Engineering Reference
OCPP Communications Support

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1 PURPOSE

The purpose of this document is to detail the OCPP command support provided by the Tritium Veefil charger to backend network providers.

2 BACKGROUND

The Veefil charger requires internet access to perform detailed remote diagnostics, firmware updates, troubleshooting, customer support, and charge network operator back-end integration.

Please refer to the latest version of the TRI93.262 ”Firewall Engineering Reference” document for details of open ports and other data access requirements.

3 READ-ONLY VARIABLES

Variable	Comment	Added
serial	Serial Number of the Veefil	v1.3.15
software_version	Version of software presently installed on the Veefil	v1.3.15
heartbeat_interval	Heartbeat interval can be set by altering the value returned in the boot notification. This is a read-only to confirm the heartbeat interval has been accepted and stored by the Veefil.	v1.3.15
charging_state	Current state the charger is in "Startup delay", "Plug to car","Authentication", "Charging","Return plug","Out of service"	v1.3.16
holster_state	State the charger plug "Both in","CCS out","Chademo out","Both out"	v1.3.16
hmi_language	Language used on the front display, this option is selected at time of manufacture	V1.3.18
modem_apn	Modem APN can be set by using the chargers web interface	V1.3.19
modem_user	Modem Username can be set by using the chargers web interface	V1.3.19
modem_pw	Modem Password can be set by using the chargers web interface	V1.3.19

4 READ / WRITE VARIABLES

Setting variables will reset parts of the charger, an error will be returned if you try to set a variable when charging in progress.

1. Writing variable restarts communication, this is the same as issuing a “soft” reset. As such no further communication can continue until boot notification is received. When you have finished configuring the charger the changeAvailability to Operative should be sent to bring the charger back in service.

2. Writing variable enforces the charger into “Startup delay”, other options can be read and written to during this time but no charging can take place until 5 minutes after last value has been written to. These variables are stored in flash, flash by it's nature has a limited amount of writes before becoming unreliable. Please change values sparingly.

Variable	Default	Comment	Added
allow_all_offline_charge[1]	False	True: Allow anyone to charge by plugging in, when offline False: Deny charge unless RFID swiped	v1.3.15
allow_rfid_offline_charge[1]	True	True: Allow any RFID card (not in whitelist) to charge when offline False: Deny charge	v1.3.15
disable_metersend[1]	False	True: Disable sending the meter values throughout the charging period False: Send updated consumption throughout the charge	v1.3.15
individual_port_updates[1]	True	True: Send status updates for each connector on the charger False: Send status updates for the whole charger	v1.3.15
status_on_plugin[1]	False	True: Send status update when the connector is plugged into the car False: Send status updates on start transaction	v1.3.15
direct_connection[1]	False	True: Send information to the central_url with corrected headers and charger address False: Information is sent through the Tritium server before being sent to providers backend	v1.3.15

Variable	Default	Comment	Added
remote_tag_timeout[1]	90s	Duration remote tag authorisation is valid, if a user fails to start a charge before this timeout they will require to re-authenticate. Functionality changed in v1.3.18 (minutes m or seconds s)	v1.3.15 v1.3.18
meter_period[1]	30s	Frequency the meter reads are sent if disable_metersend set to false (minutes m or seconds s)	V1.3.18
connection_timeout[1]	10s	Timeout for OCPP requests to the server, 3 retries of 'connection_timeout' length will be preformed before giving up and storing data locally. (minutes m or seconds s)	V1.3.18
central_url[1]	http://59.167.218.189:6443/veefil	Url of the provider backend if using direct_connection	v1.3.15
ping_host[1]	google.com	Location of a machine that can be pinged by the wireless connection, this can be an internal machine if using a secure VPN. Please note this is not a webpage thus a http address will be rejected	v1.3.15
price_display[1]	3s	Duration the cost and State of charge is displayed (Seconds s, max 99s)	v1.3.16
price_minute[1]	0	Price cost per minute in cents (max 9999) 0: Feature disabled	v1.3.16
price_kWh[1]	0	Price cost per kilowatt hour in cents (max 9999) 0: Feature disabled	v1.3.16
start_charge_remote[1]	False	True: When RemoteStartTransaction received charger will start the charge when able False: When RemoteStartTransaction received charger will unlock	v1.3.16
lock_after_remote[1]	False	True: Charger will lock after remoteStart like RFID – Warning session may not be able to be stopped if communication lossed False: Charger will remain unlocked to allow user to stop charge at any time **NOT RECOMMENDED FOR USE** due to loss of communication will result in the inability to unlock connector from the charger	v1.3.16
rfid_disable[2]	False	True: RFID Disabled allowing free charge False: RFID Enabled, requires authentication	v1.3.16
dock_connectors_disable[2]	False	True: Connectors do not need to be returned to the charger False: Connectors need to be return to charger between charging sessions	v1.3.16
max_half_enable[2]	False	True: Max/Half button will be enabled with 95%/80%. **SOC_limit_disable** must be set to **false** for this option to take effect False: Max/Half button disabled	V1.3.16
SOC_limit_disable[2]	True	True: Users can charge their cars to 100% False: Maximum charge is 80% (unless max_half_enable is set to true)	v1.3.16
charge_time_count_up[2]	True	True: Front panel displays charge time elapsed False: Front panel displays time to charge finish (estimate)	v1.3.16
dc_max_output_pwr[2]	50000	Max power charger outputs during charging. Not intended for dynamic grid power loading, will also enforce 5 minute time out when changed. Also see 'max_grid_current'	v1.3.16
dc_max_charge_time[2]	0	Max time in minutes per charge session. (max 200 minutes) 0: Feature disabled	v1.3.16
dc_max_grid_current[2]	255	200-255 – Disabled Initial current will be limited by max_output_pwr, then ramp down quickly to max_grid_current. Not intended for dynamic grid power loading, will also enforce 5 minute time out when changed.	V1.3.17

5 REVISION RECORD

REV	*DATE*	*CHANGE*
1	21 August 2015	Document creation (JMK)
2	15 September 2015	Added supported variables (LJH)
3	30 September 2015	Some defaults have changed, new values added (LJH)
4	5 November 2015	Functionality changed, new values added (LJH)
5	24 November 2015	Added modem settings as read only (LJH)