About Open Charge Alliance

The Open Charge Alliance (OCA) is a global consortium of public and private electric vehicle (EV) infrastructure leaders. Our mission is to foster global development, adoption, and compliance of communication protocols in the EV charging infrastructure and related standards through collaboration, education, testing, and certification.

- Our strength is a fundamental commitment to open processes and products
- Free to use: no constraints on the use of the standard
- Development is open and market driven to meet existing and emerging technical and business requirements
- Pragmatic approach that leverages knowledge and experience of experts in EV charging infrastructure
- Uphold OCPP and OSCP as vital standards, with implementations widely adopted and deployed

With more than sixty participants we span all sectors of the industry, including charging equipment manufacturers, software and systems providers, charging network operators, and research organizations.

Would you like to join OCA?

Please visit the website:
www.openchargealliance.org/participants/becoming-a-participant

Open Charge Alliance
Utrechtseweg 310, Office Building B42
6812 AR Arnhem
The Netherlands
www.openchargealliance.org

FACTSHEET
OCPP 1.6

What is OCPP?

Open Charge Point Protocol (OCPP) is an universal open communication standard to answer the challenges associated with proprietary networks. OCPP enables seamless communication between charging stations and vendor central systems. The closed nature of proprietary charging networks has led to unnecessary EV driver and asset owner frustration over the years, fueling widespread industry support for an open model. With more than 40,000 installations in 49 different countries, OCPP has become the de facto open standard for open charger to network communications.

The specifications can be downloaded from the Open Charge Alliance website: **www.openchargealliance.org**

What is OCPP 1.6?

OCPP 1.6 is based on OCPP 1.5 and years of experience in the field with OCPP. OCPP 1.5 has been widely used around the world since 2012 and lots of vendors have implemented OCPP 1.5 in their products. All this experience has been inserted in OCPP 1.6. A total of nineteen companies have contributed to OCPP 1.6. This version is supported by a compliance testing tool for self testing and by a Certification Program. Thus making OCPP 1.6 more valuable for its users.

OCPP 1.6 brings new features, such as Smart Charging and JSON over WebSockets. It contains lots of small enhancements that will benefit CPOs around the world and help EV drivers when they run into problems.

Lots of sections have been rewritten for better clarification. This greatly improves the interoperability between products from different vendors.

Difference between OCPP 1.5 and 1.6

A short list of the main differences between OCPP 1.5 and OCPP 1.6:
- JSON is introduced. JSON (JavaScript Object Notation) is a lightweight data-interchange format.
- StatusNotification: The statuses 'Preparing', 'Charging', 'SuspendedEV', 'SuspendedEVSE, 'Finishing' have been added; Occupied is removed.
- StatusNotification: for ConnectorId '0', now only the statusses 'Available', 'Unavailable' and 'Faulted' are applicable.
- Smart Charging: Basic Smart Charging has been added. It consist of the ability to set a charge profile on the levels: Station (ChargePoint-MaxProfile), Transaction (TxProfile) and Connector (TxDefaultProfile).

In short

OCPP 1.6 contains:
- **OCPP 1.5**
- **SOAP over HTTP and/or JSON over WebSockets support Smart Charging use cases**
- **(Local) list management support**
- **Additional statuses**
- **Message sending requests such as CP time or status at the CP**

Highlights

JSON over WebSockets:

Next to SOAP as transport protocol, OCPP now officially supports JSON over WebSockets. JSON saves 70% on mobile data usage. WebSockets enables faster responses and enables Residentals Chargers connected via home routers, and still allows remote commands.

StopReason:

No more guessing why a transaction was stopped. To be able to help support EV-drivers, Charge Points now tell the Central Server why a transaction is stopped.

Features Smart Charging:

OCPP 1.6 offers possibilities for both local Smart Charging, where charging on multiple charge points should not exceed a certain power limit, and central Smart Charging which is managed by the Central System and imposed by an external system.

It also offers the possibility for load balancing, where the charge station is facilitated to control the offered power per socket (not exceeding the power limit for the total charge station or location).