



OCPP 2.0 - 2.0.1

Changelog

FINAL, 2020-03-31

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1. Introduction

This document lists the changes between version 2.0 and 2.0.1 of OCPP without going into detail. There are separate documents: Detailed Change Log, per part, that describes the changes in more detail.

2. Part 1 - Architecture & Topology

- Device Model: Addressing Components and Variables
 - Extra explanation about physical and virtual components with a FanSpeed example
 - Monitoring explanation extended with table of possible MonitorType/dataType combinations

3. Part 2 - Specification

3.1. Generic

- FR.02 added
- FR.03 added
- FR.04 added

3.2. A. Security

- Generic Security Profile requirements
 - A00.FR.005 changed
- Unsecured Transport with Basic Authentication Profile - 1
 - A00.FR.204 changed
 - A00.FR.205 changed
- TLS with Basic Authentication Profile - 2
 - A00.FR.303 changed
 - A00.FR.304 changed
 - A00.FR.305 changed
 - A00.FR.309 changed
 - A00.FR.310 changed
 - A00.FR.316 changed
 - A00.FR.319 changed
 - A00.FR.323 changed
- TLS with Client Side Certificates Profile - 3
 - A00.FR.404 changed
 - A00.FR.405 changed
 - A00.FR.412 changed
 - A00.FR.413 changed
 - A00.FR.419 changed
 - A00.FR.421 changed
 - A00.FR.422 changed
- Certificate Properties
 - A00.FR.507 changed
 - A00.FR.510 changed
- Certificate Hierarchy
 - A00.FR.605 added
 - A00.FR.606 added
- Certificate Revocation
 - A00.FR.706 removed
- Use Case A01 - Update Charging Station Password for HTTP Basic Authentication
 - Updated Use Case description and requirements to reflect the correct variable: BasicAuthPassword
 - A01.FR.12 added (Old A01.FR.12 is split in A01.FR.11 and A01.FR.12)
- Use Case A02 - Update Charging Station Certificate by request of CSMS
 - Prerequisite added
 - Error handling added

- A02.FR.03 changed
- A02.FR.08 changed
- A02.FR.10 changed
- A02.FR.15 added
- A02.FR.16 added
- Use Case A03 - Update Charging Station Certificate initiated by the Charging Station
 - Prerequisite added
 - Error handling added
 - A03.FR.01 changed
 - A03.FR.03 changed
 - A03.FR.08 changed
 - A02.FR.10 changed
 - A03.FR.15 added
 - A03.FR.16 added
- A04 - Security Event Notification
 - A04.FR.04 added
- A05 - Upgrade Charging Station Security Profile
 - New use case
 - A05.FR.02 added
 - A05.FR.03 added
 - A05.FR.04 added
 - A05.FR.05 added
 - A05.FR.06 added
 - A05.FR.07 added

3.3. B. Provisioning

- B01 - Cold Boot Charging Station
 - B01.FR.10 added
 - B01.FR.11 added
 - B01.FR.12 added
 - B01.FR.13 added
- B02 - Cold Boot Charging Station - Pending
 - B02.FR.02 changed
 - B02.FR.09 added
- B03 - Cold Boot Charging Station - Rejected
 - Error Handling changed
 - B03.FR.07 added
 - B03.FR.08 added
- B04 - Offline Behavior Idle Charging Station
 - Scenario description changed
 - Prerequisite(s) changed
 - Postcondition(s) changed
- B05 - Set Variables
 - B05.FR.07 changed
 - B05.FR.08 changed

- B05.FR.09 changed
- B06 - Get Variables
 - B06.FR.06 changed
 - B06.FR.07 changed
 - B06.FR.08 changed
 - B06.FR.12 removed
 - B06.FR.13 changed
- B07 - Get Base Report
 - B07.FR.01 changed
 - B07.FR.06 removed
 - B07.FR.08 changed
 - B07.FR.09 changed
 - B07.FR.10 added
 - B07.FR.11 added
 - B07.FR.12 added
 - B07.FR.13 added
- B08 - Get Custom Report
 - B08.FR.13 added
 - B08.FR.14 added
 - B08.FR.15 added
 - B08.FR.16 added
- B09 - Setting a new NetworkConnectionProfile
 - B09.FR.04 added
- B10 - Migrate to new CSMS
 - Error Handling added
 - B10.FR.01 changed
 - B10.FR.02 changed
 - B10.FR.05 changed
 - B10.FR.06 added
- B11 - Reset - Without Ongoing Transaction
 - Use Case changed, now possible to reset only an EVSE
 - B11.FR.03 changed
 - B11.FR.08 added
 - B11.FR.09 added
 - B11.FR.10 added
- B12 - Reset - With Ongoing Transaction
 - Use Case changed, now possible to reset only an EVSE
 - B11.FR.03 changed
 - B11.FR.04 changed
 - B12.FR.07 added
 - B12.FR.08 added
 - B12.FR.09 added

3.4. C. Authorization

- C01 - EV Driver Authorization using RFID

- C01.FR.01 changed
- C01.FR.03 changed
- C01.FR.14 removed
- C01.FR.15 removed
- C01.FR.16 removed
- C01.FR.18 added
- C01.FR.19 added
- C01.FR.20 added
- C01.FR.21 added
- C01.FR.22 added
- C07 - Authorization using Contract Certificates
 - C07.FR.01 changed
 - C07.FR.02 changed
 - C07.FR.03 removed
 - C07.FR.05 added
 - C07.FR.06 added
 - C07.FR.07 added
 - C07.FR.08 added
 - C07.FR.09 added
 - C07.FR.10 added
 - C07.FR.11 added
 - C07.FR.12 added
 - C07.FR.13 added
 - C07.FR.14 added
- C09 - Authorization by GroupId
 - C09.FR.01 removed
 - C09.FR.02 changed
 - C09.FR.03 changed
 - C09.FR.07 changed
 - C09.FR.11 added
- C11 - Clear Authorization Data in Authorization Cache
 - C11.FR.03 changed
 - C11.FR.04 changed
 - C11.FR.05 added
- C12 - Start Transaction - Cached Id
 - C12.FR.01 removed
 - C12.FR.02 changed
 - C12.FR.03 changed
 - C12.FR.04 changed
 - C12.FR.07 removed
 - C12.FR.08 removed
- C13 - Offline Authorization through Local Authorization List
 - C13.FR.02 changed
 - C13.FR.04 added
- C15 - Offline Authorization of unknown Id
 - Remark added

- C15.FR.03 changed
- C15.FR.04 changed
- C15.FR.05 changed
- C15.FR.06 changed
- C15.FR.07 changed
- C16 - Stop Transaction with a Master Pass
 - C16.FR.06 removed

3.5. D. LocalAuthorizationList

- D01 - Send Local Authorization List
 - D01.FR.03 changed
 - D01.FR.18 added
 - D01.FR.19 added
- D02 - Get Local List Version
 - Remark added
 - D02.FR.01 changed
 - D02.FR.02 changed
 - D02.FR.03 added

3.6. E. Transactions

- E01 - Start Transaction options
 - E01.FR.09 changed
 - E01.FR.16 added
 - E01.FR.17 added
- E02 - Start Transaction - Cable Plugin First
 - E02.FR.09 changed
 - E02.FR.17 added
 - E02.FR.18 added
 - E02.FR.19 added
 - E02.FR.20 added
- E03 - Start Transaction - IdToken First
 - E03.FR.05 changed
 - E03.FR.07 changed
 - E03.FR.11 added
 - E03.FR.12 added
 - E03.FR.13 added
 - E03.FR.14 added
- E04 - Transaction started while Charging Station is offline
 - E04.FR.05 changed
 - E04.FR.11 added
- E05 - Start Transaction - Id not Accepted
 - E05.FR.02 changed
 - E05.FR.03 changed
 - E05.FR.05 changed
 - E05.FR.07 removed

- E05.FR.08 added
- E05.FR.09 added
- E05.FR.10 added
- E05.FR.11 added
- E06 - Stop Transaction options
 - E06.FR.11 changed
 - E06.FR.16 added
 - E06.FR.17 added
- E07 - Transaction locally stopped by IdToken
 - E07.FR.08 changed
 - E07.FR.13 added
- E09 - When cable disconnected on EV-side: Stop Transaction
 - E09.FR.01 changed

3.7. F. RemoteControl

- F06 - Trigger Message
 - F06.FR.17 added

3.8. G. Availability

- G03 - Change Availability EVSE/Connector
 - Use Case changed, now also for connector.
 - G03.FR.06 added
 - G03.FR.07 added
 - G03.FR.08 added
- G04 - Change Availability Charging Station
 - G04.FR.01 changed
 - G04.FR.05 changed
 - G04.FR.07 added
 - G04.FR.08 added
 - G04.FR.09 added

3.9. H. Reservation

- H01 - Reservation
 - Use case change: reservation only for a specific EVSE, not a specific connector.
 - H01.FR.04 changed
 - H01.FR.05 removed
 - H01.FR.06 changed
 - H01.FR.07 changed
 - H01.FR.08 removed
 - H01.FR.10 removed
 - H01.FR.11 changed
 - H01.FR.12 changed
 - H01.FR.13 changed
 - H01.FR.14 changed

- H01.FR.16 changed
- H01.FR.17 changed
- H01.FR.18 changed
- H01.FR.19 changed
- H01.FR.20 changed
- H02 - Cancel Reservation
 - Remark added
- H03 - Use a reserved EVSE
 - Use case change: reservation on EVSE not connector level.
 - H03.FR.01 changed
 - H03.FR.02 changed
 - H03.FR.03 changed
 - H03.FR.04 changed
 - H03.FR.05 added
 - H03.FR.06 added
 - H03.FR.07 added
 - H03.FR.08 added
- H04 - Use a reserved EVSE
 - Use case change: reservation on EVSE not connector level.
 - H04.FR.01 changed
 - H04.FR.02 changed
 - H04.FR.03 changed
 - H04.FR.04 changed

3.10. I. Tariff and Costs

- I03 - Show EV Driver Final Total Cost After Charging
 - I03.FR.01 changed
 - I03.FR.02 changed
 - I03.FR.03 changed
 - I03.FR.04 changed
- I05 - Show Fallback Total Cost Message
 - I05.FR.02 changed
- I06 - Update Tariff Information During Transaction
 - Remark added

3.11. J. Metering

- J01 - Sending Meter Values not related to a transaction
 - Error handling removed
 - Remark(s) changed
 - J01.FR.12 removed
 - J01.FR.13 changed
 - J01.FR.16 changed
 - J01.FR.17 added
 - J01.FR.18 added
- J02 - Sending transaction related Meter Values

- Remark(s) changed
- J02.FR.08 removed
- J02.FR.09 changed
- J02.FR.15 changed
- J02.FR.18 added
- J02.FR.19 added
- J03 - Charging Loop with metering information exchange
 - Combined scenario description changed
 - Remark added
 - J03.FR.01 removed
 - J03.FR.02 removed
 - J03.FR.02 removed
 - J03.FR.04 changed

3.12. K. SmartCharging

- 3.3 Charging Profile Recurrency: new section with explanatory text.
- 3.6.1 Example Using Stacked Profiles: new section.
- Use Case K01
 - K01.FR.04 changed
 - K01.FR.06 changed
 - K01.FR.10 changed
 - K01.FR.11 changed
 - K01.FR.12 changed
 - K01.FR.17 changed
 - K01.FR.26 to K01.FR.39 new
- Use Case K05
 - K05.FR.04 removed
- Use Case K08
 - 8: Remark(s): added text
 - K08.FR.06 new
 - K08.FR.07 new
- Use Case K09
 - K09.FR.03 changed
- Use Case K10
 - K10.FR.04 changed
 - K10.FR.07 new
- Use Case K15
 - Figure 113 changed
 - K15.FR.01 to K15.FR.06 changed
 - K15.FR.07 to K15.FR.17 new
- Use Case K16
 - Entire use case description changed
 - K16.FR.01 to K16.FR.06 changed
 - K16.FR.07 to K16.FR.12 new
- Use Case K17

- Entire use case description changed
- K17.FR.01 to K17.FR.03 changed
- K17.FR.04 to K17.FR.15 new

3.13. L. Firmware Management

- L01 - Secure Firmware Update
 - Scenario description changed
 - Remarks added
 - L01.FR.05 changed
 - L01.FR.07 changed
 - L01.FR.20 added
 - L01.FR.21 added
 - L01.FR.22 added
 - L01.FR.23 added
 - L01.FR.24 added
 - L01.FR.25 added
 - L01.FR.26 added
 - L01.FR.27 added
 - L01.FR.28 added

- L02 - Non-Secure Firmware Update
 - Remarks added
 - L02.FR.02 added
 - L02.FR.03 added
 - L02.FR.04 added
 - L02.FR.05 added
 - L02.FR.06 added
 - L02.FR.07 added
 - L02.FR.08 added
 - L02.FR.09 added
 - L02.FR.10 added
 - L02.FR.11 added
 - L02.FR.12 added
 - L02.FR.13 added
 - L02.FR.14 added
 - L02.FR.15 added
 - L02.FR.16 added
 - L02.FR.17 added
 - L02.FR.18 added

- L03 - Publish Firmware file on Local Controller
 - L03.FR.10 added
 - L03.FR.11 added

3.14. M. ISO 15118 Certificate Management

- M01 - Certificate installation EV
 - Scenario description changed

- Remark added
- M01.FR.01 changed
- M02 - Certificate Update EV
 - Scenario description changed
 - Remark added
 - M02.FR.01 changed
- M03 - Retrieve list of available certificates from a Charging Station
 - Remark changed
 - M03.FR.05 added
- M04 - Delete a specific certificate from a Charging Station
 - Remark added
 - M04.FR.05 removed
 - M04.FR.07 added
- M05 - Install CA certificate in a Charging Station
 - Description changed
 - Remark added
 - M05.FR.02 changed
 - M05.FR.06 added
 - M05.FR.07 added
 - M05.FR.09 added
 - M05.FR.10 added
 - M05.FR.11 added
 - M05.FR.12 added
 - M05.FR.13 added
 - M05.FR.14 added
 - M05.FR.15 added
 - M05.FR.16 added
- M06 - Get V2G Charging Station Certificate status
 - Description changed
 - Remark(s) changed/added
 - M06.FR.05 removed
 - M06.FR.06 changed
 - M06.FR.10 changed

3.15. N. Diagnostics

- N01 - Retrieve Log Information
 - Error handling changed
 - Remark added
 - N01.FR.06 removed
 - N01.FR.11 removed
 - N01.FR.12 added
 - N01.FR.13 added
- N02 - Get Monitoring report
 - Scenario description changed
 - N02.FR.01 changed

- N02.FR.05 changed
- N02.FR.06 changed
- N02.FR.08 changed
- N02.FR.09 added
- N02.FR.10 added
- N02.FR.11 added
- N02.FR.12 added
- N02.FR.13 added
- N02.FR.14 added
- N03 - Set Monitoring Base
 - N03.FR.05 changed
- N04 - Set Variable Monitoring
 - Remark(s) added
 - N04.FR.05 changed
 - N04.FR.06 changed
 - N04.FR.12 changed
 - N04.FR.14 added
 - N04.FR.15 added
 - N04.FR.16 added
 - N04.FR.17 added
- N06 - Clear / Remove Monitoring
 - N06.FR.03 changed
- N07 - Alert Event
 - N07.FR.01 removed
 - N07.FR.02 changed
 - N07.FR.04 changed
 - N07.FR.05 changed
 - N07.FR.06 changed
 - N07.FR.07 changed
 - N07.FR.08 removed
 - N07.FR.09 removed
 - N07.FR.10 added
 - N07.FR.11 added
 - N07.FR.12 added
 - N07.FR.13 added
 - N07.FR.14 added
 - N07.FR.15 added
 - N07.FR.16 added
 - N07.FR.17 added
 - N07.FR.18 added
 - N07.FR.19 added
 - N07.FR.20 added
 - N07.FR.21 added
- N08 - Periodic Event
 - N08.FR.03 changed
- N09 - Get Customer Information

- N09.FR.02 changed
- N09.FR.05 changed
- N09.FR.06 changed
- N09.FR.07 changed
- N09.FR.08 added
- N10 - Clear Customer Information
 - N10.FR.01 changed
 - N10.FR.03 changed
 - N10.FR.04 changed
 - N10.FR.06 changed
 - N10.FR.07 changed
 - N10.FR.09 added

3.16. O. Display Message

- 002 - Set DisplayMessage for Transaction
 - Error Handling added
 - 002.FR.13 removed
- 003 - Get All DisplayMessages
 - 003.FR.01 changed

3.17. P. DataTransfer

- P02 - Data Transfer to the CSMS
 - P02.FR.02 changed

3.18. Messages, Datatypes & Enumerations

All the messages have changed, due to changes in the way message can be extended.
Use the JSON Schema files released with OCPP 2.0.1.

4. Part 2 - Appendices

4.1. Security Events

- `SettingSystemTime` description changed

4.2. Standardized Components

4.2.1. Controller Components

- Datatypes added to all variables of components
- `AlignedDataCtrlr`
 - `TxEndedInterval` changed
 - `TxEndedMeasurands` changed
- `AuthCtrlr`
 - `AdditionalInfoItemsPerMessage` renamed from `AdditionalInfoMaxItems`
- `AuthCacheCtrlr`
 - `Policy` added
- `CHAdemoCtrlr` added
- `ClockCtrlr`
 - `NtpServerUri` renamed from `NtpServerAddress`
 - `TimeAdjustmentReportingThreshold` added
- `DisplayMessageCtrlr`
 - `PersonalMessageSize` added
- `ISO15118Ctrlr` added
- `SampledDataCtrlr`
 - `SignReadings` renamed from `SignReading`
- `TxCtrlr`
 - `ChargingBeforeAcceptedEnabled` added
 - `StopTxOnEVSideDisconnect` changed

4.2.2. Physical Components

- `CHAdemoController` removed (now a Controller Component: `CHAdemoCtrlr`)
- `ChargingStation`
 - `VendorName` renamed from `Manufacturer`
 - `AllowNewSessionsPendingFirmwareUpdate` added
- `Connector`
 - `AvailabilityState` added
- `Controller`
 - `FirmwareVersion` added
- `EVSE`
 - `AllowReset` added
 - `ACVoltage` renamed from `AC Voltage`
 - `DCVoltage` renamed from `DC Voltage`
- `ISO15118Controller` removed (now a Controller Component: `ISO15118Ctrlr`)
- `TokenReader`

- TokenInfo removed
- Token added
- TokenType added

4.3. Standardized Variables

- AllowChargingBeforeAccepted removed
- AllowReset added
- AuthorizeRemoteStart removed
- BasicAuthPassword removed
- BytesPerMessage removed
- ConnectorType renamed from ConnectorCode
- DataText added
- EVConnectionTimeout removed
- FileTransferProtocols removed
- FirmwareVersion added
- Identity removed
- ItemsPerMessage removed
- LifeTime removed
- ActiveNetworkProfile removed
- LocalAuthorizeOffline removed
- LocalPreAuthorize removed
- MasterPassGroupId removed
- MaxEnergyOnInvalidId removed
- Measurands removed
- MessageAttempts removed
- NonEvseSpecific removed
- NetworkAddress added
- NetworkConfigurationPriority removed
- NetworkProfileConnectionAttempts removed
- NextTimeOffsetTransitionDateTime removed
- NotifyChargingLimitWithSchedules removed
- NtpServerUri removed
- NtpSource removed
- OfflineTxForUnknownIdEnabled removed
- OrganizationName removed
- PeriodsPerSchedule removed
- PersonalMessageSize removed
- PhaseRotation changed
- Policy removed
- Priorities removed
- RateUnits removed
- SignReadings removed
- StopTxOnInvalidId removed
- StopTxOnEVDisconnect removed
- TimeSource removed

- TimeZone removed
- Token added
- TokenType added
- Tries added
- TxStartPoint removed
- TxStopPoint removed
- ValueSize removed

4.3.1. Reason Codes

This chapter has been added to list possible *reasonCodes* that can be used in *StatusInfo*.

5. Part 4 - JSON over WebSockets implementation guide

- 3.1.1 The Connection URL: remark about colon in CS identity.
- 3.3 WebSocket Compression: recommendation about CS supporting compression.
- 4.1.1 Synchronicity: minor clarification.
- 4.2.3 CALLERROR: added remark about dropping invalid messages and example CALLERROR.
- 9 CustomData Extension: new chapter explaining use of CustomData.