

XfleX REST Interface Manual

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Purpose

Interfacing third-party software with XfleX.

Requirements

- Valid XfleX service contract with XfleX REST option active
- > XfleX user with the necessary rights granted to read and/or write to the requested entities

Service address

https://rest.xflex.ch/api/_contract_

Verbs

POST

Parameters

Format: JSON (application/json) in Content.Body

For authentication the following structure must be passed:

The complete body is composed by the authentication structure followed by the contract specific parameters. Example with contract project:



Resultset

Format: JSON (application/json) Example with contract project:



Contracts

Contacts

api/contact

needs contact (CON) read access and function 111 granted; books xrm usage

Parameters

CONNR searching for a contact primary key
CONINR searching for a contact number

FULLTXT searching for a text in the 4 name lines, the short code and the number

CONEMA searching for contact with email address
CONTEL searching for contact with telephone number

CRDAFT searching for contacts created after a date (Format: 2018-01-31")

MODAFT searching for contacts modified after a date (Format: 2018-01-31")

CATNR category primary key: returns all contacts having this category actif

Resultset

CON Name Location (Number)

CONNNR Contact Number

CONTNR Contact Short Text ID
CONLAC Contact language (ISO)

CONNA1 Name Line 1
CONNA2 Name Line 2
CONNA3 Name Line 3
CONNA4 Name Line 4

CONDAT Contact Date (Birthday / Established)
COTNR Contact Type Primary Key (see api/cot)

CONNR Contact Primary Key



Projects

api/project

needs project (PRO) read access and function 131 granted; books xdeal usage

Parameters

PROINR searching for a project internal number

FULLTXT searching for a text in the short text, the long text and the number of the project

PRTLEV searching for projects on level 1, 2, 3 or 4
PRTSTD searching for a project standard type

9=standard project 1=service project

2=object
3=installation
4=contract

5=monitoring project

CRDAFT searching for projects created after a date (Format: 2018-01-31")

MODAFT searching for projects modified after a date (Format: 2018-01-31")

PRONR searching for project with primary key

Resultset

PRO Description [Projecttype] (Number)

PRONR Project Primary Key
PROINR Project internal Number
PROEXT Project external Number
PRONAS Project short description
PRONAL Project long description

PRODTB Project begin date (Format: 2018-01-31T15:40:00", 1900-01-01 if void)
PRODTE Project end date (Format: 2018-01-31T15:40:00", 9999-12-31 if void)

EMHCON Project head (CONNR)
EMDCON Project deputity (CONNR)



Documenttypes

api/dtp

needs function 9421 granted

Parameters

Resultset

DTP Name

STD Standard type

0 none; 1 offer; 2 contract; 3 delivery; 4 invoice; 5 partial invoice; 6 retour; 7 credit note; 10

correspondance; 20 timesheet; 30 projectsheet; 40 order to supplier; 50 Internal move

DTPNR Primary Key



Documents

Read

api/docread

needs document (DOC) read access and function 133 granted; books xdeal usage

Parameters

DOCNR Primary Key
INR Number

STD Standard type (255 for no filtering on STD)

0 none; 1 offer; 2 contract; 3 delivery; 4 invoice; 5 partial invoice; 6 retour; 7 credit note; 10

correspondance; 20 timesheet; 30 projectsheet; 40 order to supplier; 50 Internal move

STA Status (255 for no filtering on STA)

0 work in progress 1 final 2 replaced 3 model

PRO Linked to Projekct (primary key)

DTVAFT With valid date after (and including) (Format: 2018-01-31")

NOB Not yet booked (without DOC.DTA): "true"

Resultset

DOCNR Primary Key

DOC Description (Number / Date) [ISO Amount]

INR Number

DTP Document Type (primary key)
PRO Linked to Projekct (primary key)
STA Status (255 for no filtering on STA)

0 work in progress 1 final 2 replaced 3 model

NAS Description
NAL Long Text
DTV Valid date
DTF Financial date
DTA Booking date

CURISO Currency in ISO Format

AMT Document value

api/docopxml

needs document (DOC) read access and function 731 granted; books xdeal usage

Parameters

DOCNR Primary Key

Resultset

OPXML String with XML Data of OP just as if it would have been exported with 731 format XML.



Write

api/docwrite

needs document (DOC) write access and function 133 granted; books xdeal usage

Parameters

DOCNR Primary Key

IF = 0: add new entry (CUR, DRF, MOT, PAC come from project, standards or defaults)

IF > 0: change doc with this primary, only these fields are changable

DTP Document Type (mandatory, primary key)

INR Number (must be unique in case of invoice/credit notes)

PRO Linked to Projekct (primary key)

STA Status (mandatory)

0 work in progress 1 final 2 replaced 3 model

NAS Description
NAL Long Text

DTV Valid date (Format: 2018-01-31")

DTF Financial date (Format: 2018-01-31")

DTA Booking date (Format: 2018-01-31")

Resultset

DOCNR Primary Key

Document Payment Add

api/docpayadd

needs document-payment (DOC-BIP) write access and function 715 granted; books xdeal usage

Parameters

DOCNR Primary Key

DTB Payment date (Format: 2018-01-31")

SLP Slip info (max 30 char)

AMT Payment amount

TYP Type of payment: 0=unknown, 1=cash flow, 2=settlement, 3=loss

Resultset

RET 0=OK



Employees

api/employee

needs employee (EMP) read access and function 152 granted; books xrm usage

Parameters

EMPINR searching for an employee number

FULLTXT searching for a text in the 4 name lines of the contact linked to the employee

INA0 searching for active employees

CRDAFT searching for employees created after a date (Format: 2018-01-31")

MODAFT searching for employees modified after a date (Format: 2018-01-31")

EMPNR Employee Primary Key

Resultset

EMP Name (Number)

STDEMA Standard Email Address

CONNR Primary Key of linked contact

EMPNR Employee Primary Key



Registration Model

api/rem

needs function 923 granted

Parameters

REMSTD searching models of a standard type

0 normal registration1 general absence

2 holidays

3 compensation time (counts as if not booked)

4 correction time (counts as booked, positive or negative)

REMTPS searching for models based on a cost section

1 Section Workforce

2 Section Business Expenses

3 Section Delivery

4 Section Tools/Machines

5 Section Third Party

Resultset

REM Name (Number)

REMNR Registration Model Primary Key



Registration

Read

api/regread

needs registration (REG) read access and function 135 granted; books xperform usage

Parameters

DTB searching for registrations of a specific date (Format: 2018-01-31")

PRONR searching for registrations linked to a project
EMPNR searching for registrations linked to an employee

REMNR searching for registrations linked to a registration model

Resultset

DTB Date and Time Begin of registration
DTE Date and Time End of registration

NAS Short text of registration NAL Long text of registration

PRONR Project Primary Key of linked project (if any, otherwise 0)

EMPNR Employee Primary Key of linked employee (if any, otherwise 0)

REMNR Registration Model Primary Key

QTY Quantity

PRC Price per Unit
REB Discount in %
SUR Surcharge in %

AMT Amount of registration

CSN Cost per Unit

CST Total cost of registration
TPI Registration Usage Mode

0 Registration not part of invoice,1 Registration goes on invoice,

2 Registration repeats on each project invoice,

3 Registration is a contract position for periodic invoicing

4 Registration is a service order default (gets added to new service orders)

TPA Registration account mode

0 Registration in total amount of invoice

1 Registration not part of total amount of invoice

TPL Registration amount mode

0 Normal: AMT and CST are calculated with QTY

1 Forfeit: Qty only used for hour control, AMT and CST are not calculated



Add

api/regadd

needs registration (REG) write access and function 135 granted; books xperform usage

Parameters: REG Structure with

REMNR Registration Model Primary Key (mandatory)

PRONR Project Primary Key of linked project

EMPNR Employee Primary Key of linked employee

DTB Registration Begin Date and Time (Format: 2018-01-31T13:55:00") (mandatory)

DTE Registration End Date and Time (Date must be the same as DTB)

(Format: 2018-01-31T13:55:00")

QTY Quantity (for hour registrations in industrial minutes [100 based],

as the result of the time difference of DTE-DTB) (mandatory)

PRC Price per Unit
REB Discount in %
SUR Surcharge in %

AMT Amount of registration (mandatory)

CSN Cost per Unit

CST Total cost of registration
NAS Short text of registration
NAL Long text of registration

TPI Registration Usage Mode (mandatory)

0 Registration not part of invoice,1 Registration goes on invoice,

2 Registration repeats on each project invoice,

3 Registration is a contract position for periodic invoicing

4 Registration is a service order default (gets added to new service orders)

TPA Registration account mode (mandatory)

0 Registration in total amount of invoice (needs TPI>=1)

1 Registration not part of total amount of invoice

TPL Registration amount mode (mandatory)

0 Normal: AMT and CST are calculated with QTY

1 Forfeit: Qty only used for hour control, AMT and CST are not calculated

Resultset

REGNR Registration Primary Key of added registration



Interaction Model

api/iam

needs contact-interaction (CON-IAC) read access and function 111 granted; books xrm usage

Parameters

CHTSTD Standard Channel Type

1 Email2 Telefony

Resultset

IAM Number | Subject | Relationsshiptype | Channeltype | Documenttype | Documentlayout

IATNR Interaction Type Primary Key linked to the interaction model

Interaction

api/iacadd

needs contact-interaction (CON-IAC) write access and function 111 granted; books xrm usage

Parameters: IAC Structure with

IATNR Interaction Type Primary Key (as read in the api/iam query) (mandatory)

COR Contact Primary Key of second party (mandatory)

PRONR Project Primary Key, if interaction should be linked to a project, otherwise 0

DTB Date and Time the interaction happened (Format: 2018-01-31T13:55:00") (mandatory)

NAS Short description of the interaction (subject)
NAL Long description of the interaction (content)

Resultset

IACNR Interaction Primary Key of added interaction



Interaction Attachment

api/iacatt

needs contact-interaction (CON-IAC) write access and function 111 granted; books xrm usage

Parameters: EXCEPTION to standard parameter handling

Values read from URI

CID Client Number
UID Username
UPW Password

IACNR Interaction Primary Key (Interaction to witch the file will be linked) (mandatory)

FNAME Name of the file (mandatory)
Values read from Body.Content in binary format

File content as byte array (mandatory)

Resultset

ENONR File storage primary key

Interaction Attachment read from Exchange Server

api/iacexcatt

needs contact-interaction (CON-IAC) write access and function 111 granted; books xrm usage

Parameters:

IACNR Interaction Primary Key (Interaction to witch the file will be linked) (mandatory)

FNAME Name of the file (mandatory)

EWSURL URL to request attachment (mandatory)

ATTID Attachment ID (mandatory)

ACCTOK Access Token (OAUTH) (mandatory)

Resultset

ENONR File storage primary key



Appointment

Read

api/cagread

needs registration (REG) read access and function 173 granted; books xdispo usage

Parameters

DTB searching for appointments of a specific date (Format: 2018-01-31")

CRDAFT searching for appointments created after a date (Format: 2018-01-31")

MODAFT searching for appointments modified after a date (Format: 2018-01-31")

PRONR searching for appointments linked to a project
EMPNR searching for appointments linked to an employee
CONNR searching for appointments linked to a contact

CAQNR searching for appointment primary key

Resultset

EMPNR Employee Primary Key of linked employee (if any, otherwise 0)

PRONR Project Primary Key of linked project (if any, otherwise 0)

CONNR searching for appointments linked to a contact (if any, otherwise 0)

REMNR Registration Model Primary Key (if any, otherwise 0)

DTB Date and Time Begin of appointment
DTE Date and Time End of appointment

PRIO Priority of appointment; 1=low, 2=normal, 3=high

NAS Short text of appointment NAL Long text of appointment

CAQNR searching for appointment primary key



Write

api/caqwrite

needs registration (REG) write access and function 173 granted; books xdispo usage

Parameters CAQ Structure with

CAQNR appointment primary key

0: a new appointment will be created

>0: an existing appointment will be updated

DTB Date and Time Begin of appointment (Format: 2018-01-31T13:45:00") (mandatory)

DTE Date and Time End of appointment (Format: 2018-01-31T13:55:00"; Date must be the same

as DTB) (mandatory)

NAS Short text of appointment NAL Long text of appointment

EMPNR Employee Primary Key of linked employee (mandatory)
PRONR Project Primary Key of linked project (if any, otherwise 0)

CONNR searching for appointments linked to a contact (if any, otherwise 0)

REMNR Registration Model Primary Key (if any, otherwise 0)
PRIO Priority of appointment; 1=low, 2=normal, 3=high

Resultset

CAQNR primary key of created appointment, if a creation has been requested



Data Fields

api/dfd

needs function 9522 granted

Parameters

ENT Entity for witch Datafield is valid

CON, EMP, PRO

DFDNR primary key of datafield

Resultset

DFD Name (Number)

DFDSEL Only selection from list is allowed (true, false): must read api/dfl

REGEX Check input with this Regex value (if not DFDSEL)

DFDNR primary key of datafield

Data Field List

needs function 9522 granted

api/dfl

Parameters

DFDNR primary key of datafield
DFLNR primary key of datalistentry

Resultset

DFL Name

DFLNR primary key of datalistentry



Entity Data Field Value

Read

api/eniread

needs entity-datafield (ENT-ENI) read access and function 111 (ENT=CON) or 131 (ENT=PRO) or 152 (ENT=EMP) granted; books xrm (CON, EMP) or xdeal (PRO) usage

Parameters

ENT Entity for witch Datafield is valid

CON, EMP, PRO

ENTNR primary key of tupel of entity
DFDNR primary key of datafield

Resultset

DAT Value (if DFDSEL value is DFLNR, otherwise plain text)

DTB valid from (only the date part is significant; 0001-01-01 means null)

Write

api/eniwrite

needs entity-datafield (ENT-ENI) write access and function 111 (ENT=CON) or 131 (ENT=PRO) or 152 (ENT=EMP) granted; books xrm (CON, EMP) or xdeal (PRO) usage

If ENT, ENTNR, DFDNR and DTB already exist in this combination the value is <u>updated</u> with DAT, if not a new value is <u>added</u>.

Parameters ENI Structure with

ENT Entity for witch Datafield is valid

CON, EMP, PRO

ENTNR primary key of tupel of entity
DFDNR primary key of datafield

DTB valid from (only the date part is significant; 0001-01-01 means null)

DAT value (if DFDSEL value must be DFLNR of the selected DataFieldList entry)

Resultset

ENINR primary key of EntityDataFieldValue changed or created



Control Order Handling

Control Order Dates

api/cas

books xcheck usage

Parameters

DTB searching for control order dates after (Format: 2018-01-31") (mandatory)

DTE searching for control order dates before (Format: 2018-01-31") (mandatory)

EMPNR searching for control order dates of employee (mandatory)

Resultset

WD Weekday

DT Execution Date (only date part of DateTime is significant)
TM Execution Time (only time part of DateTime is significant)

PRONAS Short Text of Control Project
PRONAL Long Text of Control Project
PROTOP Name and Number of Object

PRO-2 Name of Project 2 levels over control order
PRO-1 Name of Project 1 level over control order
PROINR-2 Number of Project 2 levels over control order
PROINR-1 Number of Project 1 level over control order

PROINR Number of Control Project

CAPNR Primary Key of Calendar Serial Date Planning

Control Order Installations

api/coins

needs project (PRO) read access; books xcheck usage

Parameters

CAPNR Primary Key of Calendar Serial Date Planning (mandatory)

Resultset

INSNAS Installation name INSINR Installation number

INSLOC Installation location (address info)

PRTNAS Installation type

ALLDNE All fields have already a value for today

PRONR Installation primary key



Control Order Fields

api/cofld

needs project (PRO) read access; books xcheck usage

Parameters

CAPNR Primary Key of Calendar Serial Date Planning (mandatory)

PRONR Installation primary key (mandatory)

Resultset

TRIGGERNAME Name of the trigger that defines the field

CONTROLNAME Name of the datafield containing the value to control and add

LIMITNAME Name of the datafield with the threshold value

INFONAME Name of the datafield with an info value

ACTIONNAME Name of the datafield with the action name

CONTROLLASTVALUE Value of the last control value
LIMITVALUE Value in the threshold datafield
INFOVALUE Value in the info datafield

CONTROLLASTDATE DateTime of the last control value insert

DFDPK Primary key of the control datafield

Control Order Value Add

api/coadd

needs project-datafield (PRO-ENI) write access; books xcheck usage

Parameters

PRONR Installation primary key (mandatory)

DFDPK Primary Key of Datafield to take the new value (mandatory)

NEWVAL New value (max char(600))

Resultset

ERRNR 0 means OK

ERRMSG Information about the error

ERRLOC Error encountered while inserting datafield value (ENI) or Action



Functions

api/cof

needs function 9423 granted

Parameters

Resultset

COF Description (Number)
COFNR Function Primary Key

AdressTypes

api/aut

needs function 9415 granted

Parameters

Resultset

AUT Description (Number)
AUTNR Adresstype Primary Key

Categories

api/cat

needs function 9421 granted

Parameters

GRP get only group categories

ENT get all categories activated for the entity (CON, DOC, PRO, MAT, MAR, PML)

GRPNR get all categories of this group (CATNR)

CATNR get only this single category

Resultset

CAT Group - Description (Number) or just Description (Number), if Group

ISGRP Is this a group of categories

CATNR Category Primary Key or Group Primary Key



Entity Categories

api/ena

needs entity-categories (ENT-ENA) read access and function 111 (ENT=CON) or 131 (ENT=PRO) or 133 (ENT=DOC) or 154 (ENT=MAT) or 155 (ENT=MAR) or 153 (ENT=PML) granted; books xrm (CON) or xdeal (all others) usage

Parameters

ENT Entity: CON, DOC, PRO, MAT, MAR, PML

ENTPRK Entity Primary Key

Resultset

CAT Group - Description (Number)

ISGRP FALSE

CATNR Category Primary Key

Contact Types

api/cot

needs function 9411 granted

Parameters

Resultset

COT Description (Number)

COTIND Is an Individual

COTNR Contact Type Primary Key

Addresses

api/enl

needs entity-addresses (ENT-ENL) read access and function 111 (ENT=CON) or 131 (ENT=PRO) granted; books xrm (CON) or xdeal (PRO) usage

Parameters

ENT Entity: PRO, CON

ENTPRK Entity Primary Key (CONNR, PRONR)

AUTNR Address Type Primary Key

Resultset

ENLADA Building Internal

ASSSTR Street
ASSNUM Number
ASSZIP Postal code

ASSCTY City
ASSSTT State

LNDISO Country Code
LND Country Name
DTB Valid since



Contributors

api/enc

needs entity-addresses (ENT-ENL) read access and function 133 (ENT=DOC) or 131 (ENT=PRO) granted; books xdeal usage

Parameters

ENT Entity in witch contributors take part: PRO, DOC

ENTPRK Entity Primary Key (DOCNR, PRONR)

COFNR Function Primary Key

Resultset

CONPRI Primary Contact Number (CON.NNR)

CONSEC Secondary Contact Number (CON.NNR)

AUT Adresstype used

DTB Valid since

Users

api/user

needs function 9712 granted

Parameters

Resultset

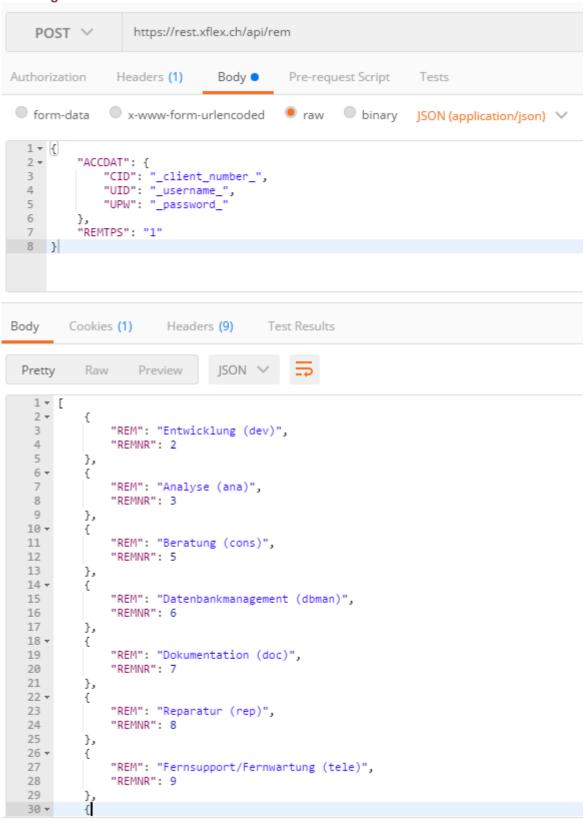
ERR 0: valid user; !=0: Error condition

UNR User Primary Key LAC User Language



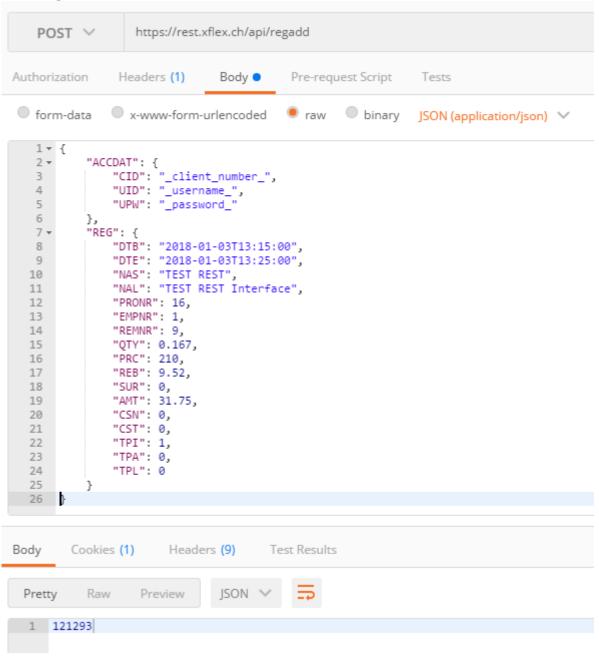
Examples using Postman

Read registration models



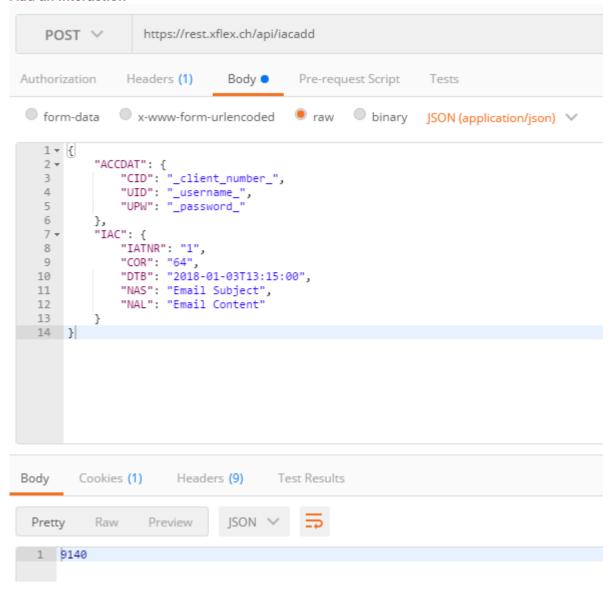


Add a registration



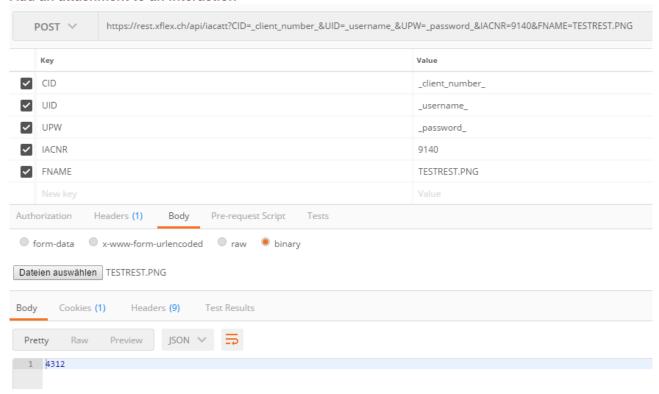


Add an interaction





Add an attachment to an interaction





Error Return Codes

-1	Missing Parameter Passing
-2	License File Parameter could not be loaded
-3	Missing License File
-4	System DB could not be opened
-6	License Infos could not be loaded
-7	Invalid Client Number in OnPremise Environmen
-10	Login is blocked
-11	REST Api not licensed
-12	License Period experied
-20	Client DB could not be opened
-21	Invalid User Credentials
-31	Missing Parameters for ENT granted checks
-41	Requested Entity access for user not granted
-42	Requested Function access for user not granted
-50	No data returned from UserGranted service