ChargePoint Web Services API Updates Overview

Document based on 5.0 Web Services API

Document Revision: 3
Revision Date: 2018-01-31

Purpose of the Document

This document is intended to provide the details on the functionality that is being added to support the VTA project and future load management features. These features are intended to be rolled out to the general population of stations as the functionality becomes available. The document will include all of the changes from the original web services 5.0 api highlighted in red text. Due to the nature of the changes, we have decided to rev the version of the API to be 5.1 so the endpoint that the changes will be on has changed to the links below:

- WSDL File: https://webservices.chargepoint.com/cp_api_5.1.wsdl
- SOAP Endpoint: https://webservices.chargepoint.com/webservices/chargepoint/services/5.1

1 Changes to Demand Management API

1.1 getLoad

Use this call to retrieve the load and shed state for a single station or custom station group. This method also returns the load for each port on a multi-port station. It will also return the group max load if the load shed command was run against a group.

1.1.1 Restrictions

Some of the fields might not be populated due to lack of support on vehicle and/or station. This information is limited to the battery percentage at this time.

1.1.2 Input Parameters

Parameter	Description	Required/ Optional	Type
sgID	Custom Station Group identifier.	Required	String
stationID	A unique station identifier used in ChargePoint. This identifier never changes, even when the station's head assembly is swapped. Format : CPNID:StationIdentifier	Optional	String
sessionID	A globally unique session identifier.	Optional	String

1.1.3 Response Parameters

Parameter	Description	Type
sgID	Custom Station Group identifier.	String
numStations	Number of stations in the group	Integer
groupName	Name of the custom station group	String
sgLoad	Present load for the custom station group (kW)	Float
groupAllowedLoad	If station is a part of a group that a load shed command was run against, this field will display the max allowed load of the group (kW).	Float
transformerPowerLimitSetValue	If this group has been setup for group level load control, the transformer limit is the physical maximum load in kW allowed for the group of stations.	Float

Parameter	Description	Type
transformerPowerLimit	The ChargePoint server reserves a buffer of 10% when using a Transformer Power Limit. This value reports the value that was set minus the 10% reserve in kW.	Float
panelCurrentLimitSetValue	This is the maximum breaker size for the panel as specified in the Panel Sharing configuration. This value is returned in Amps for the panel or group. This field is only applicable for groups of stations with only AC EVSE. Groups with any DC stations will only use transformerPowerLimitSetValue and transformerPowerLimit.	Float
panelCurrentLimit	The ChargePoint server reserves a buffer of and 20% when using a Panel Current Limit. This value reports the value that was set minus the 20% reserve in Amps.	Float
stationData	Response will include one of these objects for each station that matches the query.	Complex Type
stationID	A unique station identifier used in ChargePoint. This identifier never changes, even when the station's head assembly is swapped. Format : CPNID:StationIdentifier	String
stationName	Display name of the station (Line 1/Line 2). Line 1 is the name of the organization that owns the station and Line 2 is the name of the station. For example (COULOMB TECH / FRONT LOT 01).	String
Address	Station Address (Street Address, City, State, Postal Code, Country)	String
stationLoad	Present load for the station (kW)	Float
Port	Object representing a single port on a station. Multi-port stations will have one Port object for each port.	Complex Type
portNumber	Identifier for the port. Stations with multiple plugs associated with a single port will use a letter to indicate the port identifier.	String

Parameter	Description	Type
userID	Unique ID of the driver currently charging on this port.	String
credentialID	Identifier of the credential used to start the session. If it was a ChargePoint RFID card, it is the printed serial number on the card. If it was the ChargePoint Mobile App, it will be the identifier displayed in the user's mobile app. Contactless credit cards will be obviously be displayed as blank.	String
shedState	1 = Shed, 0 = Not Shed	bool
portLoad	Present load for the port (kW)	Float
allowedLoad	Maximum load allowed at the station (kW). If percentShed was used in the last shedLoad call to this station, this parameter will be zero.	Float
percentShed	Percent of load currently being shed. If allowedLoad was used in the last shedLoad call to this station, this parameter will be zero.	Integer
lastBatteryPercent	Returns the latest Battery percentage of the vehicle connected to this port, if both the car and station support this functionality.	Float
sessionID	A globally unique session identifier.	String

1.1.4 getLoad - Sample Input

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ns1="urn:dictionary:com.chargepoint.webservices">
  <SOAP-ENV:Header xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd">
    <wsse:Security SOAP-ENV:mustUnderstand="1">
      <wsse:UsernameToken>
   <wsse:Username>0123456789abcdef0123456789abcdef0123456789abcdef0123456</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-username-
token-profile-1.0#PasswordText">0123456789abcdef0123456789abcdef</wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <ns1:getLoad>
      <sgID>12345</sgID>
      <stationID>1:123456</stationID>
    </ns1:getLoad>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

1.1.5 getLoad – Sample Response

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" SOAP-ENV:mustUnderstand="1"/>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <ns1:getLoadResponse xmlns:ns1="urn:dictionary:com.chargepoint.webservices"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
         <responseCode>100</responseCode>
         <responseText>API input request executed successfully.</responseText>
         <sgID>12345</sgID>
         <numStations>1</numStations>
         <groupName>Building Front</groupName>
         <sgLoad>6.884</sgLoad>
         <groupAllowedLoad>80.0</groupAllowedLoad>
          <transformerPowerLimitSetValue>100.0</transformerPowerLimitSetValue>
          <transformerPowerLimit>90.0</transformerPowerLimit>
         <stationData>
            <stationID>1:123456</stationID>
            <stationName>MY COMPANY / STATION 15</stationName>
            <Address>123 Main St, Campbell, California,  95008, United States</Address>
            <stationLoad>6.884</stationLoad>
            <Port>
               <portNumber>1</portNumber>
               <userID>1234556</userID>
               <credentialID>98765341234</credentialID>
               <shedState>0</shedState>
               <portLoad>3.884</portLoad>
               <allowedLoad>0.000</allowedLoad>
               <percentShed>0</percentShed>
               <SessionID>123456</SessionID>
            </Port>
            <Port>
               <portNumber>2</portNumber>
               <userID>1234557</userID>
               <credentialID>98765341235</credentialID>
               <shedState>1</shedState>
               <portLoad>3.000</portLoad>
               <allowedLoad>3.000</allowedLoad>
               <percentShed>0</percentShed>
              <lastBatteryPercent>72.5</lastBatteryPercent>
              <SessionID>123456</SessionID>
            </Port>
         </stationData>
    </ns1:getLoadResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

1.2 shedLoad

Use this call to shed load for a single port on a station, both ports on a multi-port station or a group of stations. Only one of these three options may be used in a request as follows:

- Group: Include the shedGroup element.
- Station: Include the shedStation element and either the allowedLoadPerStation or percentShedPerStation parameters within that element; omit the Ports array.
- Port: Include the shedStation element and the Ports array; set the allowedLoadPerStation and percentShedPerStation parameters in the shedStation element to a null value or omit them from the request.

Load shedding may be performed in one of the following modes. Mixing modes on a single station is not permitted:

- percentShedPerStation or Port – Percentage of a station or port's present power output to be shed
- allowedLoadPerStation or Port – Absolute maximum allowable load in kW

Shedding is performed by specifying either the percentage of the station or port's present power output using the percentShedPerStation or percentShedPerPort parameter, or by setting an absolute maximum allowable load (in kW) for a specified time period using the allowedLoadPerStation or allowedLoadPerPort parameter. Subsequent calls will overwrite previous values if you use the same mode (allowedLoad vs. percentShed). If you use a different mode before the shed state is cleared using clearShedState, the call is ignored.

Note that if the percentShedPerStation or percentShedPerPort parameter is used on a subsequent call, it will operate on the power measured when the first call to shedLoad was made. For example, if a station is delivering 10 kW, and a call is made to shed 30%, it will drop to 7 kW. If a subsequent call is then made to shed 50%, the station will drop to 5 kW (not 3.5kW). In contrast the allowedLoadPerStation and allowedLoadPerPort parameters set the absolute maximum.

When the groupAllowedLoad command is sent against a group of stations, it will allow the ChargePoint server to use this as the total amount of power the stations can dispense in aggregate. This allows the server to dynamically adjust the power to all stations in the group to maximize the power to active drivers while staying below the threshold. This allows station owners to do things such as operate with an undersized panel / transformer or mitigate demand charges while still allowing for the best possible user experience. Any group that uses groupAllowedLoad must have a maximum cap set by either the Transformer Power Limit in kW or the Panel Current Limit in Amps. Furthermore, the ChargePoint server adds a reserve value of 10% below the Transformer Power Limit and 20% below the Panel Current Limit to avoid damaging infrastructure. If the groupAllowedLoad value is set to a value greater than the Transformer Power Limit minus the reserve or the Panel Current Limit minus the reserve (adjusted for kW based upon the voltage levels for the connected AC charging stations in the group), the server will throw an error that the groupAllowedLoad is greater than what is allowed for the infrastructure.

Note: If you use the shedLoad call with the percentShedPerStation or percentShedPerPort parameter on a station that is not delivering any power, the maximum output is set to 0 kW, and charging will not be allowed on that station until the shed period ends or a call to clearShedState is made.

1.2.1 Restrictions

None.

1.2.2 Input Parameters

Parameter	Description	Required/ Optional	Type
shedGroup	Include this object if you want to shed load for a group of stations.	Optional	Complex Type
sgID	Custom Station Group identifier.	Required	Integer
groupAllowedLoad	Set the aggregate allowed load for the group of stations in kW. This value must be less than or equal to the transformerPowerLimit or panelCurrentLimit (adjusted to kW based upon the panel voltage). Note that if the group is configured to use a Transformer Power Limit, the server will enforce a 10% reserve below this value to prevent blowing the transformer. If the Panel Current Limit is set for the group, the server will enforce a 20% reserve below this value to meet breaker loading regulations.	Optional	Float
allowedLoadPerStation	Maximum allowed load expressed in kW. This value is an absolute maximum and is not relative to the power being dispensed by the station. At the group level, this parameter applies to each station, not the total power for the group. If this parameter is set, percentShedPerStation must be set to a null value.	Optional	Float
percentShedPerStation	Percentage of the power currently being dispensed by the station to shed. For example, if the station is currently dispensing 10kW, a value	Optional	Float

Parameter	Description	Required/ Optional	Type
	of 60% will lower the power being dispensed to 4kW. At the group level, this value applies to each station. If a station is not dispensing any power, the output will be set to zero until the shed state is cleared. If this parameter is set, allowedLoadPerStation must be set to a null value.		
shedStation	Include this object if you want to shed the load for a single station or single port on a multi-port station.	Optional	Complex Type

stationID	A unique station identifier used in ChargePoint database. The identifier never changes, even when the station's hardware is replaced. Format : CPNID:StationIdentifier	Required	String
allowedLoadPerStation	Maximum allowed load expressed in kW. This value is an absolute maximum and is not relative to the power being dispensed by the station. This value only applies to the station specified by the stationID parameter. If this parameter is set, percentShedPerStation must be set to a null value.	Optional	Float
percentShedPerStation	Percentage of the power currently being dispensed by the station to shed. For example, if the station is currently dispensing 10kW, a value of 60% will lower the power being dispensed to 4kW. This value only applies to the station specified by the stationID parameter. If this parameter is set, allowedLoadPerStation must be set to a null value.	Optional	Float
Ports	Array of port objects.	Optional	Array
Port	Object that represents a port on a station.	Optional	Complex Type
portNumber	Identifier for the port. Stations with multiple connectors for a single port will use a letter to indicate the port identifier.	Optional	String
allowedLoadPerPort	Maximum allowed load expressed in kW. This value is an absolute maximum and is not relative to the power being dispensed by the port. If this parameter is set, percentShed must be set to a null value.	Optional	Float
percentShedPerPort	Percentage of the power currently being dispensed by the port to shed. For example, if the port is currently dispensing 10kW, a value	Optional	Integer

	of 60% will lower the power being dispensed to 4kW. If a port is not dispensing any power, the output will be set to zero until the shed state is cleared. If this parameter is set, allowedLoadPerPort must be set to a null value.		
timeInterval	Time interval in minutes. A value of 0 indicates that there is no specified duration for which the power will be shed.	Required	Integer

1.2.3 Response Parameters

Parameter	Description	Type
Success	A success (1) or failure (0) response code only.	Boolean
sgID	Custom Station Group identifier.	String
groupAllowedLoad	Maximum load for the group in kW.	Float
allowedLoadPerStation	Maximum load allowed expressed in kW. If percentShed was set in the request, this parameter will be null.	Float
percentShedPerStation	Percentage of the power currently being dispensed by the station to shed. If allowedLoad was set in the request, this parameter will be null.	Integer
stationID	A unique station identifier used in ChargePoint database. The identifier never changes, even when the stations's head assembly is swapped. Format: CPNID:StationIdentifier	String
Ports	Array of Port objects for the station if a single port was shed.	Array
Port	Port object that has been shed.	Complex Type
portNumber	Identifier for the port. Stations with multiple plugs associated with a single port will use a letter to indicate the port identifier.	String
allowedLoadPerPort	Maximum allowed load expressed in kW. This value is an absolute maximum and is not relative to the power being dispensed by the	Float

Parameter	Description	Type
	port. If this parameter is set, percentShed must be set to a null value.	

percentShedPerPort	Percentage of the power currently being dispensed by the port to shed. For example, if the port is currently dispensing 10kW, a value of 60% will lower the power being dispensed to 4kW. If a port is not dispensing any power, the output will be set to zero until the shed state is cleared. If this parameter is set, allowedLoadPerPort must be set to a null value.	Integer

1.2.4 shedLoad - Sample Input for Single Port

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ns1="urn:dictionary:com.chargepoint.webservices">
  <SOAP-ENV:Header xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd">
    <wsse:Security SOAP-ENV:mustUnderstand="1">
      <wsse:UsernameToken>
   <wsse:Username>0123456789abcdef0123456789abcdef0123456789abcdef0123456</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-username-
token-profile-1.0#PasswordText">0123456789abcdef0123456789abcdef</wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <ns1:shedLoad>
      <shedQuery>
        <shedStation>
          <stationID>1:123456</stationID>
          <Ports>
            <Port>
              <portNumber>1</portNumber>
              <allowedLoadPerPort>3.0</allowedLoadPerPort>
            </Port>
          </Ports>
        </shedStation>
        <timeInterval/>
      </shedQuery>
    </ns1:shedLoad>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

1.2.5 shedLoad – Sample Response for Single Port

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" SOAP-ENV:mustUnderstand="1"/>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <ns1:shedLoadResponse xmlns:ns1="urn:dictionary:com.chargepoint.webservices"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
      <responseCode>100</responseCode>
      <responseText>API input request executed successfully.</responseText>
      <Success>1</Success>
      <sgID/>
      <allowedLoadPerStation/>
      <percentShedPerStation/>
      <stationID>1:123456</stationID>
      <Ports>
        <Port>
          <portNumber>1</portNumber>
          <allowedLoadPerPort>3.0</allowedLoadPerPort>
        </Port>
      </Ports>
    </ns1:shedLoadResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

1.2.6 shedLoad - Sample Input for Station Group

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ns1="urn:dictionary:com.chargepoint.webservices">
  <SOAP-ENV:Header xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd">
    <wsse:Security SOAP-ENV:mustUnderstand="1">
      <wsse:UsernameToken>
   <wsse:Username>0123456789abcdef0123456789abcdef0123456789abcdef0123456</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-username-
token-profile-1.0#PasswordText">0123456789abcdef0123456789abcdef</wsse:Password>
      </wsse:UsernameToken>
    </wsse:Security>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <ns1:shedLoad>
      <shedQuery>
        <shedGroup>
          <sgID>1:1234</sgID>
          <groupAllowedLoad>70.0</groupAllowedLoad>
          <timeInterval/>
        </shedGroup>
      </shedQuery>
    </ns1:shedLoad>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

1.2.7 shedLoad – Sample Response for Station Group

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" SOAP-ENV:mustUnderstand="1"/>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <ns1:shedLoadResponse xmlns:ns1="urn:dictionary:com.chargepoint.webservices"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
      <responseCode>100</responseCode>
      <responseText>API input request executed successfully.</responseText>
      <Success>1</Success>
      <sgID>1:1234</sgID>
      <groupAllowedLoad>70.0</groupAllowedLoad>
    </ns1:shedLoadResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

2 Changes to Usage Analysis API

2.1 getChargingSessionData

This call retrieves final session summaries for a station owner's (organization's) charging station(s)based on search criteria. The License Key is linked to a single station owner during the License Key creation process.

2.1.1 Restrictions

Each call returns a maximum of 100 sessions.
15 minute data and driver information has service plan restrictions.

2.1.2 Input Parameters

Note: Without specifying proximity, searches based on location (i.e., Address, City, State, PostalCode, Country) return stations based on text that matches the specified location parameters. For example, if you specify a street address and city, the response includes all stations that match the values you specified for address and city. If you specify city only, the response includes all stations in the specified city. If you specify city and state, the response includes all stations that match the city and state.
When you specify proximity, the response returns all stations within the radius specified for the proximity value, with the radius centered at the most granular location information specified. For example, if you specify a street address, a city, and a state, and specify a proximity of 50 miles, the response includes all stations located with a 50 mile radius of the specified street address. However, if you specify only a state and a 50 mile radius, the response includes all stations within a 50 mile radius of the center of the specified state.

Parameter	Description	Required/ Optional	Type
stationID	A unique station identifier used in ChargePoint. This identifier never changes, even when the station's head assembly is swapped. Format : CPNID:StationIdentifier	Optional	String
sessionID	A globally unique session identifier.	Optional	String
stationName	Name of the station (wild card characters allowed). It should be searched for by both company name (the name of the organization that owns the charging station) and station name. Company name is displayed on Line 1 of the charging station (if applicable) and the station name is displayed on Line 2 of the charging station (if applicable).	Optional	String
Address	Street number and street name.	Optional	String
City	City where the station(s) are located.	Optional	String

Parameter	Description	Required/ Optional	Type
State	State where the station(s) are located.	Optional	String
Country	Country where the station(s) are located.	Optional	String
postalCode	Postal (i.e. Zip) Code where the station(s) are located.	Optional	String
Proximity	Distance from the reference point within which you want to retrieve station information.The default is 5 miles.	Optional	Integer
proximityUnit	Default value for proximity unit is M. Can have values: M (Miles), N (Nautical miles), K (Kilometer), F (Feet), I (Inches). Default unit is M	Optional	String
fromTimeStamp	The sessions time >= from timestamp in UTC indicating the start of the charging session.	Optional	dateTime
toTimeStamp	The sessions time< from timestamp in UTC indicating the end of the charging session.	Optional	dateTime
startRecord	Indicates the record number of the first session to be returned. Useful when iterating over many sessions that exceed the maximum sessions (100) that are returnable in a single call.	Optional	Long
Lat	Latitude of the reference point.	Optional	Float
Long	Longitude of the reference point.	Optional	Float

2.1.3 Response Parameters

Parameter	Description	Type
stationID	A unique station identifier used in ChargePoint. This identifier never changes, even when the station's head assembly is swapped. Format : CPNID:StationIdentifier	String
stationName	Display name (Line1/Line2) of the station.	String
portNumber	Identifier of the port used for the session.	Integer
Address	Address around which you want to see stations. Proximity to Google-resolved point: street number and street name.	String
City	City where the station is located.	String
State	State where the station is located.	String
Country	Country where the station is located.	String
postalCode	Postal (i.e. Zip) Code where the station is located.	String
sessionID	A globally unique session identifier.	String
recordNumber	Record number of the charging session. Useful when iterating over many sessions that exceed the maximum sessions (100) that are returnable in a single call.	Long
startTime	Start time of session in UTC in ISO8601 Format (YYYY-MM-DDTHH:MM:SSZ).	dateTime
endTime	End time of session in UTC in ISO8601 Format (YYYY-MM-DDTHH:MM:SSZ).	dateTime
Energy	Energy consumed (kWh).	Float
startBatteryPercentage	Starting Battery Percentage if both the station and vehicle support it.	Float
stopBatteryPercentage	Battery Percentage at the end of the session if both the station and vehicle support it.	Float
moreFlag	Indicates that the number of sessions is greater than the maximum number of sessions that can be returned in one call (currently 100), and therefore the session list was truncated.	Boolean
rfidSerialNumber*	The serial number associated with the ChargePoint card. Not applicable if an RFID card was not used to start the session.	String
driverAccountNumber*	The driver's ChargePoint account number.	String

Parameter	Description	Type
driverName*	The name of the driver who used the station during this session. This value is not applicable if an RFID card was not used to start the session. The driver must be connected to the calling organization in order for the driver name to appear in the response.	String
vehicleID*	A unique vehicle identifier if both the station and vehicle support it.	String

**Only returned if the Organization has a Service Provider plan and has appropriate rights over the station.*

2.1.4 getChargingSessionData - Sample Input

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:urn="urn:dictionary:com.chargepoint.webservices">
   <soapenv:Header xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd">
      <wsse:Security soapenv:mustUnderstand="1">
         <wsse:UsernameToken>

<wsse:Username>0123456789abcdef0123456789abcdef0123456789abcdef0123456</wsse:Username>
            <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
username-token-profile-1.0#PasswordText">0123456789abcdef0123456789abcdef</wsse:Password>
         </wsse:UsernameToken>
      </wsse:Security>
   </soapenv:Header>
   <soapenv:Body>
      <urn:getChargingSessionData>
         <searchQuery>
            <stationID>1:41613</stationID>
            <startRecord>5</startRecord>
         </searchQuery>
      </urn:getChargingSessionData>
   </soapenv:Body>
</soapenv:Envelope>
```

2.1.5 getChargingSessionData - Sample Response

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
   <soapenv:Header>
      <wsse:Security soapenv:mustUnderstand="1" xmlns:wsse="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
         <wsu:Timestamp xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd">
            <wsu:Created>2014-04-23T21:34:08.912Z</wsu:Created>
            <wsu:Expires>2014-04-23T21:39:08.912Z</wsu:Expires>
         </wsu:Timestamp>
      </wsse:Security>
   </soapenv:Header>
   <soapenv:Body>
      <ns1:getChargingSessionDataResponse xmlns:ns1="urn:dictionary:com.chargepoint.webservices">
         <responseCode>100</responseCode>
         <responseText>API input request executed successfully.</responseText>
         <ChargingSessionsData>
            <stationID>1:41613</stationID>
            <stationName>MY COMPANY / FRONT 14</stationName>
            <portNumber>1</portNumber>
            <Address>1692 Dell Ave,,Campbell,California,95008,United States</Address>
            <City>Campbell</City>
            <State>California</State>
            <Country>United States</Country>
            <postalCode>95008</postalCode>
            <sessionID>11534253</sessionID>
            <Energy>11.362906</Energy>
```

```
            <startBatteryPercentage>23.7</startBatteryPercentage>
            <stopBatteryPercentage>80.0</stopBatteryPercentage>
            <startTime>2013-06-17T19:01:07Z</startTime>
            <endTime>2013-06-17T22:46:03Z</endTime>
            <recordNumber>5</recordNumber>
            <vehicleID>1234567</vehicleID>
         </ChargingSessionsData>
         <ChargingSessionsData>
            <stationID>1:41613</stationID>
            <stationName>MY COMPANY / FRONT 14</stationName>
            <portNumber>2</portNumber>
            <Address>1692 Dell Ave,,Campbell,California,95008,United States</Address>
            <City>Campbell</City>
            <State>California</State>
            <Country>United States</Country>
            <postalCode>95008</postalCode>
            <sessionID>11534725</sessionID>
            <Energy>11.272077</Energy>
            <startBatteryPercentage>23.7</startBatteryPercentage>
            <stopBatteryPercentage>80.0</stopBatteryPercentage>
            <startTime>2013-06-17T19:41:29Z</startTime>
            <endTime>2013-06-18T02:07:41Z</endTime>
            <recordNumber>6</recordNumber>
            <vehicleID>1234567</vehicleID>
         </ChargingSessionsData>
         <ChargingSessionsData>
            <stationID>1:41613</stationID>
            <stationName>MY COMPANY / FRONT 14</stationName>
            <portNumber>2</portNumber>
            <Address>1692 Dell Ave,,Campbell,California,95008,United States</Address>
            <City>Campbell</City>
            <State>California</State>
            <Country>United States</Country>
            <postalCode>95008</postalCode>
            <sessionID>11545083</sessionID>
            <Energy>18.632622</Energy>
            <startTime>2013-06-18T16:15:49Z</startTime>
            <endTime>2013-06-18T22:33:18Z</endTime>
            <recordNumber>7</recordNumber>
         </ChargingSessionsData>
         <MoreFlag>1</MoreFlag>
      </ns1:getChargingSessionDataResponse>
   </soapenv:Body>
</soapenv:Envelope>
```

3 Changes to the Push Framework

3.1.1 station_charging_session_start

3.1.1.1 Event Parameters

Parameter Name	Description	Type
feedEventName	Name of the event	String
stationID	A unique station identifier used in ChargePoint. This identifier never changes, even when the station's head assembly is swapped. Format : CPNID:StationIdentifier	String
sessionID	A globally unique session identifier.	String
startTime	The start time of the charging session (ISO 8601 date time format in UTC YYYY-MM-DDTHH:MM:SSZ)	dateTime
portNumber	ID of the port on the station	Integer
rfID*	The serial number associated with the ChargePoint card. Not applicable if an RFID card was not used to start the session.	String
startBatteryPercentage	Starting Battery Percentage if both the station and vehicle support it.	Float
vehicleID	A unique vehicle identifier if both the station and vehicle support it.	String

**Only returned if the Organization has a Service Provider plan and has appropriate rights over the station.*

3.1.1.2 Message Format

```
<?xml version="1.0" encoding="UTF-8"?>
<event>
    <feedEventName><![CDATA[station_charging_session_start]]></feedEventName>
    <stationID><![CDATA[1:10628]]></stationID>
    <sessionID><![CDATA[193]]></sessionID>
    <startTime><![CDATA[2012-09-13T10:45:05Z]]></startTime>
    <portNumber><![CDATA[2]]></portNumber>
    <rfID><![CDATA['E00700002AD39816']]></rfID>
    <startBatteryPercentage><![CDATA[23.4]]></startBatteryPercentage>
    <vehicleID><![CDATA['19UUA66297A096663']]></vehicleID>
</event>
```

3.1.2 station_charging_session_stop

3.1.2.1 Event Parameters

Parameter Name	Description	Type
feedEventName	Name of the event	String
stationID	A unique station identifier used in ChargePoint. This identifier never changes, even when the station's head assembly is swapped. Format : CPNID:StationIdentifier	String
sessionID	A globally unique session identifier.	String
startTime	The start time of the charging session (ISO 8601 date time format in UTC YYYY-MM-DDTHH:MM:SSZ)	dateTime
endTime	The end time of the charging session (ISO 8601 date time format in UTC YYYY-MM-DDTHH:MM:SSZ)	dateTime
portNumber	ID of the port on the station	Integer
stopBatteryPercentage	Battery Percentage at the end of the session if both the station and vehicle support it.	Float

3.1.2.2 Message Format

```
<?xml version="1.0" encoding="UTF-8"?>
<event>
    <feedEventName><![CDATA[station_charging_session_stop]]></feedEventName>
    <stationID><![CDATA[1:10628]]></stationID>
    <sessionID><![CDATA[193]]></sessionID>
    <startTime><![CDATA[2012-09-13T10:45:05Z]]></startTime>
    <endTime><![CDATA[2012-09-13T13:00:25Z]]></endTime>
    <portNumber><![CDATA[2]]></portNumber>
    <stopBatteryPercentage><![CDATA[23.4]]></stopBatteryPercentage>
</event>
```