



Webservices

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WEBSERVICES

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GETTING STARTED

1.1 Services

CRM+ comes with a Rest like API available over HTTP. It provides an easier way to integrate CRM+ with an external software system. The API is suitable for automated tools to build upon, as well as supporting some ad-hoc scripting use cases. | | We highly recommend you to use **HTTPS!**

1.2 URL Format

(http|https)://[url-to-crmplus]/webservice.php? **[operation-specific-parameters]**

1.3 Output Format

CRM+ API return well styled JSON.

JSON responses are encoded using **UTF-8** and use content type **application/json**.

```
{ } [ ] " " " "  
[ ... valid JSON ... ]
```

Responses will be **gzip compressed** by the server if the HTTP Accept-Encoding request header is set to gzip. This may save network transfer time for larger responses.

1.4 ID Format

Record IDs are in the format [ModuleID]x[RecordID]. The ModuleID can be obtained from the result of a describe or listtypes call. The field in the result is named **idPrefix**.

1.5 Response Format

Response if the request performed successfully:

```
{
  "success": true,
  "result": {" ... includes data encoded as JSON object... "}
}
```

Response if occurred errors while performing the request:

```
{
  "success": false,
  "error": {
    "code": "...",
    "message": "..."
  }
}
```

OPERATIONS

2.1 Getchallenge

Get a valid and time limited challenge token from the server.

HTTP-Type: **GET**

URL:

[url-format]?operation=getchallenge&username=[crmplus-username]

Example - request:

```
curl 'http://[url-to-crmplus]/webservice.php?operation=getchallenge&username=[username]' \
-H 'Accept: application/json'
```

Example - response:

```
{
  "success":true,
  "result":{
    "token":"52d5057ebf219",
    "serverTime":1389692286,
    "expireTime":1389692586
  }
}
```

2.2 Login

Login to the server using the challenge token obtained in getchallenge operation. For "accessKey" create a MD5 hash after concatenating the challenge token obtained from get challenge result and the user access key from my preference page.

HTTP-Type: **POST**

URL:

[url-format]?operation=login&username=[crmplus-username]&accessKey=[generated-accesskey]

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php' \
-H 'Accept: application/json' \
-d 'operation=login&username=admin&accessKey=[accessKey]'
```

Example - response:

```
{
  "success": true,
  "result": {
    "userId": "19x1",
    "sessionId": "4a0b52d5057f9f288"
  }
}
```

How to generate an accesskey

Get the CrmPlusUserAccessKey from: CRM+ -> My Perferences -> AccessKey

Generate accesskey:

```
echo -n "[challengeToken][crmUserAccessKey]" | md5sum
```

Example accesskey:

```
"5a764bb8bcff5ea689aaa3c349f73887"
```

2.3 Create

Create a new entry on the CRM+.

HTTP-Type: **POST**

URL:

[url-format]?operation=create&elementType=[moduleName]&element=[object]&options=[object]

Options:

- **events** it's useful if you want to update without to trigger events like workflows, handlers (default: true)

Note: If you transfer large data sets we recommend to set **events false** to get more performance.

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php' \
-H 'Accept: application/json' \
-d 'operation=create&elementType=Leads&sessionId=[sessionId]' \
```

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```
-d 'element={"lastname":"Lastname via Webservice", "company":"Company via Webservice",
↪"assigned_user_id":"19x1"}' \
-d 'options={"events": false}'
```

Example - response:

```
{
  "success":true,
  "result":{
    "annualrevenue":"0.000000000",
    "...",
    "company":"Company via Webservice",
    "country":"",
    "createdtime":"2014-01-14 10:21:36",
    "...",
    "lastname":"Lastname via Webservice",
    "leadsource":"",
    "leadstatus":"",
    "lead_no":"LEA78",
    "mobile":"",
    "modifiedtime":"2014-01-14 10:21:36",
    "noofemployees":"0",
    "partner_id":"",
    "phone":"",
    "pobox":"",
    "rating":"",
    "record_currency_id":"1",
    "...",
    "assigned_user_id":"19x1",
    "...",
    "id":"2x199"
  }
}
```

2.4 Retrieve

Returns fields with values of a specific record.

HTTP-Type: **GET**

URL:

[url-format]?operation=retrieve&sessionName=[sessionID]&id=[ModulID x RecordID]&options=[object]

Options:

- **withPermissions** Retrieve with edit & delete permissions (default: false)
- **withAttachment** Retrieve documents with base64 encoded attachment (default: false)

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php?operation=retrieve&sessionName=[sessionID]&
↪id=2x199' \
-H 'Accept: application/json'
```

Example - response:

```
{
  "success": true,
  "result": {
    "annualrevenue": "0.000000000",
    "...",
    "company": "Company via Webservice",
    "country": "",
    "createdtime": "2014-01-14 10:21:36",
    "...",
    "lastname": "Lastname via Webservice",
    "leadsource": "",
    "leadstatus": "",
    "lead_no": "LEA78",
    "mobile": "",
    "modifiedtime": "2014-01-14 10:21:36",
    "noofemployees": "0",
    "partner_id": "",
    "phone": "",
    "pobox": "",
    "rating": "",
    "record_currency_id": "1",
    "...",
    "assigned_user_id": "19x1",
    "...",
    "id": "2x199"
  }
}
```

2.5 Update

Update a retrieved or newly created record.

HTTP-Type: **POST**

URL:

[url-format]?operation=update&sessionName=[sessionID]&element=[object]&options=[object]

Options:

- **patch** it's useful if you want to update only some of the fields without override existing one (default: false)
- **events** it's useful if you want to update without to trigger events like workflows, handlers (default: true)

Note: If **patch** is not set to true, execute the describe function first and modify the field values before passing them to the update function. If you transfer large data sets we recommend to set **events** to **false** to get more performance.

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php' \  
-H 'Accept: application/json' \  
-d 'operation=update&sessionName=[sessionID]' \  
-d 'element={"lastname":"Lastname updated via Webservice", "company":"Company updated_  
↪via Webservice", "assigned_user_id":"19x1", "id":"2x199"}' \  
-d 'options={"patch": true, "events": false}'
```

Example - response:

```
{  
  "success":true,  
  "result":{  
    "annualrevenue":"0.000000000",  
    "city":"",  
    "code":"",  
    "company":"Company Updated",  
    "country":"",  
    "createdtime":"2014-01-14 10:40:39",  
    "description":"",  
    "designation":"",  
    "email":"",  
    "fax":"",  
    "firstname":"",  
    "industry":"",  
    "lane":"",  
    "lastname":"Lastname updated via Webservice",  
    "...",  
    "ship_pobox":"",  
    "ship_state":"",  
    "ship_street":"",  
    "assigned_user_id":"19x1",  
    "state":"",  
    "website":"",  
    "yahooid":"",  
    "id":"2x204"  
  }  
}
```

2.6 Delete

Delete a record from the CRM+.

HTTP-Type: **POST**

URL:

[url-format]?operation=delete&sessionName=[sessionID]&id=[ModulID x RecordID]

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php' \
-H 'Accept: application/json' \
-d 'operation=delete&sessionName=[sessionID]&id=2x199'
```

Example - response:

```
{
  "success": true,
  "result": {
    "status": "successful"
  }
}
```

2.7 Sync

Sync will return a list of records that contains details of changes after modified time.

HTTP-Type: **GET**

[url-format]?operation=sync&sessionName=[sessionID]&elementType=[moduleName]&modifiedTime=[timestamp]&options=[object]

Options:

- **onlyOwn** it's useful if you want to sync all permissible records, not only these which the user is assigned to (default: true)

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php' \
-H 'Accept: application/json' \
-d 'operation=sync&sessionName=[sessionID]&elementType=Leads&modifiedTime=[modifiedtime]
→' \
-d 'options={"onlyOwn": false}'
```

Example - response:

```
{
  "success": true,
  "result": {
    "updated": [
```

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```

        {
          "annualrevenue":"0.000000000",
          "city":"",
          "code":"",
          "company":"Brainformatik GmbH",
          "country":"",
          "createdtime":"2013-08-05 06:37:11",
          "...",
          "ship_country":"",
          "ship_pobox":"",
          "ship_state":"",
          "ship_street":"",
          "assigned_user_id":"19x1",
          "state":"",
          "website":"",
          "yahooid":"",
          "id":"2x51"
        }
      ],
      "deletedeleted":[
      ],
      "lastModifiedTime":1385378660
    }
  }
}

```

2.8 Query

The query operation provides a way to select data from CRM+. Queries are currently limited to a CRM module. Joins and embeded queries are not supported. Query always limits its output to 100 records. Client application can use limit operator to get different records.

HTTP-Type: **GET**

URL:

[url-format]?operation=query&sessionName=[sessionID]&query=[query string]

FORMAT:

```

SELECT * | <column_list> | <count(*)>
FROM <object>
[WHERE <conditionals>]
[ORDER BY <column_list>]
[LIMIT [<m>,] <n>]

```

[column_list]	=>	Comma separated list of field names.
[object]	=>	Type or Module Name. The first letter has to be upper case.
[conditionals]	=>	[condition_operations] or [in_clauses] or [like_clauses] separated by 'and' or 'or' operators these are processed from left to right. It's not possible to structure the grouping conditions by brackets.
[condition_operations]	=>	<, >, <=, >=, =, !=
[in_clauses]	=>	in ()
[like_clauses]	=>	mysql> SELECT * FROM [DB] WHERE [COND] LIKE '%sqlregex%'
[regex_clauses]	=>	mysql> SELECT * FROM [DB] WHERE [COND] REGEXP '[x-z]'
[value_list]	=>	a comma separated list of values.
m,n	=>	integer values to specify the offset and limit respectively

LIMITATIONS

- Queries are currently limited to a single object.
- Joins are not supported.
- Query always limits its output to 100 records, Client application can use limit operator to get different records.

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php?operation=query&sessionName=[sessionID]&
↳query=[query string]' \
-H 'Accept: application/json'
```

Example - response:

```
{
  "success": true,
  "result": [
    {
      "accountname": "Brainformatik GmbH",
      "account_no": "ACC4",
      "accounttype": "",
      "annual_revenue": "0.000000000",
      "...",
      "bill_city": "Sunnyvale",
      "bill_code": "88854",
      "bill_country": "USA",
      "bill_pobox": "",
      "bill_state": "CA",
      "bill_street": "1715 Scott Dr",
      "...",
      "fax": "",
      "industry": "Chemicals",
      "modifiedtime": "2011-06-15 10:09:32",
      "notify_owner": "0",
      "otherphone": "",
      "ownership": ""
    }
  ]
}
```

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```

        "account_id": "",
        "partner_id": "",
        "phone": "(489) 604-3335",
        "...",
        "ship_state": "CA",
        "ship_street": "1715 Scott Dr",
        "siccode": "",
        "assigned_user_id": "19x1",
        "tickersymbol": "",
        "website": "www.brainformatik.com",
        "id": "3x8"
    }
]
}

```

2.9 Listtypes

List the names of all the CRM modules available through the API.

HTTP-Type: **GET**

URL:

[url-format]?operation=listtypes&sessionName=[sessionID]

Example - request:

```

curl 'https://[url-to-crmplus]/webservice.php?operation=listtypes&sessionName=[sessionID]
→ ' \
-H 'Accept: application/json'

```

Example - response:

```

{
  "success": true,
  "result": {
    "types": [
      "Leads",
      "Accounts",
      "...",
      "Groups",
      "Currencies",
      "AttachmentsFolder"
    ],
    "information": {
      "Leads": {
        "isEntity": true,
        "label": "Leads",
        "singular": "Lead",

```

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```
curl -X GET "https://[url-to-crmplus]/webservice.php?operation=describe&
↪sessionName=[sessionID]&elementType=[Module]" \
-H "Accept: application/json"
```

Example - response:

```
{
"success": true,
"result": {
  "label": "Leads",
  "name": "Leads",
  "createable": true,
  "updateable": true,
  "deleteable": true,
  "retrieveable": true,
  "fields": [
    {
      "name": "annualrevenue",
      "label": "Jahresumsatz",
      "mandatory": false,
      "type": {
        "name": "double",
        "uitype": "71"
      },
      "nullable": true,
      "editable": true,
      "displayType": "1",
      "default": "0.000000000"
    },
    "...",
    {
      "name": "partner_id",
      "label": "Partner",
      "mandatory": false,
      "type": {
        "refersTo": [
          "Partner"
        ],
        "refersToTranslated": [
          {
            "name": "Partner",
            "label": "Partner"
          }
        ],
        "name": "reference",
        "uitype": "10"
      },
      "nullable": true,
      "editable": true,
      "displayType": "1",
      "default": "0"
    }
  ],
}
```

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```
"idPrefix": "2",
"isEntity": true,
"labelFields": "firstname, lastname"
"userDefinedFields": [
  {
    "tabid": "23",
    "fieldid": "1725",
    "columnname": "cf_1725",
    "tablename": "vtiger_inventoryproductrel",
    "generatedtype": "2",
    "uitype": "1",
    "fieldname": "cf_1725",
    "fieldlabel": "cf_1725",
    "readonly": "1",
    "presence": "2",
    "selected": "0",
    "maxlength": "100",
    "sequence": "12",
    "block": "70",
    "displaytype": "-1",
    "typeofdata": "V~0~LE~100",
    "quickcreate": "1",
    "quickcreatesequence": null,
    "info_type": "BAS",
    "masseditable": "1",
    "helpinfo": "",
    "displaytype_adjust": "",
    "ajax_editable": "1",
    "properties_editable": "1",
    "account_related": "0",
    "revision_safe": "0",
    "function_message": "",
    "outsourced": "0",
    "product_block_field": "1",
    "product_block_sequence": "1",
    "default_value": "",
    "blockid": "70",
    "blocklabel": "LBL_RELATED_PRODUCTS",
    "show_title": "0",
    "visible": "0",
    "create_view": "0",
    "edit_view": "0",
    "detail_view": "0",
    "display_status": "1",
    "iscustom": "0",
    "add_field": "0",
    "drop_target": "0",
    "hide_allowed": "0",
    "show_empty_block": "1",
    "handler_class": "classes\\Inventory\\CustomBlocks\\ProductBlock"
  }
],
```

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```

"productBlocks": {
  "677": {
    "name": "ArticleList1",
    "translation": {
      "de_de": "Standard",
      "en_us": "Standard",
      "fr_fr": "Standard",
      "it_it": "Standard",
      "es_es": "Estándar"
    }
  }
}

```

2.11 GetAccessList

Get the status if a language or module is activated.

HTTP-Type: **GET**

URL:

[url-format]?operation=getaccesslist&sessionName=[sessionID]&elementType=[Modules / Languages]

Example - request:

```

curl 'https://[url-to-crmplus]/webservice.php?operation=getaccesslist&
↪sessionName=[sessionID]&elementType=[Modules / Languages]' \
-H 'Accept: application/json'

```

Example - response:

For 'Modules':

```

{
  "success": true,
  "result": {
    "Accounts": {
      "active": 1
    },
    "Assets": {
      "active": 1
    }
    "...",
  }
}

```

For 'Languages':

```
{
  "success":true,
  "result":{
    "de_de":{
      "active":"1"
    },
    "en_us":{
      "active":"0"
    },
    "...",
  }
}
```

2.12 Updateaccess

Update access of a language or a module by setting activating or deactivating flag.

HTTP-Type: **POST**

URL:

[url-format]?operation=updateaccess&sessionName=[sessionID]&elementType=[Modules / Languages]&element=[object]

Example - request (language):

```
curl 'https://[url-to-crmplus]/webservice.php' \
-H 'Accept: application/json' \
-d 'operation=updateaccess&sessionName=[sessionID]&elementType=Languages' \
-d 'element={"de_de":{"active":"1"},"en_us":{"active":"0"}}'
```

Example - response (language):

```
{
  "success":true,
  "result":{
    "de_de":{
      "success":true
    },
    "en_us":{
      "success":true
    }
  }
}
```

You can see changes in response from **GetAccesslist**

```
{
  "success":true,
  "result":{
```

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```

    "de_de":{
      "success":true
    },
    "en_us":{
      "success":false
    }
    "...",
  }
}

```

Example - request (modules):

```

curl 'https://[url-to-crmplus]/webservice.php' \
-H 'Accept: application/json' \
-d 'operation=updateaccess&sessionName=[sessionID]&elementType=Modules' \
-d 'element={"Accounts":{"active":"1"},"Calendar":{"active":"0"}}'

```

Example - response (modules):

```

{
  "success":true,
  "result":{
    "Accounts":{
      "success":true
    },
    "Calendar":{
      "success":true
    }
  }
}

```

You can see changes in response from **GetAccesslist**

```

{
  "success":true,
  "result":{
    "Accounts":{
      "success":true
    },
    "Calendar":{
      "success":false
    }
    "...",
  }
}

```

2.13 ChangePassword

This service allows you to change the user password.

HTTP-Type: **POST**

URL:

[url-format]?operation=changePassword&sessionName=[sessionID]&oldPassword=[old Password]&confirmPassword=[confirm New Password]&newPassword=[new Password]&id=[userId]

Example-Request:

```
curl 'https://[url-to-crmplus]/webservice.php' \  
-H 'Accept: application/json' \  
-d 'operation=changePassword&sessionName=[sessionID]&oldPassword=admin1&  
confirmPassword=admin2&newPassword=admin2&id=19x1'
```

Example - response:

```
{  
  "success": true,  
  "result": {  
    "message": "Changed password successfully"  
  }  
}
```

2.14 DeleteUser

Delete a user from the CRM+. The "newOwnerId" is a user who gets the ownership transferred from the old user.

HTTP-Type: **POST**

URL:

[url-format]?operation=deleteUser&sessionName=[sessionID]&id=[userID]&newOwnerId=[userID]

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php' \  
-H 'Accept: application/json' \  
-d 'operation=deleteUser&sessionName=[sessionID]&id=19x1&newOwnerId=20x1'
```

Example - response:

```
{  
  "success": true,  
  "result": {  
    "status": "successful"  
  }  
}
```

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```
}  
}
```

2.15 UploadDocument

Creates a new document with internal attachment.

HTTP-Type: **POST**

URL:

[url-format]?operation=uploadDocument&sessionName=[sessionID]&attachment=[object]&element=[object]

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php' \  
-H 'Accept: application/json' \  
-d 'operation=uploadDocument&sessionName=[sessionID]' \  
-d 'attachment={"stream":"e.g. base64 encoded file!", "mime_type":"e.g. image/jpg"}' \  
↪ /base64 should be urlencoded otherwise your file might not work  
-d 'element={"notes_title":"test", "filename":"test"}'
```

Example - response:

```
{  
  "success":true,  
  "result":{  
    "createdtime":"2014-01-14 14:46:23",  
    "filedownloadcount":"0",  
    "filelocationtype":"I",  
    "filesize":"0",  
    "filestatus":"1",  
    "filetype":"",  
    "fileversion":"",  
    "folderid":"22x1",  
    "modifiedtime":"2014-01-14 14:46:23",  
    "...",  
    "visible_for_cp":"0",  
    "id":"7x218"  
  }  
}
```

2.16 AddRelatedRecord

Create new relations between records (n:m and field relations).

HTTP-Type: **POST**

URL:

[url-format]?operation=addRelatedRecord&sessionName=[sessionID]&sourceId=[sourceID]&targetId=[object]

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php' \  
-H 'Accept: application/json' \  
-d 'operation=addRelatedRecord&sessionName=[sessionID]' \  
-d 'sourceId=3x456' \  
-d 'targetId=["4x2"]'
```

Example - response:

```
{  
  "success": true,  
  "result": null  
}
```

2.17 GetAllRelations

Get a records available relation modules and their number of related records.

HTTP-Type: **GET**

URL:

[url-format]?operation=getAllRelations&sessionName=[sessionID]&sourceId=[sourceID]

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php?operation=getAllRelations&  
↪sessionName=[sessionID]&sourceId=3x456' \  
-H 'Accept: application/json'
```

Example - response:

```
{  
  "success": true,  
  "result": [  
    {  
      "name": "Contacts",  
      "label": "Kontakte",  
    }  
  ]  
}
```

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```

        "relation": 2
      },
      {
        "name": "EmailsLocal",
        "label": "E-Mails",
        "relation": 0
      },
      {
        "name": "Activities",
        "label": "Aktivitäten",
        "relation": 3
      },
      "...
    ]
  }

```

2.18 GetRelatedRecords

Get a records related records.

HTTP-Type: **GET**

URL:

[url-format]?operation=getRelatedRecords&sessionName=[sessionID]&sourceId=[sourceID]&moduleName=[moduleName]

Example - request:

```

curl 'https://[url-to-crmplus]/webservice.php?operation=getRelatedRecords&
↪sessionName=[sessionID]&sourceId=7x925&moduleName=Documents' \
-H 'Accept: application/json'

```

Example - response:

```

{
  "success": true,
  "result": {
    "name": "Contacts",
    "module": "Contacts",
    "fields": [
      {
        "name": "contact_no",
        "label": "Kontaktnr."
      },
      {
        "name": "lastname",
        "label": "Nachname"
      }
    ]
  }
}

```

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```

    ],
    "relations": [
      {
        "id": "4x1",
        "contact_no": "CON1",
        "lastname": "Test1",
        "createdtime": "2018-05-30 12:48:11",
        "modifiedtime": "2018-05-30 12:48:11",
        "assigned_user_id": "19x1"
      },
      {
        "id": "4x2",
        "contact_no": "CON2",
        "lastname": "Test2",
        "createdtime": "2018-06-01 14:39:51",
        "modifiedtime": "2018-06-01 14:39:51",
        "assigned_user_id": "19x1"
      }
    ]
  }
}

```

2.19 AddLineItems

Add a product or service to a product block record.

HTTP-Type: **POST**

URL:

[url-format]?operation=addLineItem&sessionName=[sessionID]&recordId=[recordId]&attributes=[object]&options=[object]

Example - request:

```

curl 'https://[url-to-crmplus]/webservice.php' \
-H 'Accept: application/json' \
-d 'operation=addLineItem&sessionName=[sessionID]' \
-d 'recordId=16x3507' \
-d 'attributes={"id":"6x3099", "name":"Product 1", "sequence": 0, "headline": "",
↪ "headlines": "", "linebreak": "off", "show_subtotal": 0, "comment": null, "quantity": 1,
↪ "listprice": 0, "grossPrice": null, "asset_id": 0, "lineitem_id": 0, "tax_id": 0, "discount_
↪ percent": 0, "discount_amount": 0, "productBlockName": "article_list_2",
↪ "optionalLineItem": false, "cf_1767": "value", "alternativeParentId": "0"}' \
-d 'options={"recalculate": true}' // true = invoice subtotal / total / etc will get
↪ recalculated / recommended

```

Example - response:


```
{
  "success": true,
  "result": {
    "4": {
      "id": "25x3299",
      "name": "Service 1",
      "sequence": "1",
      "headline": "",
      "headlinedes": "",
      "linebreak": "off",
      "show_subtotal": "0",
      "comment": "",
      "description": "",
      "quantity": 2,
      "listprice": "12235.870000000",
      "asset_id": "0",
      "subproduct_ids": "",
      "itemtype": "Services",
      "lineitem_id": "4",
      "total": 24471.74,
      "total_discount": 0,
      "total_after_discount": 24471.74,
      "taxclass": "0",
      "tax_percentage": "0.000",
      "discount_percent": 0,
      "discount_amount": 0,
      "total_tax_value": 0,
      "net_price": 24471.74,
      "net_subtotal": 48943.48,
      "grossLineItem": "0",
      "grossPrice": null,
      "grossDiscountAmount": null,
      "forecast": "0",
      "sh_tax": 0,
      "ship_bill_date": null,
      "qtyinstock": 0,
      "changetime": "1508501942",
      "copyProduct": false,
      "optionalLineItem": false,
      "productBlockName": "article_list_2",
      "alternativeLineItem": false,
      "cf_1767": "value",
    },
    "5": {
      "id": "6x3099",
      "name": "Product 1",
      "sequence": "2",
      "headline": "",
      "headlinedes": "",
      "linebreak": "off",
      "show_subtotal": "0",
      "comment": "",
    }
  }
}
```

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```

        "description": "",
        "quantity": 1,
        "listprice": "12235.870000000",
        "asset_id": "0",
        "subproduct_ids": "",
        "itemtype": "Products",
        "lineitem_id": "5",
        "total": 12235.87,
        "total_discount": 0,
        "total_after_discount": 12235.87,
        "taxclass": "413",
        "tax_percentage": "7.500",
        "discount_percent": 0,
        "discount_amount": 0,
        "total_tax_value": 0,
        "net_price": 12235.87,
        "net_subtotal": 24471.74,
        "grossLineItem": "0",
        "grossPrice": null,
        "grossDiscountAmount": null,
        "forecast": "0",
        "sh_tax": 0,
        "ship_bill_date": null,
        "qtyinstock": 0,
        "changetime": "1508501883",
        "copyProduct": false,
        "productBlockName": "article_list_2"
        "optionalLineItem": false,
        "alternativeLineItem": false,
        "cf_1767": "value",
    }
}
}

```

2.20 GetLineItems

Get all line items and their infos of a product block record.

HTTP-Type: **GET**

URL:

[url-format]?operation=getLineItems&sessionName=[sessionID]&recordId=[recordId]

Example - request:

```

curl 'https://[url-to-crmplus]/webservice.php?operation=getLineItems&
↪sessionName=[sessionID]&recordId=16x973' \
-H 'Accept: application/json'

```

Example - response:

```
{
  "success": true,
  "result": {
    "4": {
      "id": "25x3299",
      "name": "Service 1",
      "sequence": "1",
      "headline": "",
      "headlinedes": "",
      "linebreak": "off",
      "show_subtotal": "0",
      "comment": "",
      "description": "",
      "quantity": 2,
      "listprice": "12235.870000000",
      "asset_id": "0",
      "subproduct_ids": "",
      "itentype": "Services",
      "lineitem_id": "4",
      "total": 24471.74,
      "total_discount": 0,
      "total_after_discount": 24471.74,
      "taxclass": "0",
      "tax_percentage": "0.000",
      "discount_percent": 0,
      "discount_amount": 0,
      "total_tax_value": 0,
      "net_price": 24471.74,
      "net_subtotal": 48943.48,
      "grossLineItem": "0",
      "grossPrice": null,
      "grossDiscountAmount": null,
      "forecast": "0",
      "sh_tax": 0,
      "ship_bill_date": null,
      "qtyinstock": 0,
      "changetime": "1508501942",
      "copyProduct": false,
      "optionalLineItem": false,
      "alternativeLineItem": false,
      "cf_1767": "value",
      "productBlockName": "article_list_2"
    },
    "5": {
      "id": "6x3099",
      "name": "Product 1",
      "sequence": "2",
      "headline": "",
      "headlinedes": "",
      "linebreak": "off",
      "show_subtotal": "0",
```

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```

        "comment": "",
        "description": "",
        "quantity": 1,
        "listprice": "12235.870000000",
        "asset_id": "0",
        "subproduct_ids": "",
        "itentype": "Products",
        "lineitem_id": "5",
        "total": 12235.87,
        "total_discount": 0,
        "total_after_discount": 12235.87,
        "taxclass": "413",
        "tax_percentage": "7.500",
        "discount_percent": 0,
        "discount_amount": 0,
        "total_tax_value": 0,
        "net_price": 12235.87,
        "net_subtotal": 24471.74,
        "grossLineItem": "0",
        "grossPrice": null,
        "grossDiscountAmount": null,
        "forecast": "0",
        "sh_tax": 0,
        "ship_bill_date": null,
        "qtyinstock": 0,
        "changetime": "1508501883",
        "copyProduct": false,
        "optionalLineItem": true,
        "alternativeLineItem": false,
        "cf_1767": "value",
        "productBlockName": "article_list_2"
    }
}
}

```

2.21 UpdateLineItem

Update the infos of a line item of a product block record.

HTTP-Type: **POST**

URL:

[url-

format]?operation=updateLineItem&sessionName=[sessionId]&recordId=[recordId]&lineItemId=[lineItemId]&fields=[job

Example - request:

```

curl 'https://[url-to-crmplus]/webservice.php' \
-H 'Accept: application/json' \
-d 'operation=updateLineItem&sessionName=[sessionID]' \
-d 'recordId=16x3507' \
-d 'lineItemId=5' \
-d 'fields={"linebreak":"off","quantity":1,"listprice":199.99, "productBlockName":
↪"ArticleList1", "optionalLineItem": false, "cf_1767": "value", "alternativeParentId":
↪"4"}' \
-d 'options={"recalculate":true}' // true = invoice subtotal / total / etc will get ↪
↪recalculated / recommended

```

Example - response:

```

{
  "success": true,
  "result": {
    "id": "6x3099",
    "name": "Product 1",
    "sequence": "2",
    "headline": "",
    "headlinedes": "",
    "linebreak": "off",
    "show_subtotal": "0",
    "comment": "",
    "description": "",
    "quantity": 1,
    "listprice": "199.990000000",
    "asset_id": "0",
    "subproduct_ids": "",
    "itemtype": "Products",
    "lineitem_id": "5",
    "total": 199.99,
    "total_discount": 0,
    "total_after_discount": 199.99,
    "taxclass": "413",
    "tax_percentage": "7.500",
    "discount_percent": 0,
    "discount_amount": 0,
    "total_tax_value": 0,
    "net_price": 199.99,
    "net_subtotal": 399.98,
    "grossLineItem": "0",
    "grossPrice": null,
    "grossDiscountAmount": null,
    "forecast": "0",
    "sh_tax": 0,
    "ship_bill_date": null,
    "qtyinstock": 0,
    "changetime": "1508501883",
    "copyProduct": false,
    "cf_1767": "value",
    "productBlockName": "ArticleList1"
    "optionalLineItem": false,

```

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```

        "alternativeLineItem": true,
        "alternativeParentId": 4
    }
}

```

2.22 DeleteLineItem

Delete a line item of a product block record.

HTTP-Type: **GET**

URL:

[url-format]?operation=deleteLineItem&sessionName=**[sessionID]**&recordId=**[recordId]**&lineItemId=**[lineItemId]**

Example - request:

```

curl 'https://[url-to-crmplus]/webservice.php?operation=deleteLineItem&
→sessionName=[sessionID]&recordId=16x973&lineItemId=1&options=%7B%22recalculate%22
→%3Atrue%7D' \ //options should be urlencoded, true = invoice subtotal / total / etc
→will get recalculated / recommended
-H 'Accept: application/json'

```

Example - response:

```

{
  "success": true,
  "result": {
    "4": {
      "id": "25x3299",
      "name": "Service 1",
      "sequence": "1",
      "headline": "",
      "headlinedes": "",
      "linebreak": "off",
      "show_subtotal": "0",
      "comment": "",
      "description": "",
      "quantity": 2,
      "listprice": "12235.870000000",
      "asset_id": "0",
      "subproduct_ids": "",
      "itemtype": "Services",
      "lineitem_id": "6",
      "total": 24471.74,
      "total_discount": 0,
      "total_after_discount": 24471.74,
      "taxclass": "0",
    }
  }
}

```

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```

        "tax_percentage": "0.000",
        "discount_percent": 0,
        "discount_amount": 0,
        "total_tax_value": 0,
        "net_price": 24471.74,
        "net_subtotal": 48943.48,
        "grossLineItem": "0",
        "grossPrice": null,
        "grossDiscountAmount": null,
        "forecast": "0",
        "sh_tax": 0,
        "ship_bill_date": null,
        "qtyinstock": 0,
        "changetime": "1508501942",
        "copyProduct": false,
        "optionalLineItem": false,
        "alternativeLineItem": false,
        "cf_1767": "value",
        "productBlockName": "ArticleList1"
    }
}
}

```

2.23 GetStreamProperties

Get internal stream properties. This service provides almost the same parameters as the home dashboard module in the CRM+.

HTTP-Type: **GET**

URL:

[url-format]?operation=getstreamproperties&sessionName=[sessionID]

Example - request:

```

curl 'https://[url-to-crmplus]/webservice.php?operation=getStreamProperties&
↪sessionName=[sessionID]' \
-H 'Accept: application/json'

```

Example - response:

```

{
    "success": true,
    "result": {
        "modules": [
            {
                "name": "Accounts",
                "id": "6"
            }
        ]
    }
}

```

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```
        },
        "...",
    ],
    "timeframe":{
        "days":[
            1,
            3,
            5,
            14
        ]
    },
    "assignment":[
        {
            "name":"LBL_ONLY_MINE",
            "label":"zeige meine Daten"
        },
        {
            "name":"LBL_ALL_RECORDS",
            "label":"zeige alle Daten"
        }
    ]
}
}
```

2.24 GetStreamData

Get internal stream data / changes. This service provides almost the same parameters as the home dashboard module in the CRM+.

To use this operation you have to activate **Track Changes** for the module you would like to stream data. | Login as admin -> global Settings -> Track Changes -> Continuous change tracking (active) & select module (active)

This additional filters are allowed:

- assignment
- timestamp
- timeframe
- maxchanges
- maxrecords
- withchanges
- withpagecount
- recordid
- pagenumber

HTTP-Type: **GET**

URL:

[url-format]?operation=getStreamData&sessionName=[sessionID]&filter=[object]

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php/webservice.php?operation=getStreamData&
↳sessionName=[sessionID]&filter=%7B%22modules%22%3A%22%27%22%7D' \  //{"modules": "7"}
↳url encoded
-H 'Accept: application/json'
```

Example - response:

```
{
  "success": true,
  "result": {
    "lastSyncTime": 1389711761,
    "changes": [
      {
        "record": {
          "id": 213,
          "name": "Lastname via Webservice",
          "link": "",
          "modifiedOn": "2014-01-14 12:16",
          "modifiedBy": " Administrator"
        },
        "module": {
          "label": "Leads",
          "link": "index.php?module=Leads&action=index"
        },
        "data": [
          {
            "datetime": "2014-01-14 12:16",
            "status": 1,
            "changes": [
            ]
          }
        ]
      },
      "...",
    ]
  }
}
```

2.25 Logout

Logout from the webservices session, this leaves the webservice session invalid for further use.

HTTP-Type: **POST**

URL:

[url-format]?operation=logout&sessionName=[sessionID]

Example - request:

```
curl 'https://[url-to-crmplus]/webservice.php?operation=logout&sessionName=[sessionID]' \  
-H 'Accept: application/json'
```

Example - response:

```
{  
  "success": true,  
  "result": {  
    "message": "successfull"  
  }  
}
```

FUNCTIONS

3.1 POST

Include the helper functions **'Post'** for POST-Requests:

```
<?php

function Post(array $data) {
    $url = 'http://[url-to-crmplus]/webservice.php';

    $handle = curl_init();
    curl_setopt($handle, CURLOPT_URL, $url);
    curl_setopt($handle, CURLOPT_HTTPHEADER, array('Accept: application/json'));
    curl_setopt($handle, CURLOPT_RETURNTRANSFER, 1);
    curl_setopt($handle, CURLOPT_SSL_VERIFYHOST, 0);
    curl_setopt($handle, CURLOPT_SSL_VERIFYPEER, 0);
    curl_setopt($handle, CURLOPT_POST, 1);
    curl_setopt($handle, CURLOPT_POSTFIELDS, $data);
    $response = curl_exec($handle);
    curl_close($handle);

    return json_decode($response, true);
}
```

3.2 GET

Include the helper functions **'Get'** for GET-Requests:

```
<?php

function Get(array $data) {
    $url = 'http://[url-to-crmplus]/webservice.php';
    $url .= '?' . http_build_query($data, '', '&');

    $handle = curl_init();
    curl_setopt($handle, CURLOPT_URL, $url);
    curl_setopt($handle, CURLOPT_HTTPHEADER, array('Accept: application/json'));
    curl_setopt($handle, CURLOPT_RETURNTRANSFER, 1);
```

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```
curl_setopt($handle, CURLOPT_SSL_VERIFYHOST, 0);  
curl_setopt($handle, CURLOPT_SSL_VERIFYPEER, 0);  
$response = curl_exec($handle);  
curl_close($handle);  
  
return json_decode($response, true);  
}
```

ERROR CODES

Code	Description
SESSION_EXPIRED	Session has life span over please login again
SESSION_LEFT_IDLE	Session has been invalidated to due lack activity
INVALID_SESSIONID	Session identifier provided is invalid
INVALID_AUTH_TOKEN	Specified token is invalid or expired
ACCESSKEY_UNDEFINED	Access key for the user is undefined
INVALID_USER_CREDENTIALS	Invalid username or password
AUTHENTICATION_REQUIRED	Given user is inactive
AUTHENTICATION_FAILURE	Authencation failed
ACCESS_DENIED	Permission is denied to perform operation (depends on request)
DATABASE_QUERY_ERROR	Database error while performing required operation (depends on request)
QUERY_SYNTAX_ERROR	Syntax error in query
MANDATORY_FIELDS_MISSING	Mandantory field is missing or does not have a value (depends on request)
REFERENCE_INVALID	Invalid reference specified for given fieldname (depends on request)
INVALID_ID_ATTRIBUTE	Id specified is incorrect
RECORD_NOT_FOUND	Record you are trying to access is not found
RECORD_NOT_SAVED	Record is not saved
INTERNAL_SERVER_ERROR	Unknown error while processing request
OPERATION_NOT_SUPPORTED	Operation you calling is not supported (depends on request)
UNKOWN_ENTITY	Entity is not associated with any tables
INVALID_OLD_PASSWORD	Invalid value given for old password
NEW_PASSWORD_MISMATCH	New password and confirm password don't match
CHANGE_PASSWORD_FAILURE	Failed to change password
INVALID_FILE_LOCATION_TYPE	File location type needs to be 'l'
INVALID_FILESTATUS	File status needs to be '1'
ATTACHMENT_WRONG_ENCODING	We support only base64 encoding
ATTACHMENT_NO_DATA	No binary data retrieved or encoding incorrect
INVALID_FILENAME	Filename is invalid
MAINTENANCE_MODE	The maintenance mode has been activated. Until the maintenance is completed, no actions can be performed via the web services. Additionally, the HTTP status code 503 is returned.

FIELD TYPES

Type	Description
Autogenerated	These are fields for which the values are generated automatically by the crm, this is usually an objects id field
String	A one line text field
Text	A multiline text field
Boolean	A boolean field can have the values true or false
Integer	A non decimal number field
Double	A field for for floating point numbers
Decimal	A field for for floating point numbers
Time	A string of the format hh:ii format is based on the users settings time format
Datetime	A string representing the date and time, the format is base on the users settings date format, e.g. yyyy-mm-dd hh:mm
Date	<p>A string representing a date, the field type map will contain another element called format which is the format of value of is expected. It is based on the users settings date format.</p> <pre> { format: "...", // The format in which the value of this field is expected name: "...", // Name of the field type } </pre>
Owner	A string field for defining the owner of the field which could be a group or individual user
Email	A string field for storing email ids
Phone	A string field for storing phone numbers
Url	A string field for storing urls
Password	A string field for storing passwords
Picklist	<p>A picklist field where only one value can be selected</p> <pre> { picklistValues: [... valid JSON ...], // List of possible values defaultValue: "...", // Specifies which value should be used as the default value name: "...", // Name of the field type } </pre>

Multipicklist	<p>A picklist field where multiple values can be selected. Multiple values are separated by eg. Value1 Value2</p> <pre>{ picklistValues: [... valid JSON ...], // List of possible values defaultValue: "...", // Specifies which value should be used as the default value name: "...", // Name of the field type }</pre>
Reference	<p>A field that shows a relation to another object this field type will contain another element called refersTo which is an array containing the name of modules of which the field can point to</p> <pre>{ refersTo: [... valid JSON ...], // Is an list containing the name of modules name: "...", // Name of the field type }</pre>
File	<p>A field for adding file to crm</p> <pre>{ maxUploadFileSize: "...", // Max allowed size of a file getting uploaded name: "...", // Name of the field type }</pre>