



OCHP Update Announcement

Target Versions: OCHP 1.3 | eCHS 1.0.1

Announcement Date: March 11, 2015

Protocol Release Date: April 1, 2015

eCHS Upgrade Date: July 1, 2015

Introduction

Management Summary

After almost a full year of so far undisturbed productive operation of eCHS on OCHP Version 1.2, the next version will be available. Starting with a integration phase on first of July 2015, the new interface will provide more functionality and higher convenience in the implementation.

Along with OCHP 1.3 comes the **OCHP-direct Extension**, providing a simple yet powerful feature set for remote access and direct charging session control over roaming partner's system borders: *Let your customers start and stop charging sessions at any roaming partner's charge pole through your app!*

Technical Summary

In this update to OCHP 1.3 some enhancements are made to the API. Besides a few minor updates, bug fixes and spellings corrections also new features are added to the API. A field 'time zone' is added to specify the time zone of a specific charge point, which was requested by navigation partners. One more feature requested by navigation partners is the *GeneralLocationType*, which enables EVSE owners to specify where the charge point is located. This can be for example 'on-street', but also in a 'parking-garage'.

Another new feature is the possibility to specify remote authorization types to the *AuthMethodType*, which is extended with *OchpDirectAuth* and *OperatorAuth*. *OchpDirectAuth* enables the authorization via an OCHP-direct capable provider, whereas *OperatorAuth* enables a direct online payment for a specific EVSE.

One more important improvement in OCHP 1.3 is the addition of power ratings in the *RatingsType* class. Values of the *maximumPower*, *guaranteedPower* and *nominalVoltage* can be supplied by the EVSE owner.

eCHS is extended with the possibility to receive notifications e-mails about incoming roaming requests. Also the roaming connections matrix is enhanced with a button to switch the view of the matrix to showing a list of own partners for a selected foreign partner.

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Changes to OCHP

1. Renamed all wrongly spelled occurrences of calypso

Change type: Bug Fix

Impact: Specification, API, eCHS

Backward-Compatibility: eCHS translates the value to OCHP 1.2

Forward-Compatibility: eCHS translates the value to OCHP 1.3

Impact for partners: none

Description: There were different spelling versions of the name “Calypso” around. Specification and WSDL gets harmonized to the right one.

Change: [A4310CB9EBF453DF6ECE052278BEE50B73E3449F](#)

Specification

(none)

WSDL (API)

1248	1248		DirectCash; The EVSE can be accessed through direct payment in cash. Direct
1249	1249		RfidMifareCls; Personal RFID token with roaming relation. (Mifare Classic)
1250	1250		RfidMifareDes; Personal token with roaming relation. (Mifare Desfire)
1251	-	-	RfidCalypso; Personal RFID token with roaming relation. (Calypso)
	1251	+	RfidCalypso; Personal RFID token with roaming relation. (Calypso)
1252	1252		Iec15118; In-car access token as specified in IEC-15118
1253	1253		</s:documentation>
1254	1254		</s:annotation>
 @@ -1263,7 +1263,7 @@ http://creativecommons.org/licenses/by-nd/4.0/.			
1263	1263		<s:enumeration value="DirectDebitcard"></s:enumeration>
1264	1264		<s:enumeration value="RfidMifareCls"></s:enumeration>
1265	1265		<s:enumeration value="RfidMifareDes"></s:enumeration>
1266	-	-	<s:enumeration value="RfidCalypso"></s:enumeration>
	1266	+	<s:enumeration value="RfidCalypso"></s:enumeration>
1267	1267		<s:enumeration value="Iec15118"></s:enumeration>
1268	1268		</s:restriction>
1269	1269		</s:simpleType>

eCHS GUI

(none)

2. Changed error codes for eCHS response messages

Change type:	Enhancement
Impact:	<input checked="" type="checkbox"/> Specification, <input checked="" type="checkbox"/> API, <input type="checkbox"/> eCHS
Backward-Compatibility:	OCHP 1.2 interface responds with old error codes.
Forward-Compatibility:	OCHP 1.3 interface responds with new error codes.
Impact for partners:	Error handling should be revised and updated when implementing OCHP 1.3
Description:	The error codes in OCHP 1.2 do not represent all situations correctly. Error handling in partner's systems may be difficult. New error codes are introduced.

Change: [664Fc946130BB45E79970c8cf6c9882657E030A0](#)

Specification

Value	Description
ok	Data accepted and processed;
partly	Only part of the data was accepted;
not-authorized	Wrong username and/or password.
invalid-id	One or more ID (EVSE/Contract) were not valid for this user.
server	Internal server error.
other	Other error type. See Description for details.
format	Data could not be processed due to formal error in the SOAP message.
missing	A mandatory value was missing.
range	A given value was out of the allowed range.

WSDL (API)

1614	1614		<s:annotation>
1615	1615		<s:documentation>
1616	1616		ok: Data accepted and processed;
1617		-	server: Internal server error;
1618		-	other: Other error type. See description for details;
1619		-	format: Data could not be processed due to formal error in
1620		-	missing: A mandatory value was missing;
1621		-	range: A given value was out of the allowed range;
	1617	+	partly: Only part of the data was accepted;
	1618	+	not-authorized: Wrong username and/or password;
	1619	+	invalid-id: One or more ID (EVSE/Contract) were not valid
	1620	+	server: Internal server error;
1622	1621		</s:documentation>
1623	1622		</s:annotation>
1624	1623		<s:simpleType>
1625	1624		<s:restriction base="s:string">
1626	1625		<s:enumeration value="ok"></s:enumeration>
	1626	+	<s:enumeration value="partly"></s:enumeration>
	1627	+	<s:enumeration value="not-authorized"></s:enumeration>
	1628	+	<s:enumeration value="invalid-id"></s:enumeration>
1627	1629		<s:enumeration value="server"></s:enumeration>
1628		-	<s:enumeration value="other"></s:enumeration>
1629		-	<s:enumeration value="format"></s:enumeration>
1630		-	<s:enumeration value="missing"></s:enumeration>
1631		-	<s:enumeration value="range"></s:enumeration>
1632	1630		</s:restriction>
1633	1631		</s:simpleType>
1634	1632		</s:element>

eCHS GUI

(none)

3. Re-arranged the geo reference handling

- Change type: Enhancement
- Impact: Specification, API, eCHS
- Backward-Compatibility: eCHS maps the geo points to the OCHP 1.2 structure and omits the names. Additional geo points which do not fit the OCHP 1.2 structure are left out. There are no such situations known in the current data.
- Forward-Compatibility: eCHS maps the geo points into the new structure and does not set the name fields.
- Impact for partners: Implement new structure, possibility to send more details.
- Description: For user navigation purpose a name field to each entry or exit point of a parking area is needed. This can be displayed to the driver while navigation into bigger parking sites with multiple entrances. To support this, the geo referencing gets re-arranged.

Change: [30E3FC30D070DFDCCB055F96c7c92CDECC196288](#)

Specification

AdditionalGeoPointType class

This class defines a geo location. The geodetic system to be used is WGS 84.

Field Name	Field Type	Card.	Description
lat	string(10)	1	Latitude of the point in decimal degree. Example: 50.770774. Decimal separator: "." Regex: <code>-?[\$0-9\$]{1,2}\$\.\$[\$0-9\$]{6}</code>
lon	string(11)	1	Longitude of the point in decimal degree. Example: -126.104965. Decimal separator: "." Regex: <code>-?[\$0-9\$]{1,3}\$\.\$[\$0-9\$]{6}</code>
name	string(255)	?	Name of the point in local language or as written at the location. For example the street name of a parking lot entrance or it's number.
class	GeoClass	1	The class of this geo point for categorization and right usage.

GeoClassType enum

Where the type-enum can be one of the following choices:

Value	Description
entrance	For larger sites entrances may be specified for navigation.
exit	For larger sites exits may be specified for navigation purpose.
access	Two directional entrance and exit.
ui	Geographical location of the user interface for authorisation and payment means. If not specified the user interface is assumed to be at the location of the charge point.
other	Other relevant point. Name recommended.

ConnectorStandard enum



Property	Type	Cardinality	Description
geoLocation chargePointLocation	GeoPointType	1	Geographical location of the charge point itself (power outlet).
geoUserInterface relatedLocation	GeoPointType AdditionalGeoPointType	?	Geographical location of the user interface for authorisation and payment means. If not specified related points relevant to the user interface is assumed to be at the location specified in geoLocation .
geoSiteEntrance	GeoPointType	±	For larger sites entrances may be specified for navigation.
geoSiteExit	GeoPointType	±	For larger sites exits may be specified for navigation purpose. If only entrances are set, two-direction traffic is assumed.



WSDL (API)

```

1015 | 1015 | <s:complexType name="GeoPointType">
1016 | - | <s:sequence>
1017 | - | <s:element name="lat" minOccurs="1" maxOccurs="1">
1018 | - | <s:annotation>
1019 | - | <s:documentation>
1020 | - | Latitude of the Point in decimal degree. Example: 50.10496
1021 | - | </s:documentation>
1022 | - | </s:annotation>
1023 | - | <s:simpleType>
1024 | - | <s:restriction base="s:string">
1025 | - | <s:pattern value="-?[0-9]{1,2}\.[0-9]{6}"></s:pattern>
1026 | - | </s:restriction>
1027 | - | </s:simpleType>
1028 | - | </s:element>
1029 | - | <s:element name="lon" minOccurs="1" maxOccurs="1">
1030 | - | <s:annotation>
1031 | - | <s:documentation>
1032 | - | Longitude of the decimal degree Example: -126.104965 Decim
1033 | - | </s:documentation>
1034 | - | </s:annotation>
1035 | - | <s:simpleType>
1036 | - | <s:restriction base="s:string">
1037 | - | <s:pattern value="-?[0-9]{1,3}\.[0-9]{6}"></s:pattern>
1038 | - | </s:restriction>
1039 | - | </s:simpleType>
1040 | - | </s:element>
1041 | - | </s:sequence>

```

```

1016 | + | <s:attribute name="lat" use="required">
1017 | + | <s:annotation>
1018 | + | <s:documentation>
1019 | + | Latitude of the Point in decimal degree. Example: 50.104965 Decima
1020 | + | </s:documentation>
1021 | + | </s:annotation>
1022 | + | <s:simpleType>
1023 | + | <s:restriction base="s:string">
1024 | + | <s:pattern value="-?[0-9]{1,2}\.[0-9]{6}"></s:pattern>
1025 | + | </s:restriction>
1026 | + | </s:simpleType>
1027 | + | </s:attribute>
1028 | + | <s:attribute name="lon" use="required">
1029 | + | <s:annotation>
1030 | + | <s:documentation>
1031 | + | Longitude of the decimal degree Example: -126.104965 Decimal separ
1032 | + | </s:documentation>
1033 | + | </s:annotation>
1034 | + | <s:simpleType>
1035 | + | <s:restriction base="s:string">
1036 | + | <s:pattern value="-?[0-9]{1,3}\.[0-9]{6}"></s:pattern>
1037 | + | </s:restriction>
1038 | + | </s:simpleType>
1039 | + | </s:attribute>
1040 | + | </s:complexType>

```


1474	-	<s:element name="geoUserInterface" type="tns:GeoPointType" minOccurs="0" maxOccurs="1" />
1475	-	<s:annotation>
1476	-	<s:documentation>
1477	-	Geographical location of the user interface for authorisation
1478	-	</s:documentation>
1479	-	</s:annotation>
1480	-	</s:element>
1481	-	<s:element name="geoSiteEntrance" type="tns:GeoPointType" minOccurs="0" maxOccurs="1" />
1482	-	<s:annotation>
1483	-	<s:documentation>
1484	-	For larger sites entrances may be specified for navigation
1485	-	</s:documentation>
1486	-	</s:annotation>
1487	-	</s:element>
1488	-	<s:element name="geoSiteExit" type="tns:GeoPointType" minOccurs="0" maxOccurs="unbounded" />
1515	+	<s:element name="relatedLocation" type="tns:AdditionalGeoPointType" minOccurs="0" maxOccurs="1" />
1489	1516	<s:annotation>
1490	1517	<s:documentation>
1491	-	For larger sites exits may be specified for navigation purposes
1518	+	Geographical location of related points relevant to the user interface
1492	1519	</s:documentation>
1493	1520	</s:annotation>
1494	1521	</s:element>

eCHS GUI

(none)

4. Added a Time Zone field to ChargePointInfo type

Change type:	Enhancement
Impact:	<input checked="" type="checkbox"/> Specification, <input checked="" type="checkbox"/> API, <input type="checkbox"/> eCHS
Backward-Compatibility:	eCHS drops the time zone value
Forward-Compatibility:	eCHS does not set the time zone field
Impact for partners:	none
Description:	Navigation providers need to know the time zone of a charge point. The calculation of the actual time zone from a geo location is not trivial. Hence the time zone can be specified in OCHP 1.3 as tzdata string. (Visit http://www.iana.org/time-zones for further reading.)

Change: [146F919A80114F23EFB0DD5364733AD8137B6663](#)

Specification

timeZone	string(255)	?	One of IANA tzdata's TZ -values representing the time zone of the location. Examples: "Europe/Oslo", "Europe/Zurich". (http://www.iana.org/time-zones)
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WSDL (API)

1530	+	<code><s:element name="timeZone" minOccurs="0" maxOccurs="1"></code>
1531	+	<code><s:annotation></code>
1532	+	<code><s:documentation></code>
1533	+	One of IANA tzdata's TZ-values representing the time zone
1534	+	<code></s:documentation></code>
1535	+	<code></s:annotation></code>
1536	+	<code><s:simpleType></code>
1537	+	<code><s:restriction base="s:string"></code>
1538	+	<code><s:length value="255"></s:length></code>
1539	+	<code></s:restriction></code>
1540	+	<code></s:simpleType></code>
1541	+	<code></s:element></code>

eCHS GUI

(none)

5. Simplified the definition of 24/7 operating hours

- Change type: Bug Fix
- Impact: Specification, API, eCHS
- Backward-Compatibility: eCHS creates seven days with opening hours “00:00 till 24:00” in the OCHP 1.2 interface when the 24/7 value is set in the OCHP 1.3 interface.
- Forward-Compatibility: eCHS detects all opening hours “00:00 till 24:00” or “00:00 till 23:59” in OCHP 1.2 and sets the 24/7 value in the OCHP 1.3 interface instead.
- Impact for partners: Opening hour definition to be rebuild
- Description: The most common case of operating hours can be defined by a single Boolean value. For more complex situations the daily hours can be specified. This reduces the overhead significantly. Furthermore the overhead gets reduced by changing some XML elements to XML attributes in the type definition.

Change: [0B31BD20A169793E6E03A5D76200B9C0E3DA11FA](#)

Specification

```

204 +The character *>* in front of any data field indicates a choice of
205 +multiple possibilities.
206 +
207 +The character *~* appended to any data field indicates the
208 +implementation as XML attribute instead of an element.
209 +

```

HoursType class

Opening and access hours for the charge point.

Field Name	Field Type	Card.	Description
<i>Choice: one of two</i>			
> regularHours	regularHoursType	*	Regular hours, weekday based. Should not be set for representing 24/7 as this is the most common case.
> twentyfourseven	boolean	1	True to represent 24 hours per day and 7 days per week, except the given exceptions.
exceptionalOpenings	exceptionalPeriodType	*	Exceptions for specified calendar dates, time-range based. Periods the station is operating/accessible. Additional to regular hours. May overlap regular rules.
exceptionalClosings	exceptionalPeriodType	*	Exceptions for specified calendar dates, time-range based. Periods the station is not operating/accessible. Overwriting regularHours and exceptionalOpenings. Should not overlap exceptionalOpenings.

Example one

Operating 24/7 except for New Year 2015:

```
<operatingTimes>
  <twentyfourseven>true</twentyfourseven>
  <exceptionalClosings>
    <periodBegin>
      <DateTime>2015-01-01T00:00:00Z</DateTime>
    </periodBegin>
    <periodEnd>
      <DateTime>2015-01-02T00:00:00Z</DateTime>
    </periodEnd>
  </exceptionalClosings>
</operatingTimes>
```

(only major part of the change printed)

WSDL (API)

1181	1181	<s:complexType name="HoursType">
1182	1182	<s:sequence>
1183	-	<s:element name="regularHours" type="tns:RegularHoursType" minOccurs="0" maxOccurs="1" base="tns:RegularHoursType" substitutionBase="tns:RegularHoursType" documentation="Regular hours, weekday based. Should not be set for representative hours."/ >
1184	-	<s:annotation base="tns:Documentation" type="tns:Documentation" text="Regular hours, weekday based. Should not be set for representative hours."/>
1185	-	<s:documentation text="Regular hours, weekday based. Should not be set for representative hours."/>
1186	-	Regular hours, weekday based. Should not be set for representative hours.
1187	-	</s:documentation>
1188	-	</s:annotation>
1189	-	</s:element>
1183	+	<s:choice>
1184	+	<s:element name="regularHours" type="tns:RegularHoursType" minOccurs="1" maxOccurs="1" base="tns:RegularHoursType" substitutionBase="tns:RegularHoursType" documentation="Regular hours, weekday based. This element should be used for representative hours."/ >
1185	+	<s:annotation base="tns:Documentation" type="tns:Documentation" text="Regular hours, weekday based. This element should be used for representative hours."/>
1186	+	<s:documentation text="Regular hours, weekday based. This element should be used for representative hours."/>
1187	+	Regular hours, weekday based. This element should be used for representative hours.
1188	+	</s:documentation>
1189	+	</s:annotation>
1190	+	</s:element>
1191	+	<s:element name="twentyfourseven" type="s:boolean" minOccurs="1" maxOccurs="1" base="s:boolean" documentation="True to represent 24 hours per day and 7 days per week."/ >
1192	+	<s:annotation base="tns:Documentation" type="tns:Documentation" text="True to represent 24 hours per day and 7 days per week."/>
1193	+	<s:documentation text="True to represent 24 hours per day and 7 days per week."/>
1194	+	True to represent 24 hours per day and 7 days per week.
1195	+	</s:documentation>
1196	+	</s:annotation>
1197	+	</s:element>
1198	+	</s:choice>
1190	1199	<s:element name="exceptionalOpenings" type="tns:ExceptionalPeriodType" minOccurs="0" maxOccurs="1" base="tns:ExceptionalPeriodType" substitutionBase="tns:ExceptionalPeriodType" documentation="Exceptional openings, weekday based. Should not be set for representative hours."/ >
1191	1200	<s:annotation base="tns:Documentation" type="tns:Documentation" text="Exceptional openings, weekday based. Should not be set for representative hours."/>
1192	1201	<s:documentation text="Exceptional openings, weekday based. Should not be set for representative hours."/>
✠		@@ -1318,46 +1327,45 @@ http://creativecommons.org/licenses/by-nd/4.0/.
1318	1327	Regular hours, weekday based. Number of day in the week, from Monday(1) to Sunday(7). Should not be set for representative hours."/ >
1319	1328	<s:documentation text="Regular hours, weekday based. Number of day in the week, from Monday(1) to Sunday(7). Should not be set for representative hours."/>
1320	1329	</s:annotation>
1321	-	<s:sequence>
1322	-	<s:element name="weekday" minOccurs="1" maxOccurs="1" base="s:boolean" documentation="Regular hours, weekday based. Number of day in the week, from Monday(1) to Sunday(7). Should not be set for representative hours."/ >
1323	-	<s:annotation base="tns:Documentation" type="tns:Documentation" text="Regular hours, weekday based. Number of day in the week, from Monday(1) to Sunday(7). Should not be set for representative hours."/>
1324	-	<s:documentation text="Regular hours, weekday based. Number of day in the week, from Monday(1) to Sunday(7). Should not be set for representative hours."/>
1325	-	Regular hours, weekday based. Number of day in the week, from Monday(1) to Sunday(7). Should not be set for representative hours.
1326	-	</s:documentation>
1327	-	</s:annotation>

```

1328 - <s:simpleType>
1329 - <s:restriction base="s:int">
1330 - <s:minInclusive value="1"></s:minInclusive>
1331 - <s:maxInclusive value="7"></s:maxInclusive>
1332 - </s:restriction>
1333 - </s:simpleType>
1334 - </s:element>
1335 - <s:element name="periodBegin" minOccurs="1" maxOccurs="1">
1336 - <s:annotation>
1337 - <s:documentation>
1338 - Begin of the regular period given in hours and minutes. Must
1339 - </s:documentation>
1340 - </s:annotation>
1341 - <s:simpleType>
1342 - <s:restriction base="s:string">
1343 - <s:length value="5"></s:length>
1344 - <s:pattern value="[0-2][0-9]\:[0-5][0-9]"></s:pattern>
1345 - </s:restriction>
1346 - </s:simpleType>
1347 - </s:element>

```

```

1348 - <s:element name="periodEnd" minOccurs="1" maxOccurs="1">
1349 - <s:annotation>
1350 - <s:documentation>
1351 - End of the regular period, syntax as for periodBegin. Must
1352 - </s:documentation>
1353 - </s:annotation>
1354 - <s:simpleType>
1355 - <s:restriction base="s:string">
1356 - <s:pattern value="[0-2][0-9]\:[0-5][0-9]"></s:pattern>
1357 - </s:restriction>
1358 - </s:simpleType>
1359 - </s:element>
1360 - </s:sequence>

```

```

1330 + <s:attribute name="weekday" use="required">
1331 + <s:annotation>
1332 + <s:documentation>
1333 + Number of day in the week, from Monday(1) till Sunday(7)
1334 + </s:documentation>
1335 + </s:annotation>
1336 + <s:simpleType>
1337 + <s:restriction base="s:int">
1338 + <s:maxInclusive value="7"></s:maxInclusive>
1339 + <s:minInclusive value="1"></s:minInclusive>
1340 + </s:restriction>
1341 + </s:simpleType>
1342 + </s:attribute>
1343 + <s:attribute name="periodBegin" use="required">
1344 + <s:annotation>
1345 + <s:documentation>
1346 + Begin of the regular period given in hours and minutes. Must be in
1347 + </s:documentation>
1348 + </s:annotation>
1349 + <s:simpleType>
1350 + <s:restriction base="s:string">
1351 + <s:pattern value="[0-2][0-9]\:[0-5][0-9]"></s:pattern>
1352 + <s:length value="5"></s:length>
1353 + </s:restriction>
1354 + </s:simpleType>
1355 + </s:attribute>

```

1356	+	<s:attribute name="periodEnd" use="required">
1357	+	<s:annotation>
1358	+	<s:documentation>
1359	+	End of the regular period, syntax as for periodBegin. Must be later
1360	+	</s:documentation>
1361	+	</s:annotation>
1362	+	<s:simpleType>
1363	+	<s:restriction base="s:string">
1364	+	<s:pattern value="[0-2][0-9]:[0-5][0-9]"></s:pattern>
1365	+	<s:length value="5"></s:length>
1366	+	</s:restriction>
1367	+	</s:simpleType>
1368	+	</s:attribute>
1361	1369	</s:complexType>
1362	1370	
1363	1371	<s:complexType name="ExceptionalPeriodType">

eCHS GUI

(none)

6. Added a general location type

Change type:	Enhancement
Impact:	<input checked="" type="checkbox"/> Specification, <input checked="" type="checkbox"/> API, <input type="checkbox"/> eCHS
Backward-Compatibility:	eCHS drops the location type for OCHP 1.2
Forward-Compatibility:	eCHS sets the location type to “unknown” in OCHP 1.3
Impact for partners:	If available, new data can be added.
Description:	For user information in navigation systems a location type is needed. It helps the user to filter and search for the desired charging station.

Change: [194c2E732D207F79F603BDEECBB5A629425A19F1](#)

Specification

ParkingRestrictionType *enum*

Reflects the general type of the charge points location. May be used for user information.

Value	Description
on-street	parking in public space
parking-garage	multistorey car park
underground-garage	multistorey car park, mainly underground
parking-lot	a cleared area that is intended for parking vehicles, i.e. at super markets, bars, etc.
other	none of the given possibilities
unknown	parking location type is not known by the operator



location	GeneralLocationType	1	The general type of the charge point location.
----------	---------------------	---	--

WSDL (API)

```

1267 +         <s:complexType name="GeneralLocationType">
1268 +             <s:sequence>
1269 +                 <s:element name="GeneralLocationType">
1270 +                     <s:annotation>
1271 +                         <s:documentation>
1272 +                             * on-street parking in public space
1273 +                             * parking-garage multistorey car park
1274 +                             * underground-garage multistorey car park, mainly underground
1275 +                             * parking-lot a cleared area that is intended for parking
1276 +                             * other none of the given possibilities
1277 +                             * unknown parking location type is not known by the operator
1278 +                         </s:documentation>
1279 +                     </s:annotation>
1280 +                     <s:simpleType>
1281 +                         <s:annotation>
1282 +                         </s:annotation>
1283 +                         <s:restriction base="s:string">
1284 +                             <s:enumeration value="on-street"></s:enumeration>
1285 +                             <s:enumeration value="parking-garage"></s:enumeration>
1286 +                             <s:enumeration value="underground-garage"></s:enumeration>
1287 +                             <s:enumeration value="parking-lot"></s:enumeration>
1288 +                             <s:enumeration value="other"></s:enumeration>
1289 +                             <s:enumeration value="unknown"></s:enumeration>
1290 +                         </s:restriction>
1291 +                     </s:simpleType>
1292 +                 </s:element>
1293 +             </s:sequence>
1294 +         </s:complexType>
1295 +

```

```

1611 +         <s:element name="location" type="tns:GeneralLocationType" minOccurs="1" maxOccurs="1">
1612 +             <s:annotation>
1613 +                 <s:documentation>
1614 +                     The general type of the charge point location.
1615 +                 </s:documentation>
1616 +             </s:annotation>
1617 +         </s:element>

```

eCHS GUI

(none)

7. Added remote authorisation modes

Change type:	Enhancement
Impact:	<input checked="" type="checkbox"/> Specification, <input checked="" type="checkbox"/> API, <input type="checkbox"/> eCHS
Backward-Compatibility:	eCHS drops new authorization methods
Forward-Compatibility:	New authorization methods are not available for OCHP 1.2 data
Impact for partners:	Possible enhancement in customer communication (POI display)
Description:	The AuthMethodType was only defining the technical capability of the charge point itself. However, in many cases also remote access is possible and has to be communicated to the user. Two additional auth methods make this possible.

Change: [212E119EE298E255FAC6C02E7D7DB1026D97A4DA](#)

Specification

OchpDirectAuth	The EVSE can be accessed through a OCHP-direct capable provider app.
OperatorAuth	The EVSE can be accessed through a direct online payment to the operator.

WSDL (API)

1331	1332	Iec15118; In-car access token as specified in IEC-15118
	1333	+ OchpDirectAuth; The EVSE can be accessed through a OCHP-direct capable prov
	1334	+ OperatorAuth; The EVSE can be accessed through a direct online payment to t
1332	1335	</s:documentation>
1333	1336	</s:annotation>
1334	1337	<s:sequence>
@@ -1344,6 +1347,8 @@ http://creativecommons.org/licenses/by-nd/4.0/.		
1344	1347	<s:enumeration value="RfidMifareDes"></s:enumeration>
1345	1348	<s:enumeration value="RfidCalypso"></s:enumeration>
1346	1349	<s:enumeration value="Iec15118"></s:enumeration>
	1350	+ <s:enumeration value="OchpDirectAuth"></s:enumeration>
	1351	+ <s:enumeration value="OperatorAuth"></s:enumeration>
1347	1352	</s:restriction>
1348	1353	</s:simpleType>
1349	1354	</s:element>

eCHS GUI

(none)

8. Added power ratings to the charge points

Change type:	Enhancement
Impact:	<input checked="" type="checkbox"/> Specification, <input checked="" type="checkbox"/> API, <input type="checkbox"/> eCHS
Backward-Compatibility:	Ratings are not available for OCHP 1.2 data
Forward-Compatibility:	The eCHS does not set the ratings property on a OCHP 1.2 charge point
Impact for partners:	Possibility for filling of the rating values should be checked.
Description:	Users need to know the available power at the charge point beforehand in order to find a charge point fitting their needs. Therefore three values are added that can be displayed to the user or used to calculate charge time forecasts.

Change: [540d888cc2a3e61e63b20d20c761a523796f0b57](#)

Specification

RatingsType class

This class defines the ratings of a charge point. The values can be displayed to the user or used to calculate charge time forecasts. Depending on the used plug type the effective available power might be lower.

Field Name	Field Type	Card.	Description
maximumPower	float	1	The maximum available power at this charge point at nominal voltage over all available phases of the line.
guaranteedPower	float	?	The minimum guaranteed mean power in case of load management. Should be set to maximum when no load management applied.
nominalVoltage	int	?	The nominal voltage for the charge point.



AuthMethodType enum



ratings	RatingsType	?	Defines the ratings for the charge point.
---------	-------------	---	---

WSDL (API)

931	+	<s:complexType name="RatingsType">
932	+	<s:sequence>
933	+	<s:element name="maximumPower" minOccurs="1" maxOccurs="1" type="s:float">
934	+	<s:annotation>
935	+	<s:documentation>
936	+	The maximum available power at this charge point at nomina
937	+	</s:documentation>
938	+	</s:annotation>
939	+	</s:element>
940	+	<s:element name="guaranteedPower" minOccurs="0" maxOccurs="1" type="s:float">
941	+	<s:annotation>
942	+	<s:documentation>
943	+	The minimum guaranteed mean power in case of load manage
944	+	</s:documentation>
945	+	</s:annotation>
946	+	</s:element>
947	+	<s:element name="nominalVoltage" minOccurs="0" maxOccurs="1">
948	+	<s:annotation>
949	+	<s:documentation>
950	+	The nominal voltage for the charge point.
951	+	</s:documentation>
952	+	</s:annotation>
953	+	<s:simpleType>
954	+	<s:restriction base="s:int">
955	+	<s:minExclusive value="0"></s:minExclusive>
956	+	<s:maxInclusive value="1000"></s:maxInclusive>
957	+	</s:restriction>
958	+	</s:simpleType>
959	+	</s:element>
960	+	</s:sequence>
961	+	</s:complexType>
962	+	
⚡ @@ -1660,6 +1692,13 @@ http://creativecommons.org/licenses/by-nd/4.0/.		
1660	1692	</s:documentation>
1661	1693	</s:annotation>
1662	1694	</s:element>
1695	+	<s:element name="ratings" type="tns:RatingsType" minOccurs="0" maxOccurs="1">
1696	+	<s:annotation>
1697	+	<s:documentation>
1698	+	Defines the ratings for the charge point.
1699	+	</s:documentation>
1700	+	</s:annotation>
1701	+	</s:element>
1663	1702	<s:element name="userInterfaceLang" minOccurs="0" maxOccurs="unbounded">
1664	1703	<s:annotation>
1665	1704	<s:documentation>
⚡		

eCHS GUI

(none)

9. Definition of charge point categories

Change type:	Bug Fix
Impact:	<input checked="" type="checkbox"/> Specification, <input checked="" type="checkbox"/> API, <input type="checkbox"/> eCHS
Backward-Compatibility:	Charge point categories are not transferred to the OCHP 1.2 interface
Forward-Compatibility:	eCHS will not set a charge point category for data from OCHP 1.2
Impact for partners:	Internal categories have to be mapped
Description:	A charge point category is added to allow different pricing levels in roaming agreements based on the category. The operator should define charge point categories as short codes and negotiate roaming tariffs on their basis and optionally based on further conditions (e.g. day time, connector, etc).

Change: [91c6BD2c197D25c42F517BEBF9EB839C1F4c073F](#)

Specification

category	string(2)	?	Charge point category code defined by the operator. Allows different pricing levels in roaming agreements based on the category.
----------	-----------	---	--

WSDL (API)

1605	1605		
1606	1606		
1607	1607		
1608	+		<code></s:restriction></code>
1609	+		<code></s:simpleType></code>
1610	+		<code></s:element></code>
1611	+		<code><s:element name="category" minOccurs="0" maxOccurs="1"></code>
1612	+		<code><s:annotation></code>
1613	+		<code><s:documentation></code>
1614	+		Charge point category code defined by the operator. Allows
1615	+		<code></s:documentation></code>
1616	+		<code></s:annotation></code>
1617	+		<code><s:simpleType></code>
1618	+		<code><s:restriction base="s:string"></code>
1619	+		<code><s:minLength value="1"></s:minLength></code>
1620	+		<code><s:maxLength value="2"></s:maxLength></code>
1608	1621		<code></s:restriction></code>
1609	1622		<code></s:simpleType></code>
1610	1623		<code></s:element></code>
			<code><s:element name="operatingTimes" type="tns:HoursType" minOccurs="0" maxOccurs="1"></code>
			<code><s:annotation></code>
			<code><s:documentation></code>

eCHS GUI

(none)

10. Harmonized type case of chargePointInfoArray

Change type:	Bug Fix
Impact:	<input type="checkbox"/> Specification, <input checked="" type="checkbox"/> API, <input type="checkbox"/> eCHS
Backward-Compatibility:	n/a
Forward-Compatibility:	n/a
Impact for partners:	Correction of the element name in the implementation
Description:	Element chargePointInfoArray was incorrectly spelled chargepointInfoArray in SetChargePointListRequest.

Change: [FDE01137FC1339E6C22EA9307E2F7876E6A6664D](#)

Specification

(none)

WSDL (API)

286	286		<s:element name="SetChargePointListRequest">
287	287		<s:complexType>
288	288		<s:sequence>
289	-		<s:element minOccurs="1" maxOccurs="unbounded" name="chargepointInfoArray">
	289	+	<s:element minOccurs="1" maxOccurs="unbounded" name="chargePointInfoArray">
290	290		<s:annotation>
291	291		<s:documentation>
292	292		This contains the charge point information records
✱			

eCHS GUI

(none)

11. Added referenced resources to the charge points

Change type:	Bug Fix
Impact:	<input checked="" type="checkbox"/> Specification, <input checked="" type="checkbox"/> API, <input type="checkbox"/> eCHS
Backward-Compatibility:	n/a
Forward-Compatibility:	n/a
Impact for partners:	Enhanced user information possible
Description:	Added data type to reference a resource in the internet for the user of the charge point. This can be further information and/or further functionality.

Change: [CF1667F0C16767B8E031CCC442317BBBD66CFF29](#)

Specification

AdditionalGeoPointType class

This class defines a resource related to the charge point or charging station. It is meant to be visited by the user with their web-browser to receive further information or access further functionality. A resource can have multiple classes to indicate a combination of resources on one web site. A class should only be assigned if the user can find the described information right from the referenced page.

Field Name	Field Type	Card.	Description
uri	string(255)	1	Referencing uri to the resource. Must begin with a protocol of the list: http, https. Regex: (http
class	ImageClass	+	Class(es) of the related url to indicate the referenced content and/or functionality.

RelatedResourceClass enum

The class of referenced related resource.

Value	Description
operatorMap	direct link to this charge point on a map of the operator
operatorPayment	link to a payment page of the operator for contractless direct payment
stationInfo	further information on the charging station
surroundingInfo	further information on the surroundings of the charging station e.g. further POIs
ownerHomepage	website of the station owner (not operator) in case of hotels, restaurants, etc.
feedbackForm	form for user feedback on the charging station service



relatedResource	RelatedResourceType	+	Links to be visited by the user, related to the charge point or charging station.
-----------------	---------------------	---	---

WSDL (API)

```

<< -1515,6 +1515,7 @@ http://creativecommons.org/licenses/by-nd/4.0/.
1515 1515 </s:simpleType>
1516 1516 </s:element>
1517 1517 <s:element name="images" minOccurs="0" maxOccurs="unbounded" type="tns:EvseImageUr:
1518 1518 + <s:element name="relatedResource" minOccurs="0" maxOccurs="unbounded" type="tns:Re:
1519 1519 <s:element name="houseNumber" minOccurs="0" maxOccurs="1">
1520 1520 <s:annotation>
1521 1521 <s:documentation>
<< -1880,6 +1881,47 @@ http://creativecommons.org/licenses/by-nd/4.0/.
1880 1881 </s:sequence>
1881 1882 </s:complexType>
1882 1883
1884 1884 + <s:complexType name="RelatedResourceType">
1885 1885 + <s:sequence>
1886 1886 + <s:element name="uri" minOccurs="1" maxOccurs="1">
1887 1887 + <s:annotation>
1888 1888 + <s:documentation>
1889 1889 + Referencing uri to the resource. Must begin with a protocol:
1890 1890 + </s:documentation>
1891 1891 + </s:annotation>
1892 1892 + <s:simpleType>
1893 1893 + <s:restriction base="s:string">
1894 1894 + <s:pattern value="(http|https):\\/\\.+"</s:pattern>
1895 1895 + <s:maxLength value="255"</s:maxLength>
1896 1896 + </s:restriction>
1897 1897 + </s:simpleType>
1898 1898 + </s:element>
1899 1899 + <s:element name="class" minOccurs="1" maxOccurs="1">
1900 1900 + <s:annotation>
1901 1901 + <s:documentation>
1902 1902 + The class of referenced related resource. Values:
1903 1903 + operatorMap: direct link to this charge point on a
1904 1904 + operatorPayment: link to a payment page of the open
1905 1905 + stationInfo: further information on the charging s:
1906 1906 + surroundingInfo: further information on the surround
1907 1907 + ownerHomepage: website of the station owner (not o
1908 1908 + feedbackForm: form for user feedback on the chargi
1909 1909 + </s:documentation>
1910 1910 + </s:annotation>
1911 1911 + <s:simpleType>
1912 1912 + <s:restriction base="s:string">
1913 1913 + <s:enumeration value="operatorMap"></s:enumeration>
1914 1914 + <s:enumeration value="operatorPayment"></s:enumeration>
1915 1915 + <s:enumeration value="stationInfo"></s:enumeration>
1916 1916 + <s:enumeration value="surroundingInfo"></s:enumeration>
1917 1917 + <s:enumeration value="ownerHomepage"></s:enumeration>
1918 1918 + <s:enumeration value="feedbackForm"></s:enumeration>
1919 1919 + </s:restriction>
1920 1920 + </s:simpleType>
1921 1921 + </s:element>
1922 1922 + </s:sequence>
1923 1923 + </s:complexType>
1924 1924 +
1883 1925 <s:element name="UpdateStatusRequest">
1884 1926 </s:complexType>

```

eCHS GUI

(none)

12. Specification document

Change type:	Bug Fix, Enhancement
Impact:	<input checked="" type="checkbox"/> Specification, <input type="checkbox"/> API, <input type="checkbox"/> eCHS
Backward-Compatibility:	n/a
Forward-Compatibility:	n/a
Impact for partners:	none
Description:	Various spelling errors in the specification document get corrected. Added more information to different definitions.

Changes to the eCHS

13. Notification of incoming roaming requests

Change type:	Enhancement
Impact:	<input type="checkbox"/> Specification, <input type="checkbox"/> API, <input checked="" type="checkbox"/> eCHS
Backward-Compatibility:	n/a
Forward-Compatibility:	n/a
Impact for partners:	Ease of business processes
Description:	Some roaming partners requested better process integration for incoming roaming relations. Therefore a notification e-mail will be used. There is a configurable email address per partner already in the system. Whenever a partner is requested for a new roaming connection, they will receive an email with the details. This email contains a direct link to the “confirm roaming connection” view in eCHS from where they can log in and confirm the roaming request. The requesting roaming partner will receive a confirmation email as well. Alternatively the roaming connections can still be managed in the GUI.

Change:

Specification

(none)

WSDL (API)

(none)

eCHS GUI

E-Mail "New Request":

From: no-reply@e-clearing.net
To: "Roaming Partner's Service Email"
Subject: [e-clearing.net] New Roaming Request Pending

Dear e-clearing.net partner,
A new roaming request for your partner "Your Brand Name" was created in the eCHS:

Partner: The Example Company Inc.
Market Role: Provider
Type-ID: DEABC
Networks: example-network, other-network

Please use the following link to log into eCHS and confirm the request: <https://echs.e-clearing.net/partner/gridConfirmRelationsPartnerMatrix?accordionHeader=partner&accordionEntry=confirm-relations&partnerId=123>

Yours sincerely,
The Team of e-clearing.net

E-Mail "Request Confirmed":

From: no-reply@e-clearing.net
To: "Roaming Partner's Service Email"
Subject: [e-clearing.net] Roaming Request Confirmed

Dear e-clearing.net partner,
Your roaming request for your partner "Your Brand Name" was confirmed by "The Example Company Inc." (Provider).

Yours sincerely,
The Team of e-clearing.net

14. Reverse Matrix View

Change type: Enhancement

Impact: Specification, API, eCHS

Backward-Compatibility: n/a

Forward-Compatibility: n/a

Impact for partners: Easier roaming relation handling

Description: Roaming connections to one foreign partner from multiple own partners should be easier to request. In the current user interface the roaming relation request starts with the selection of the own partner for whom a user wants to request a roaming relation. The Partner Matrix view shows a list of all possible roaming partners for a selected partner and is used to request roaming relations. Users acting for multiple partners have to set roaming connections for each of the own partners separately. A toggle button is added to the top of the matrix view. It allows switching the view of the matrix: Showing the list of own partners for a selected foreign partner.

Change:

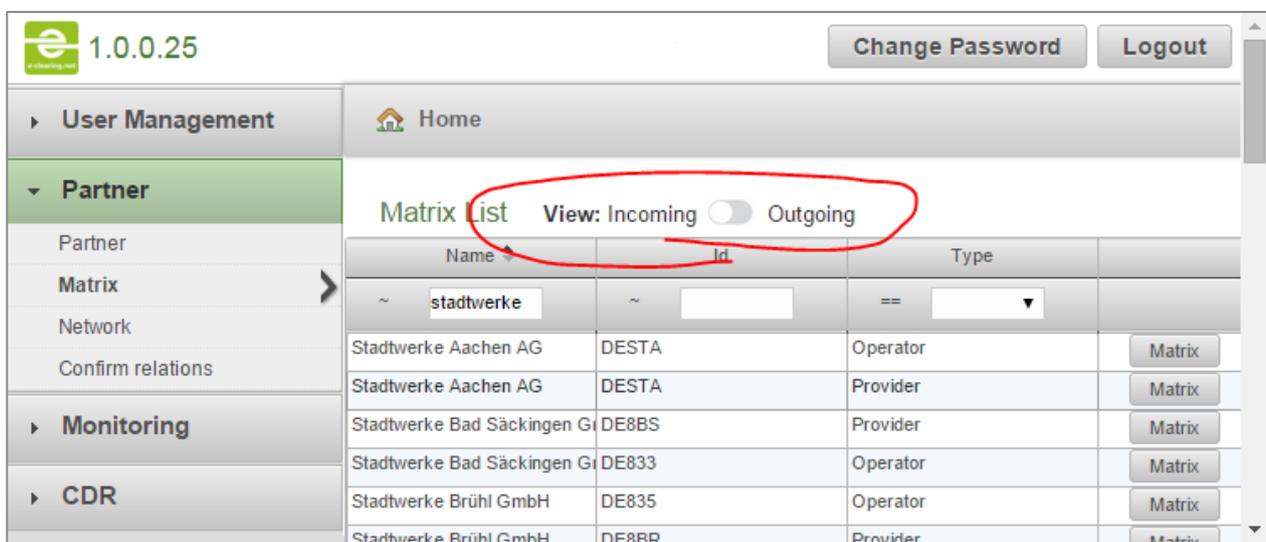
Specification

(none)

WSDL (API)

(none)

eCHS GUI



The screenshot shows the eCHS GUI interface. At the top left, there is a logo and version number '1.0.0.25'. On the right, there are buttons for 'Change Password' and 'Logout'. The main navigation menu on the left includes 'User Management', 'Partner' (selected), 'Monitoring', and 'CDR'. The 'Partner' section is expanded, showing 'Partner', 'Matrix' (selected), 'Network', and 'Confirm relations'. The main content area displays 'Matrix List' and a toggle for 'View: Incoming' (selected) and 'Outgoing'. Below this is a table with columns for Name, Id, and Type, and a 'Matrix' button for each row.

Name	Id	Type	Matrix
~ stadtwerke	~	==	
Stadtwerke Aachen AG	DESTA	Operator	Matrix
Stadtwerke Aachen AG	DESTA	Provider	Matrix
Stadtwerke Bad Säckingen G	DE8BS	Provider	Matrix
Stadtwerke Bad Säckingen G	DE833	Operator	Matrix
Stadtwerke Brühl GmbH	DE835	Operator	Matrix
Stadtwerke Brühl GmbH	DF8BR	Provider	Matrix