
P. DataTransfer

1. Introduction

This Functional Block describes the functionality that enables parties to extend existing commands with custom attributes or add new custom commands to OCPP.

OCPP offers two mechanisms to create vendor-specific custom extension.

1. The [DataTransferRequest](#) message allows for the exchange of data or messages not standardized in OCPP. As such, it offers a framework within OCPP for experimental functionality that may find its way into future OCPP versions. Experimenting can be done without creating new (possibly incompatible) OCPP dialects. Secondly, it offers a possibility to implement additional functionality agreed upon between specific CSMS and Charging Station vendors.
2. A CustomData element exists as an optional element in the JSON schemas of all types. CustomData is the only class in the JSON schema files that allows additional properties. It can thus be used to add additional custom attributes to any type. The CustomData has been deliberately left out of the specification document, because it would introduce a lot of clutter and it is not meant to be used in standard implementations. See also [\[OCPP2.0-PART4\]](#).

IMPORTANT

Please use with extreme caution and only for optional functionality, since it will impact your compatibility with other systems that do not make use of this option. We recommend mentioning the usage explicitly in your documentation and/or communication. Please consider consulting the Open Charge Alliance before turning to this option to add functionality.

2. Use cases & Requirements

P01 - Data Transfer to the Charging Station

Table 246. P01 - Data Transfer to the Charging Station

No.	Type	Description
1	Name	Data Transfer to the Charging Station
2	ID	P01
	<i>Functional block</i>	P. Data Transfer
3	Objective(s)	To send information from the CSMS to the Charging Station for a function that is not supported by OCPP.
4	Description	This use case covers the functionality of sending a DataTransfer message to the Charging Station from the CSMS.
	<i>Actors</i>	Charging Station, CSMS
	<i>Scenario description</i>	<ol style="list-style-type: none"> 1. The CSMS sends information to a Charging Station for a function not supported by OCPP with DataTransferRequest. 2. The Charging Station responds to the CSMS with DataTransferResponse.
5	Prerequisite(s)	n/a
6	Postcondition(s)	<p>Successful postcondition: DataTransferRequest is received <i>Successfully</i> and <i>Accepted</i></p> <p>Failure postcondition: Message has been <i>Accepted</i> but the contained request is <i>Rejected</i>. In all other cases the usage of status <i>Accepted</i> or <i>Rejected</i> and the data element is part of the vendor-specific agreement between the parties involved.</p>

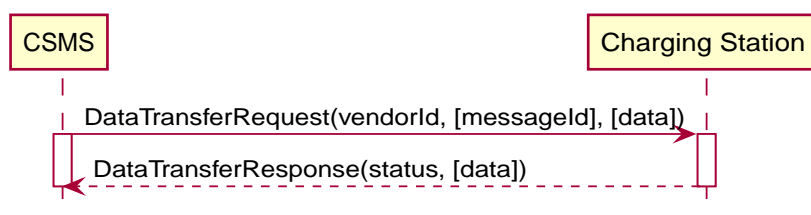


Figure 146. Sequence Diagram: Data Transfer to the Charging Station

7	Error handling	n/a
8	Remark(s)	<p>Data Transfer is used if information for a function is not supported by OCPP.</p> <p>The length of data in both the request and response message is undefined and it is RECOMMENDED that this is agreed upon by all parties involved.</p>

P01 - Data Transfer to the Charging Station - Requirements

Table 247. P01 - Requirements

ID	Precondition	Requirement definition
P01.FR.01		The Charging Station SHALL only use DataTransferRequest for a function which is not supported by OCPP.
P01.FR.02		The vendorId SHOULD be a value from the reversed DNS namespace, where the top tiers of the name, when reversed, should correspond to the publicly registered primary DNS name of the Vendor organization.
P01.FR.03		The messageId in the request message MAY be used to indicate a specific message or implementation.
P01.FR.04		The length of data in both the request and response message is undefined and it is RECOMMENDED that this is agreed upon by all parties involved.

ID	Precondition	Requirement definition
P01.FR.05	If the recipient of the request has no implementation for the specific vendorId.	The recipient SHALL return a status <i>UnknownVendor</i> .
P01.FR.06	Upon receipt of DataTransferRequest and in case of a messageId mismatch (if used).	The recipient SHALL return status <i>UnknownMessageId</i> .
P01.FR.07		The usage of status <i>Accepted</i> or <i>Rejected</i> and the data element SHALL be part of the vendor-specific agreement between the parties involved.

P02 - Data Transfer to the CSMS

Table 248. P02 - Data Transfer to the CSMS

No.	Type	Description
1	Name	Data Transfer to the CSMS
2	ID	P02
	Functional block	P. Data Transfer
3	Objective(s)	To send information from the Charging Station to the CSMS for a function which is not supported by OCPP.
4	Description	This use case covers the functionality of sending a DataTransfer message to the CSMS from the Charging Station.
	Actors	Charging Station, CSMS
	Scenario description	<ol style="list-style-type: none"> 1. The Charging Station sends information to the CSMS for a function not supported by OCPP with DataTransferRequest. 2. The CSMS responds to the Charging Station with DataTransferResponse.
5	Prerequisite(s)	n/a
6	Postcondition(s)	<p>Successful postcondition: DataTransferRequest is received <i>Successfully</i> and <i>Accepted</i></p> <p>Failure postcondition: Message has been accepted but the contained request is <i>Rejected</i>.</p> <p>In all other cases the usage of status <i>Accepted</i> or <i>Rejected</i> and the data element is part of the vendor-specific agreement between the parties involved.</p>

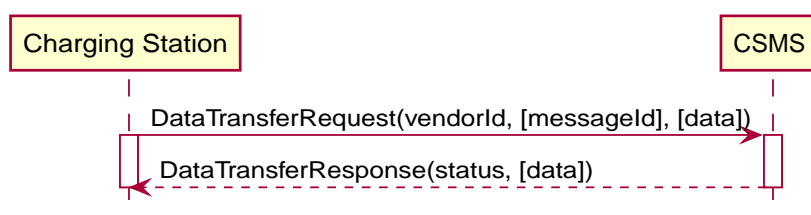


Figure 147. Sequence Diagram: Data Transfer to the CSMS

7	Error handling	n/a
8	Remark(s)	<p>Data Transfer is used if information for a function is <i>not</i> supported by OCPP.</p> <p>The length of data in both the request and response message is undefined and should be agreed upon by all parties involved.</p>

P02 - Data Transfer to the CSMS - Requirements

Table 249. P02 - Requirements

ID	Precondition	Requirement definition
P02.FR.01		The vendorId in the request message SHOULD be known to the Charging Station and uniquely identify the vendor-specific implementation.
P02.FR.02		The Charging Station SHALL only use DataTransferRequest for a function which is not supported by OCPP.
P02.FR.03		The VendorId SHOULD be a value from the reversed DNS namespace, where the top tiers of the name, when reversed, should correspond to the publicly registered primary DNS name of the Vendor organization.
P02.FR.04		The messageId in the request message MAY be used to indicate a specific message or implementation.

ID	Precondition	Requirement definition
P02.FR.05		The length of data in both the request and response message is undefined and it is RECOMMENDED that this is agreed upon by all parties involved.
P02.FR.06	If the recipient of the request has no implementation for the specific vendorId.	The recipient SHALL return a status <i>UnknownVendor</i> .
P02.FR.07	Upon receipt of DataTransferRequest and in case of a messageId mismatch (if used).	The recipient SHALL return status <i>UnknownMessageId</i> .
P02.FR.08		The usage of status <i>Accepted</i> or <i>Rejected</i> and the data element SHALL be part of the vendor-specific agreement between the parties involved.