
F. RemoteControl

1. Introduction

This Functional Block describes three types of use cases for remote control management from the CSMS:

1. Remote Transaction Control. These use cases describe the functionality which enable the CSO (or indirect a third party) to start/stop a transaction with a remote command.
2. Unlocking a Connector. These use cases describe the functionality that enables the CSO (or indirect a third party) to unlock the Connector with a remote command. This can for example be used to assist customers when they have problems unplugging their cable.
3. Remote Trigger. These use cases describe all the remote trigger functionality of OCPP. This functionality enables remote triggering of messages. For example, requesting messages to be resend or request current status of some ongoing processes in the Charging Station.

2. Use cases & Requirements

2.1. Remote Transaction Control

F01 - Remote Start Transaction - Cable Plugin First

Table 124. F01 - Remote Start Transaction - Cable Plugin First

No.	Type	Description
1	Name	Remote Start Transaction - Cable Plugin First
2	ID	F01
	Functional block	F. Remote Control
3	Objective(s)	<ol style="list-style-type: none"> 1. To remotely start a transaction by the CSMS. 2. To enable a CSO to help an EV Driver that has problems starting a transaction. 3. To enable third parties (e.g. mobile apps) to control charging transactions via the CSMS.
4	Description	This use case describes how the CSMS remotely requests the Charging Station to start a transaction by sending RequestStartTransactionRequest . Upon receipt, the Charging Station responds with RequestStartTransactionResponse and a status indicating whether it is able to try to start a transaction or not.
	Actors	Charging Station, CSMS, CSO
	Scenario description	<ol style="list-style-type: none"> 1. The EV Driver plugs in the cable at the Charging Station. 2. The Charging Station sends a StatusNotificationRequest to the CSMS to inform it about a Connector that became Occupied. 3. The CSMS responds with a StatusNotificationResponse, confirming that the StatusNotificationRequest was received. 4. The Charging Station sends a TransactionEventRequest (eventType = Started) notifying the CSMS about a transaction that has started (even when the driver is not yet known.) 5. The CSMS responds with a TransactionEventResponse, confirming that the TransactionEventRequest was received. 6. An external trigger (as example in this use case: EV Driver) triggers the remote start. 7. The CSMS sends a RequestStartTransactionRequest to the Charging Station. 8 The Charging Station responds with a RequestStartTransactionResponse with the <i>transactionId</i> of the already started transaction to the CSMS. 9. Optionally: the EV Driver is authorized by the CSMS. 10. The Charging Station sends a TransactionEventRequest (eventType = Updated, chargingState = Charging) message to inform the CSMS that the charging has started.
	Alternative scenario(s)	Remote Start Transaction - Remote Start First F02 - Remote Start Transaction - Remote Start First
5	Prerequisite(s)	Charging Cable plugged in first.
6	Postcondition(s)	The Charging Station offers energy. If the value of AuthorizeRemoteStart is <i>true</i> , the Charging Station will only offer energy when it successfully authorized the <i>IdToken</i> , using Local Authorization List , Authorization Cache and/or an AuthorizeRequest .

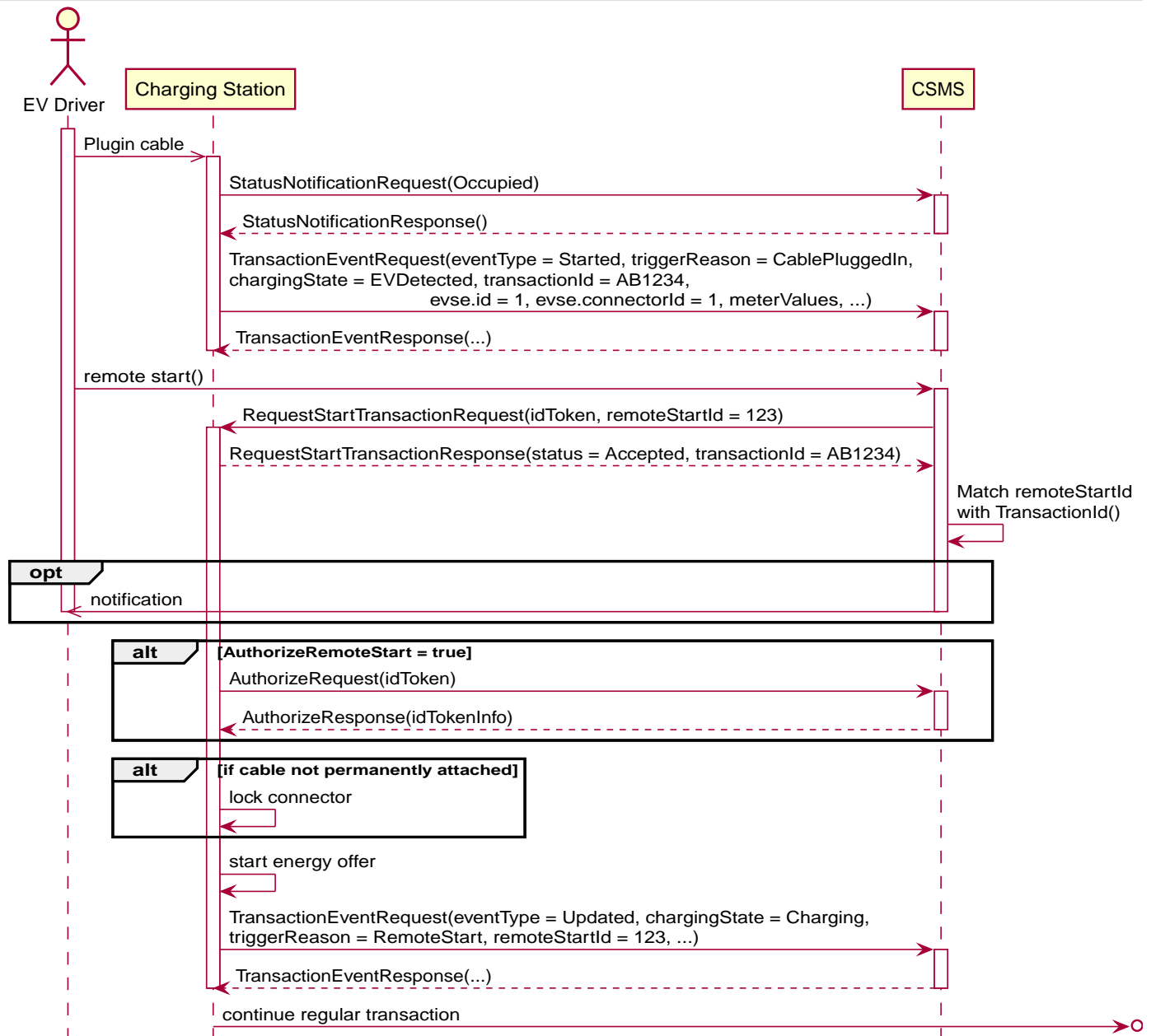


Figure 65. Sequence Diagram: Remote Start Transaction - Cable Plugged in First

7	Error handling	n/a
8	Remark(s)	<p>An external trigger can be e.g. a Charging Station Operator or an EV Driver app.</p> <p>The RequestStartTransactionResponse contains a status which indicates whether the Charging Station has accepted the request and will attempt to start a transaction.</p> <p>The CSMS is allowed to send a RequestStartTransactionRequest with IdTokenType of type: NoAuthorization. The operator should be aware that if the Charging Station supports local stop transaction, this transaction can be stopped by anyone.</p> <p>The scenario description and sequence diagram above are based on the Configuration Variable for start transaction being configured as follows: TxStartPoint: EVConnected, Authorized, DataSigned, PowerPathClosed, EnergyTransfer</p> <p>This use-case is also valid for other configurations, but then the transaction might start/stop at another moment, which might change the sequence in which message are send. For more details see the use cases: E01 - Start Transaction options.</p>

F01 - Remote Start Transaction - Cable Plugin First - Requirements

Table 125. F01 - Requirements

ID	Precondition	Requirement definition	Note
F01.FR.01	If the value of AuthorizeRemoteStart = true.	The Charging Station SHALL behave as if in response to a local action at the Charging Station to start a transaction with the IdToken given in RequestStartTransactionRequest message.	This means that the Charging Station will first try to authorize the IdToken, using the Local Authorization List, Authorization Cache and/or an AuthorizeRequest . A transaction will only be started after authorization was obtained.
F01.FR.02	If the value of AuthorizeRemoteStart = false.	The Charging Station SHALL immediately try to start a transaction for the IdToken given in RequestStartTransactionRequest message.	Note that after the transaction has been started, the Charging Station will send a TransactionEventRequest with the idToken to the CSMS, and the CSMS will check the authorization status of the IdToken when processing this TransactionEventRequest .
F01.FR.03	After the transaction has been started.	The Charging Station SHALL send a TransactionEventRequest to the CSMS, and the CSMS will check the authorization status of the IdToken when processing this TransactionEventRequest .	
F01.FR.04		RequestStartTransactionRequest SHALL contain an IdToken, which Charging Station SHALL use, if it is able to start a transaction, in the TransactionEventRequest sent to the CSMS.	
F01.FR.05		The transaction SHALL be started in the same way as described in E01 - Start Transaction - Cable Plugin First .	
F01.FR.06		RequestStartTransactionRequest MAY contain an evseld if the transaction is to be started on a specific EVSE.	When no evseld is provided, the Charging Station is in control of the EVSE selection.
F01.FR.07	If the RequestStartTransactionRequest does not contain an evseld.	The Charging Station MAY reject the RequestStartTransactionRequest .	
F01.FR.08		The CSMS MAY include a ChargingProfile in the RequestStartTransactionRequest .	
F01.FR.09	F01.FR.08	The purpose of this ChargingProfile SHALL be set to TxProfile .	
F01.FR.10	F01.FR.08	The Charging Station SHALL use this ChargingProfile for the transaction that is started by this RequestStartTransactionRequest .	
F01.FR.11	F01.FR.08	The transactionId in the ChargingProfile SHALL NOT be set.	
F01.FR.12	If a Charging Station without support for Smart Charging receives a RequestStartTransactionRequest with a ChargingProfile .	The Charging Station SHALL ignore the specified ChargingProfile .	

ID	Precondition	Requirement definition	Note
F01.FR.13	When a transaction is created on the Charging Station, but has not been authorized. AND RequestStartTransactionRequest is received.	The Charging Station SHALL return the <i>transactionId</i> in the RequestStartTransactionResponse .	
F01.FR.14	When configured to send meter data in the TransactionEventRequest (<i>eventType = Started</i>), See: Meter Values - Configuration	The Charging Station SHALL add the configured measurands to the optional <i>meterValue</i> field in the TransactionEventRequest(eventType = Started) sent to the CSMS to provide more details during the transaction.	
F01.FR.15	When configured to send meter data in the TransactionEventRequest (<i>eventType = Updated</i>), See: Meter Values - Configuration	The Charging Station SHALL add the configured measurands to the optional <i>meterValue</i> field in the TransactionEventRequest(eventType = Updated) sent to the CSMS to provide more details during the transaction.	
F01.FR.16	F01.FR.15 AND Amount of meter data is too much for 1 TransactionEventRequest (<i>eventType = Updated</i>)	The Charging Station MAY split meter data over multiple TransactionEventRequest(eventType = Updated) messages with the same <i>timestamp</i> .	
F01.FR.17	When sending a TransactionEventRequest	The Charging Station SHALL set the <i>triggerReason</i> to inform the CSMS about what triggered the event. What reason to use is described in the description of TriggerReasonEnumType .	
F01.FR.18	After a transaction has been started	The Charging Station MAY send additional TransactionEventRequest(eventType = Updated) messages during the transaction when a <i>trigger event</i> occurs.	
F01.FR.19	When a RequestStartTransactionRequest is received.	The next TransactionEventRequest SHALL contain <i>triggerReason</i> : RemoteStart .	

F02 - Remote Start Transaction - Remote Start First

Table 126. F02 - Remote Start Transaction - Remote Start First

No.	Type	Description
1	Name	Remote Start Transaction - Remote Start first
2	ID	F02
	Functional block	F. Remote Control
	Parent use case	F01 - Remote Start Transaction - Cable Plugin First
3	Objective(s)	To enable the CSMS to remotely start a transaction while the RequestStartTransactionRequest is sent first, before the connection between Charging Station and EV is established.
4	Description	This use case covers how the CSMS is able to remotely start a transaction for the User.
	Actors	Charging Station, CSMS, External Trigger

No.	Type	Description
	Scenario description	<ol style="list-style-type: none"> 1. An External Trigger triggers the remote start. 2. The CSMS sends RequestStartTransactionRequest to the Charging Station. 3. The Charging Station responds with RequestStartTransactionResponse to the CSMS. 4. The EV Driver is authorized by the CSMS, dependent on the Configuration Variable settings. 5. The Charging Station sends StatusNotificationRequest to the CSMS to inform it about a Connector became <i>Occupied</i>. 6. The CSMS sends StatusNotificationResponse to the Charging Station 7. The Charging Station sends a TransactionEventRequest (<i>eventType = Started</i>) notifying the CSMS about a transaction that has started 8. The cable is plugged in. 9. The energy offer is started. 10. The Charging Station sends a TransactionEventRequest (<i>eventType = Updated, chargingState = Charging</i>) message to inform the CSMS that the charging has started. 11. The CSMS sends TransactionEventResponse to the Charging Station
5	Prerequisite(s)	Charging Cable not plugged in. Remote start first. Enable mobile apps to control charging transactions via the CSMS.
6	Postcondition(s)	Successful postcondition: The transaction for which a start was request has started and the EV is charging. Failure postcondition: The transaction for which a start was request did not start or the EV is not charging.

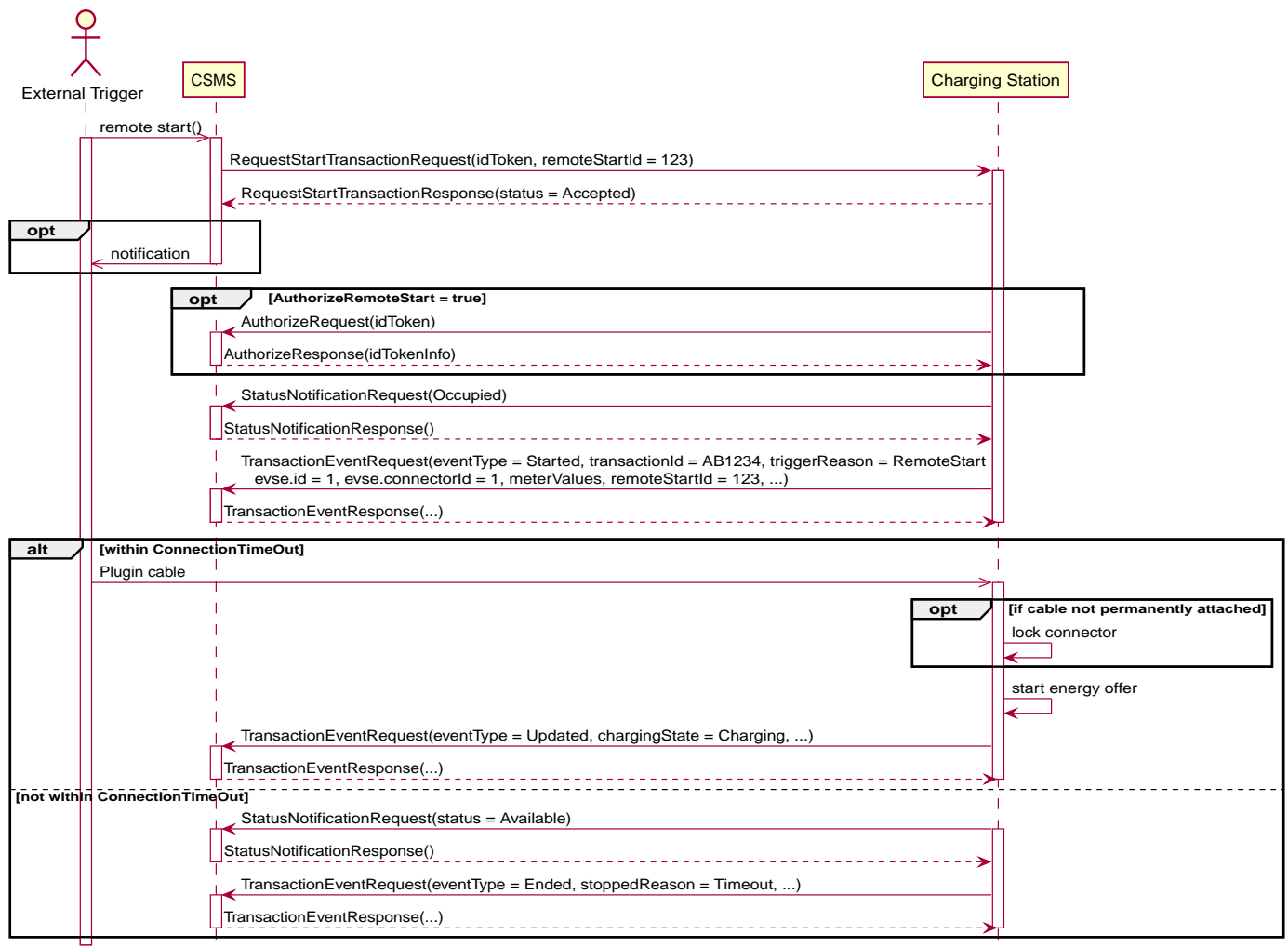


Figure 66. Sequence Diagram: Remote Start Transaction - Remote Start First

7	Error handling	n/a
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8	Remark(s)	<p>An external trigger can be e.g. a Charging Station Operator or an EV Driver app.</p> <p>It is advised not to start transactions remotely without evseld due to the uncertainty which EVSE is started. In case of a Logic Controller with many EVSEs, the EV Driver might not be in front of the activated EVSE.</p> <p>The CSMS is allowed to send a RequestStartTransactionRequest with IdTokenType of type: NoAuthorization. The operator should be aware that if the Charging Station supports local stop transaction, this transaction can be stopped by anyone.</p> <p>The scenario description and sequence diagram above are based on the Configuration Variable for start transaction being configured as follows: TxStartPoint: EVConnected, Authorized, DataSigned, PowerPathClosed, EnergyTransfer</p> <p>This use-case is also valid for other configurations, but then the transaction might start/stop at another moment, which might change the sequence in which message are send. For more details see the use cases: E01 - Start Transaction options.</p>
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F02 - Remote Start Transaction - Remote Start First - Requirements

Table 127. F02 - Requirements

ID	Precondition	Requirement definition
F02.FR.01	When a transaction is started as a result of a RequestStartTransactionRequest .	The Charging Station SHALL put the <i>remoteStartId</i> in the first TransactionEventRequest it sends for this new transaction.
F02.FR.02	When configured to send meter data in the TransactionEventRequest(eventType = Started) , See: Meter Values - Configuration	The Charging Station SHALL add the configured measurands to the optional meterValue field in the TransactionEventRequest(eventType = Started) sent to the CSMS to provide more details during the transaction.
F02.FR.03	When configured to send meter data in the TransactionEventRequest(eventType = Updated) , See: Meter Values - Configuration	The Charging Station SHALL add the configured measurands to the optional meterValue field in the TransactionEventRequest(eventType = Updated) sent to the CSMS to provide more details during the transaction.
F02.FR.04	F02.FR.03 AND Amount of meter data is too much for 1 TransactionEventRequest(eventType = Updated)	The Charging Station MAY split meter data over multiple TransactionEventRequest(eventType = Updated) messages with the same <i>timestamp</i> .

NOTE

Requirements of previous use case: [F01 - Remote Start Transaction - Cable Plugin First](#), are also considered relevant for [F02 - Remote Start Transaction - Remote Start First](#)

F03 - Remote Stop Transaction

Table 128. F03 - Remote Stop Transaction

No.	Type	Description
1	Name	Remote Stop Transaction
2	ID	F03
	Functional block	F. Remote Control
3	Objective(s)	1. To enable a CSO to help an EV Driver who has problems stopping a transaction. or 2. Enable mobile apps to control transactions via the CSMS.
4	Description	This use case describes how the CSMS requests the Charging Station to stop a transaction.
	Actors	Charging Station, CSMS, CSO, EV Driver

No.	Type	Description
	Scenario description	<ol style="list-style-type: none"> 1. An External Trigger triggers a remote stop. 2. The CSMS requests a Charging Station to stop a transaction by sending RequestStopTransactionRequest to the Charging Station with the transactionId of the transaction. 3. The Charging Station responds with RequestStopTransactionResponse and a status indicating whether it has accepted the request and a transaction with the given transactionId is ongoing and will be stopped. 4. Charging is stopped, the Charging Station sends TransactionEventRequest (eventType = Updated) and, if applicable, unlocks the Connector. 5. After the EV Driver unplugs the cable, the Charging Station sends StatusNotificationRequest with status <i>Available</i>. 6. The Charging Station ends the transaction and sends a TransactionEventRequest (eventType = <i>Ended</i>, stoppedReason = <i>Remote</i>) message to the CSMS.
5	Prerequisite(s)	A transaction is ongoing.
6	Postcondition(s)	<p>Successful postcondition: The transaction for which a stop was request has ended.</p> <p>Failure postcondition: The transaction for which a stop was requested is still ongoing.</p>

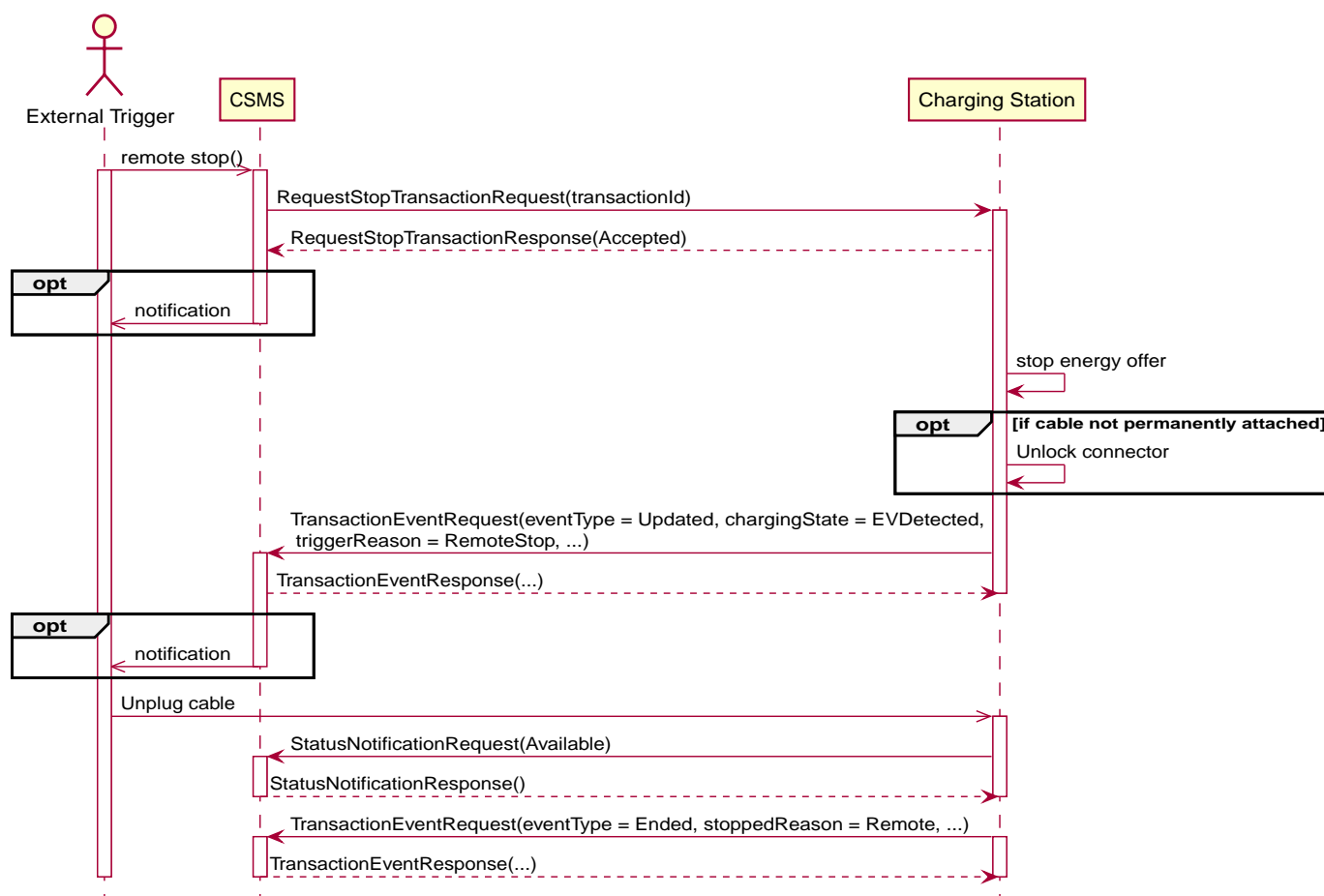


Figure 67. Sequence Diagram: Remote Stop Transaction

7	Remark(s)	<p>This remote request to stop a transaction is equal to a local action to stop a transaction.</p> <p>The scenario description and sequence diagram above are based on the Configuration Variable for stop transaction being configured as follows. TxStartPoint: ParkingBayOccupancy, EVConnected This use-case is also valid for other configurations, but then the transaction might stop at another moment, which might change the sequence in which message are send. For more details see the use case: E06 - Stop Transaction options</p>
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F03 - Remote Stop Transaction - Requirements

Table 129. F03 - Requirements

ID	Precondition	Requirement definition	Note
F03.FR.01	When the CSMS receives a remote stop transaction trigger (For example when terminating using a smartphone app, exceeding a (non local) prepaid credit.)	The CSMS SHALL send a RequestStopTransactionRequest to the Charging Station with the transactionId of the transaction.	
F03.FR.02	F03.FR.01	The Charging Station SHALL stop the energy offer, unlock the cable and send a TransactionEventRequest (eventType = Updated) to the CSMS.	Cable unlocked if not permanently attached.
F03.FR.03	F03.FR.02 + When the EV Driver unplugs the cable.	The Charging Station SHALL send a TransactionEventRequest (eventType = Ended , stoppedReason = Remote) to the CSMS.	
F03.FR.04	When configured to send meter data in the TransactionEventRequest (eventType = Ended), See: Meter Values - Configuration	The Charging Station SHALL add the configured measurands to the optional meterValue field in the TransactionEventRequest (eventType = Ended) sent to the CSMS to provide more details about transaction usage.	
F03.FR.05	F03.FR.04 AND The Charging Station is running low on memory	The Charging Station MAY drop meter data.	
F03.FR.06	F03.FR.05	When dropping meter data, the Charging Station SHALL drop intermediate values first (1st value, 3th value, 5th etc), not start dropping values from the start of the list or stop adding values to the list.	
F03.FR.07	When the Charging Station receives a RequestStopTransactionRequest	And the TransactionId can be matched to an active transaction; the Charging Station SHALL respond with a RequestStopTransactionResponse with status set to <i>Accepted</i> .	
F03.FR.08	When the Charging Station receives a RequestStopTransactionRequest	And the TransactionId cannot be matched to an active transaction; the Charging Station SHALL respond with a RequestStopTransactionResponse with status set to <i>Rejected</i> .	
F03.FR.09	When sending a TransactionEventRequest	The Charging Station SHALL set the triggerReason to inform the CSMS about what triggered the event. What reason to use is described in the description of TriggerReasonEnumType .	
F03.FR.10		The Charging Station SHALL include the stoppedReason element in the TransactionEventRequest (eventType = Ended). What reason to use is described in the description of reasonEnumType .	

F04 - Remote Stop ISO 15118 Charging from CSMS

Table 130. F04 - Charging loop with interrupt from the CSMS

No.	Type	Description
1	Name	Remote Stop ISO 15118 Charging from CSMS
2	ID	F04
	Functional block	F. Remote Control
	Reference	ISO15118-1 F2 Charging loop with interrupt from the SECC.
3	Objectives	See ISO15118-1 , use case Objective F2, page 38.
4	Description	See ISO15118-1 , use case Description F2, page 38.
5	Actors	EV, EVSE, Charging Station

No.	Type	Description
6	Prerequisites	- If authorization according use cases in Functional Block C is applied, it SHALL be finished successfully. See ISO15118-1 , use case Prerequisites F2, page 38.
7	Combined scenario description	OCPP: 1. The CSMS sends a RequestStopTransactionRequest to the Charging Station. 2. The Charging Station responds with a RequestStopTransactionResponse . ISO 15118: 3. The EV sends a ChargingStatus (in case of AC charging) or CurrentDemandReq (in case of DC Charging) PDU to the Charging Station. 4. The Charging Station responds with an EVSENotification = StopCharging.
8	Postcondition(s)	See ISO15118-1 , use case End conditions F2, page 38.

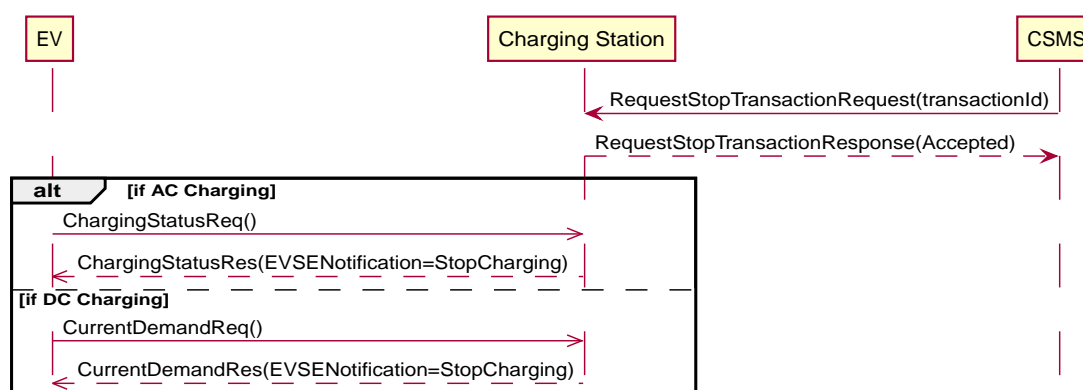


Figure 68. Charging loop with interrupt from the Charging Station

9	Error handling	n/a
10	Remark(s)	n/a

F04 - Remote Stop ISO 15118 Charging from CSMS - Requirements

These requirements are normative.

Table 131. F04 - Requirements

ID	Precondition	Requirement definition	Note
F04.FR.01	When the CSMS receives a remote stop transaction trigger (For example when terminating using a smartphone app, exceeding a (non local) prepaid credit.)	The CSMS SHALL send a RequestStopTransactionRequest to the Charging Station with the transactionId of the transaction.	
F04.FR.02	F04.FR.01	The Charging Station SHALL stop the energy offer, unlock the cable and send a TransactionEventRequest (eventType = Updated) to the CSMS.	Cable unlocked if not permanently attached.
F04.FR.03	F04.FR.02 + When the EV Driver unplugs the cable.	The Charging Station SHALL send a TransactionEventRequest (eventType = Ended, stoppedReason = Remote) to the CSMS.	
F04.FR.04	When configured to send meter data in the TransactionEventRequest (eventType = Ended), See: Meter Values - Configuration	The Charging Station SHALL add the configured measurands to the optional meterValue field in the TransactionEventRequest (eventType = Ended) sent to the CSMS to provide more details about transaction usage.	
F04.FR.05	F04.FR.04 AND The Charging Station is running low on memory	The Charging Station MAY drop meter data.	

ID	Precondition	Requirement definition	Note
F04.FR.06	F04.FR.05	When dropping meter data, the Charging Station SHALL drop intermediate values first (1st value, 3th value, 5th etc), not start dropping values from the start of the list or stop adding values to the list.	

2.2. Unlock Connector

F05 - Remotely Unlock Connector

Table 132. F05 - Remotely Unlock Connector

No.	Type	Description
1	Name	Remotely Unlock Connector
2	ID	F05
	Functional block	F. RemoteControl
3	Objective(s)	To enable the CSO to help an EV-driver that has problems unplugging his charging cable because the locked failed after the transaction has ended.
4	Description	It sometimes happens that a connector of a Charging Station socket does not unlock correctly. This happens most of the time when there is tension on the charging cable. This means the driver cannot unplug his charging cable from the Charging Station. To help a driver, the CSO can send a UnlockConnectorRequest to the Charging Station. The Charging Station will then try to unlock the connector again.
	Actors	Charging Station, CSMS, External Trigger
	Scenario description	<ol style="list-style-type: none"> 1. An External Trigger (probably the CSO) request the unlocking of a specific connector of a Charging Station. 2. The CSMS sends an UnlockConnectorRequest to the Charging Station. 3. Upon receipt of UnlockConnectorRequest, the Charging Station responds with UnlockConnectorResponse. 4. The response message indicates whether the Charging Station was able to unlock its Connector.
5	Prerequisite(s)	No ongoing transaction on the specified connector The Charging Station has a connector lock.
6	Postcondition(s)	The Charging Station was able to unlock the Connector.

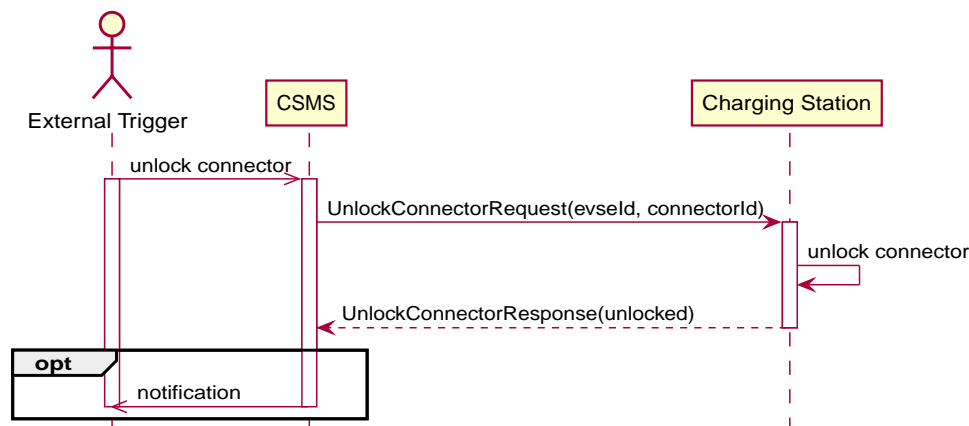


Figure 69. Sequence Diagram: Unlock Connector

7	Error handling	n/a
8	Remark(s)	<p>An external trigger, triggering the Unlock command, can be e.g. a Charging Station Operator or an EV Driver app.</p> <p>UnlockConnectorRequest is intended only for unlocking the cable retention lock on the Connector, not for unlocking a Connector access door.</p>

F05 - Remotely Unlock Connector - Requirements

Table 133. F05 - Requirements

ID	Precondition	Requirement definition
F05.FR.01	Upon receipt of an UnlockConnectorRequest .	The Charging Station SHALL respond with UnlockConnectorResponse .

ID	Precondition	Requirement definition
F05.FR.02	F05.FR.01 AND There is a an authorized transaction ongoing on the specified connector.	The Charging Station SHALL NOT try to unlock the connector (or stop the transaction) but use the status: <code>OngoingAuthorizedTransaction</code> in the <code>UnlockConnectorResponse</code> .
F05.FR.03	F05.FR.01 AND Specified connector unknown.	The Charging Station SHALL use the status: <code>UnknownConnector</code> in the <code>UnlockConnectorResponse</code> .
F05.FR.04	F05.FR.01 AND The Charging Station was able to unlock the specified connector.	The Charging Station SHALL use the status: <code>Unlocked</code> in the <code>UnlockConnectorResponse</code> .
F05.FR.05	F05.FR.01 AND The Charging Station was NOT able to unlock the specified connector.	The Charging Station SHALL use the status: <code>UnlockFailed</code> in the <code>UnlockConnectorResponse</code> .
F05.FR.06	F05.FR.01 AND No cable is connected to the connector.	The Charging Station SHALL attempt to unlock the connector, even if no cable is detected and SHALL return the result of the unlock attempt.

2.3. Remote Trigger

F06 - Trigger Message

Table 134. F06 - Trigger Message

No.	Type	Description
1	Name	Trigger Message
2	ID	F06
	<i>Functional block</i>	F. RemoteControl
3	Objective(s)	To enable the CSMS to request a Charging Station to send a Charging Station-initiated message.
4	Description	This use case describes the use of the TriggerMessageRequest message: how a CSMS can request a Charging Station to send Charging Station-initiated messages. In the request the CSMS indicates which message it wishes to receive.
	<i>Actors</i>	Charging Station, CSMS
	<i>Scenario description</i>	<ol style="list-style-type: none"> 1. The CSMS sends a TriggerMessageRequest to the Charging Station. 2. The Charging Station responds with a TriggerMessageResponse, indicating whether it will send it or not, by returning <i>Accepted</i>, <i>Rejected</i> or <i>NotImplemented</i>. 3. Message, requested by the CSMS, that the Charging Station marked as <i>Accepted</i>, is being sent.
5	Prerequisite(s)	The Functional Block <i>Remote Trigger</i> is installed.
6	Postcondition(s)	<p>Successful postconditions:</p> <ol style="list-style-type: none"> 1. The CSMS has <i>Successfully</i> received a TriggerMessageResponse message. 2. The CSMS has <i>Successfully</i> received a TriggerMessageResponse message with status <i>Accepted</i> AND has <i>Successfully</i> received the requested message. <p>Failure postconditions:</p> <ol style="list-style-type: none"> 1. The CSMS has NOT received a TriggerMessageResponse message. 2. The CSMS has <i>Successfully</i> received a TriggerMessageResponse message with status <i>Accepted</i> AND has NOT received the requested message.

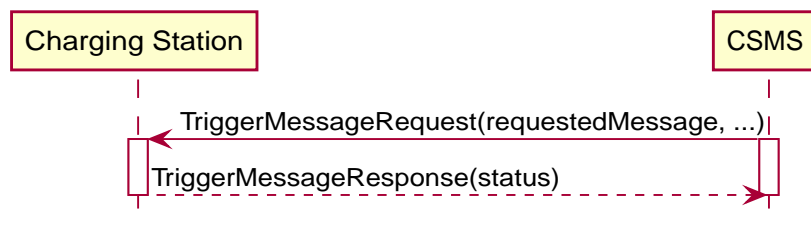


Figure 70. Sequence Diagram: Trigger Message

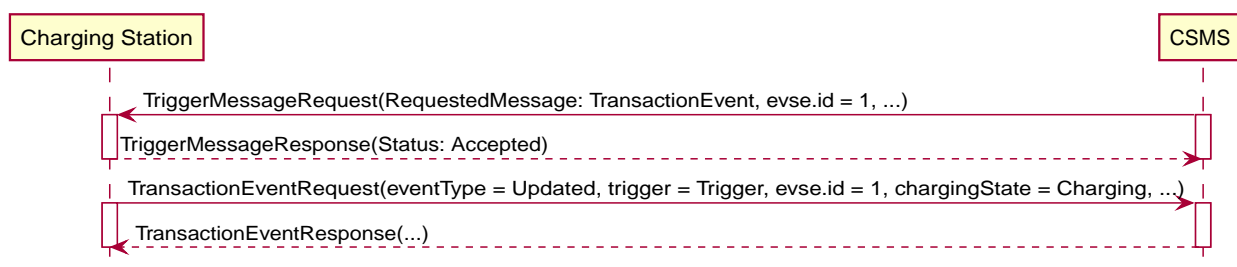


Figure 71. Sequence Diagram: Trigger Message Example

7	Error handling	n/a
8	Remark(s)	The TriggerMessage mechanism is not intended to retrieve historic data.

F06 - Trigger Message - Requirements

Table 135. F06 - Requirements

ID	Precondition	Requirement definition	Note
F06.FR.01		In the TriggerMessageRequest message, the CSMS SHALL indicate which message(s) it wishes to receive.	
F06.FR.02	F06.FR.01. For every such requested message.	The CSMS MAY indicate to which EVSE this request applies.	
F06.FR.03	F06.FR.02	The requested message SHALL be leading. If the specified evseld is not relevant to the message, it SHALL be ignored. In such cases the requested message SHALL still be sent.	
F06.FR.04	If a Charging Station receives a TriggerMessageRequest .	The Charging Station SHALL first send the TriggerMessageResponse before sending the requested message.	
F06.FR.05	F06.FR.04	In the TriggerMessageResponse the Charging Station SHALL indicate whether it will send the requested message or not, by returning <i>Accepted</i> or <i>Rejected</i> .	It is up to the Charging Station if it accepts or rejects the request to send.
F06.FR.06	If a Charging Station receives a TriggerMessageRequest with <i>requestedMessage</i> set to: <i>MeterValues</i>	The Charging Station SHALL send a MeterValuesRequest to the CSMS with the most recent measurements for all measurands configured in Configuration Variable: AlignedDataMeasurands .	
F06.FR.07	If a Charging Station receives a TriggerMessageRequest with <i>requestedMessage</i> set to: <i>TransactionEvent</i>	The Charging Station SHALL send a TransactionEventRequest to the CSMS with the current status of the transaction, and the most recent measurements for all measurands configured in Configuration Variable: SampledDataTxUpdatedMeasurands .	
F06.FR.08	When the Charging Station receives a TriggerMessageRequest with a <i>requestedMessage</i> that it has not implemented	The Charging Station SHALL respond with TriggerMessageResponse with status <i>NotImplemented</i> .	
F06.FR.09		The messages it triggers SHALL only give current information.	
F06.FR.10		Messages that the Charging Station marks as <i>Accepted</i> SHALL be sent.	E.g. the situation could occur that, between accepting the request and actually sending the requested message, that same message gets sent because of normal operations. In such cases the message just sent MAY be considered as complying with the request.
F06.FR.11	If the field <i>evse</i> is relevant but absent in the TriggerMessageRequest .	The Charging Station SHALL interpret this as "for all allowed evse values".	For example, a request for a <i>statusNotification</i> without <i>evse</i> is a request for multiple <i>statusNotifications</i> : a notification for each Connector of each EVSE.
F06.FR.12	If a Charging Station receives a TriggerMessageRequest with <i>requestedMessage</i> set to: <i>StatusNotification</i> AND <i>evse.id</i> is set to 0	The Charging Station SHALL respond with a TriggerMessageResponse with status <i>Rejected</i> .	<i>StatusNotification</i> messages can only be sent at connector level.

ID	Precondition	Requirement definition	Note
F06.FR.13	When sending a TriggerMessageRequest with <i>requestedMessage</i> set to: <i>StatusNotification</i>	The CSMS SHALL set the <i>connectorId</i> field	StatusNotification messages can only be sent at connector level.
F06.FR.14	If a Charging Station receives a TriggerMessageRequest with <i>requestedMessage</i> set to: <i>LogStatusNotification</i> AND The Charging Station is uploading a log file	The Charging Station SHALL send a LogStatusNotificationRequest to the CSMS with <i>status Uploading</i> .	
F06.FR.15	If a Charging Station receives a TriggerMessageRequest with <i>requestedMessage</i> set to: <i>LogStatusNotification</i> AND The Charging Station is NOT uploading a log file	The Charging Station SHALL send a LogStatusNotificationRequest to the CSMS with <i>status Idle</i> .	
F06.FR.16	If a Charging Station receives a TriggerMessageRequest with <i>requestedMessage</i> set to: <i>FirmwareStatusNotification</i> AND The Charging Station is not performing firmware update related tasks.	The Charging Station SHALL send a FirmwareStatusNotificationRequest to the CSMS with <i>status Idle</i> .	
F06.FR.17	If Charging Station receives a TriggerMessageRequest with <i>requestedMessage</i> set to: <i>BootNotification</i> AND the response it received from CSMS to the last BootNotificationRequest was: <i>Accepted</i>	Charging Station SHALL respond with a TriggerMessageResponse with <i>status Rejected</i> .	A trigger to request a Charging Station to send a <i>BootNotification</i> is only meant to be used when the <i>BootNotification</i> has not yet been accepted.