

E&P EDIFACT RESTful API

使用文档

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1. API 概述

本 REST API 可以让应用开发人员用任何支持发送 HTTP 请求的设备来与 E&P EDIFACT API 进行交互，可以使用本 REST API 进行多种实现，比如：

- 一个移动网站可以通过 JavaScript 来获取 E&P EDIFACT API 上的数据。
- 一个网站可以展示来自 E&P EDIFACT API 的数据。
- 使用任何支持 JSON 语言的程序都可以操作 E&P EDIFACT API 上的数据。

协议规范

- 采用 HTTP RESTful 风格。
- 响应数据包为 JSON 格式。
- 请求方式：HTTP GET / POST
- 接口地址：
 - 标准查询接口（提供标准查询服务，见第 3 节）
 - ◆ <http://192.168.3.216:8080/edifact-std> （开发机 IP）
 - 报文翻译接口（提供报文翻译服务，见第 4 节）
 - ◆ <http://192.168.3.216:8080/edifact-translate> （开发机 IP）

2. 消息体结构

- JSON 格式：

```
[ //统一为一个列表
{
    "id": "APERAK",
    "name": "APERAK",
    "des": "Application error and acknowledgement message ",
    "status": "1",
    "rev": "1",
    "pid": "95b",
    "isparent": true
}
]
```

3. 标准查询接口使用方法

- 参数列表

参数名	含义	备注
year	年份	例如 95b

trmd	一级字段名	例如 codeco
trsd	二级字段名	例如 unh
trcd	三级字段名	例如 c107
tred	四级字段名	例如 3055

3.1 请求年份列表

- GET <http://192.168.3.216:8080/edifact-std> （即所有参数为空）

- 返回消息：

```
[ // 返回本接口支持的年份列表
  {
    "year": "00A"
  },
  {
    "year": "00B"
  }
]
```

3.2 请求一级数据（例如 CODECO）

- GET <http://192.168.3.216:8080/edifact-std?year=95b> （给出年份）

- 返回消息：

```
[
  {
    "id": "BAPLIE", //字段 ID
    "name": "BAPLIE", //字段名
    "des": "Bayplan/stowage plan occupied and empty locations message", //字段描述
    "status": "2", //字段状态
    "rev": "2", //字段 REV
    "pid": "95b", //父字段信息
    "isparent": true, //是否含有子字段
    "nname": "BAPLIE" //方便直接显示的字段名
  },
  {
    "id": "CALINF",
    "name": "CALINF",
    "des": "Call info message ",
    "status": "1",
  }
]
```

```
"rev": "1",
"pid": "95b",
"isparent": true,
"name": "CALINF"
}
]
```

3.3 请求二级数据（如 UNH、BGM）

- GET <http://192.168.3.216:8080/edifact-std?year=95b&trmd=codeco>
(给出年份和上级字段信息)
- 返回消息:

```
[
{
  "id": "UNH", //字段 ID
  "name": "UNH", //字段名
  "des": "Message header", //字段描述
  "function": "A service segment starting and uniquely identifying a message.", //功能描述
  "note": "Report messages conforming to this document must contain the following data in segment UNH, composite S009:", //字段备注
  "pos": "0010", //字段位置
  "s": "M", //是否必须字段
  "r": "1", //字段长度
  "pid": "codeco", //父字段 ID
  "isparent": true, //是否有子字段
  "name": "UNH(M)" //方便直接显示的字段名
  "code_desc": "A service segment starting and uniquely identifying a message. The message type code for the Container gate-in /gate-out report message is CODECO." //字段描述
},
{
  "id": "BGM",
  "name": "BGM",
  "des": "Beginning of message",
  "function": "To indicate the type and function of a message and to transmit the identifying number.",
  "note": "",
  "pos": "0020",
```

```
"s": "M",
"r": "1",
"pid": "codeco",
"isparent": true,
"nname": "BGM(M)"
  "code_desc": "A segment to indicate the beginning of a message and to transmit identifying number and the further specification of the message type (in data element 1001: Document/message name, coded), such as Gate-in report, Gate-out report."
}
]
```

3.4 请求三级数据

- GET <http://192.168.3.216:8080/edifact-std?year=95b&trsd=bgm>
(给出年份和上级字段信息)
- 返回消息:

```
[
{
  "id": "C002", //字段 ID
  "name": "C002", //字段名
  "des": "Document/message name", //字段描述
  "function": "Identification of a type of document/message by code or name. Code preferred.", //字段功能
  "note": "", //备注
  "pid": "bgm", //父字段 ID
  "isparent": true, //是否含有子字段
  "repeat": "1", //是否可重复
  "mc": "C", //是否必须字段
  "pos": "010", //字段位置
  "repr": "", //字段长度
  "nname": "010-BGM (C)" //方便显示的字段名
},
{
  "id": "1004",
  "name": "1004",
  "des": "Document/message number",
  "function": "Reference number assigned to the document/message by the issuer.",
  "note": "",
  "pid": "bgm",
```

```
"isparent":false,
"repeat":"1",
"mc":"C",
"pos":"020",
"repr":"an..35",
"name":"020-1004(C)"
}
]
```

3.5 请求四级数据

- GET <http://192.168.3.216:8080/edifact-std?year=95b&trcd=c002>
(给出年份和上级字段信息)

- 返回消息:

```
[
{
  "id":"1",
  "name":"1001",
  "des":"Document/message name, coded",
  "function":"Document/message identifier expressed
in code.",
  "note":"Users should note that code values marked
as additions or changes are included pending approval by
the 1001 Maintenance Agency and may be disapproved or c
hanged. The results of this review will be reflected in
a future version of the draft directory.",
  "pid":"c002",
  "isparent":false,
  "repeat":"1",
  "mc":"C",
  "pos":"010",
  "repr":"an..3",
  "name":"010-1001(C)"
},
{
  "id":"2",
  "name":"1131",
  "des":"Code list qualifier",
  "function":"Identification of a code list.",
  "note":"",
  "pid":"c002",
```

```
"isparent":false,
"repeat":"1",
"mc":"C",
"pos":"020",
"repr":"an..3",
"nname":"020-1131(C)"
}
]
```

3.6 请求五级数据

- GET <http://192.168.3.216:8080/edifact-std?year=95b&tred=1001>
(给出年份和上级字段信息)

- 返回消息:

```
[
{
  "id":"1",
  "name":"1",
  "des":"Certificate of analysis",
  "note":"providing the values of an analysis.",
  "pid":"1001"
},
{
  "id":"2",
  "name":"2",
  "des":"Certificate of conformity",
  "note":"Certificate certifying the conformity to p
redefined definitions.",
  "pid":"1001"
}
]
```

4. 报文翻译接口使用方法

- 参数列表

参数名	含义	备注
year	年份	(可选) 例如 95b
type	报文类型	(可选) 例如 codeco
msg	报文原文	不包含任何多余字符、空格

4.1 报文类型的自动解析

year 和 type 为可选参数。

如果两者中任一为空（或没有给出），则直接根据 msg 参数传入的报文进行自动解析判断报文的年份和类型。

若两者都已经给出，则不进行自动判断，以用户给出的参数为准。

■ 例如：

按给定类型（year、type）进行翻译：

■ GET / POST

<http://192.168.3.216:8080/edifact-translate?year=95b&type=codeco&msg=UNB+UNOA:1+13220793-5+74619577-2+120907:0915+0000013666%27UNG+CODECO+13220793-5+74619577-2+120907:0915+0000013664+UN+D:95B%27UNH+0000056050+CODECO:D:95B:UN%27BGM+980+GATE-OUT%20REPORT+9%27FTX+DTM+++201107010027%27RFF+ACW%27TDT+20+1125W++++I++SN-LAN:::LANTAU%20BRIDE%27NAD+CF+CSC+CSC%27EQD+CN+CCLU6523850+4500++3+5%27RFF+BM:YOKSHA001449%27DTM+997:201106302030:203%27LOC+11+CNSHA%27MEA+WT+AAG+KGM:29300%27SEL+I828157%27TDT+1++1+35:T513+CSC:::CSC%27LOC+80+:::WH%27CNT+16:1:CH%27UNT+16+0000056050%27UNE+1+0000013664%27UNZ+1+0000013666%27>

自动解析类型进行翻译：

■ GET / POST

<http://192.168.3.216:8080/edifact-translate?msg=UNB+UNOA:1+13220793-5+74619577-2+120907:0915+0000013666%27UNG+CODECO+13220793-5+74619577-2+120907:0915+0000013664+UN+D:95B%27UNH+0000056050+CODECO:D:95B:UN%27BGM+980+GATE-OUT%20REPORT+9%27FTX+DTM+++201107010027%27RFF+ACW%27TDT+20+1125W++++I++SN-LAN:::LANTAU%20BRIDE%27NAD+CF+CSC+CSC%27EQD+CN+CCLU6523850+4500++3+5%27RFF+BM:YOKSHA001449%27DTM+997:201106302030:203%27LOC+11+CNSHA%27MEA+WT+AAG+KGM:29300%27SEL+I828157%27TDT+1++1+35:T513+CSC:::CSC%27LOC+80+:::WH%27CNT+16:1:CH%27UNT+16+0000056050%27UNE+1+0000013664%27UNZ+1+0000013666%27>

4.2 报文格式的自动修正

本接口会将已经分好段的报文，自动进行修正。

● 例如：

对于如下已经分段的报文，可直接原文提交：

```
UNB+UNOA:1+13223722-9+OOCL+170831:1631+4OU6A'  
UNH+6NU5C+IFTMBF:D:96B:UN'  
BGM+335+6NU5C+9'  
DTM+255:20170915:102'  
TSR+30+2'  
FTX+AAB+++Collect'
```



```
FTX+AAI+++OOCL CHICAGO'  
FTX+AAI+++S/C?:AUT17496 NAC?:STOCKWOOD PINE:PTY LTD. AUSTRALIA,'  
RFF+FF:4031480350'  
RFF+BM:OOLU4031480350'
```

而对于没有分段的报文，也可以正常进行原文提交：

```
UNA:+,?'UNB+UNOA:1+MAEU+EASIPASS+170831:0905+13672987'UNH+1367298700001+IF  
TMBC:D:99B:UN'BGM+770++6+AP'CTA+CW+:Li, Richend  
Bin'COM+RBL021@maersk.com:EM'DTM+137:201708310904:203'TSR++CY::CY'FTX+AAI+++  
'RFF+BN:961347972'RFF+BM:961347972'RFF+CT:7910454'RFF+AEM:E1'RFF+SRV:NGL'TDT+  
10+1757+++OTH+++Z19::11:ZHONG KAI  
19'LOC+88+CNJJGSIN:139:6:ZHANGJIAGANG'DTM+133:201707170000:203'LOC+9+CNJJGSIN  
:139:6:ZHANGJIAGANG'DTM+133:201707170000:203'LOC+11+CNSGHY1:139:6:SHANGHAI'D  
TM+132:201707210000:203'LOC+7+NOSTVTM:139:6:STAVANGER'DTM+132:201709041000:  
203
```

4.3 翻译报文

■ GET / POST

<http://192.168.3.216:8080/edifact-translate?year=95b&type=codeco&msg=UNB+UNOA:1+13220793-5+74619577-2+120907:0915+0000013666%27UNG+CODECO+13220793-5+74619577-2+120907:0915+0000013664+UN+D:95B%27UNH+0000056050+CODECO:D:95B:UN%27BGM+980+GATE-OUT%20REPORT+9%27FTX+DTM+++201107010027%27RFF+ACW%27TDT+20+1125W++++I++SN-LAN:::LANTAU%20BRIDE%27NAD+CF+CSC+CSC%27EQD+CN+CCLU6523850+4500++3+5%27RFF+BM:YOKSHA001449%27DTM+997:201106302030:203%27LOC+11+CNSHA%27MEA+WT+AAG+KGM:29300%27SEL+I828157%27TDT+1++1+35:T513+CSC:::CSC%27LOC+80+:::WH%27CNT+16:1:CH%27UNT+16+0000056050%27UNE+1+0000013664%27UNZ+1+0000013666%27>

或者：

GET / POST

<http://192.168.3.216:8080/edifact-translate?msg=UNB+UNOA:1+13220793-5+74619577-2+120907:0915+0000013666%27UNG+CODECO+13220793-5+74619577-2+120907:0915+0000013664+UN+D:95B%27UNH+0000056050+CODECO:D:95B:UN%27BGM+980+GATE-OUT%20REPORT+9%27FTX+DTM+++201107010027%27RFF+ACW%27TDT+20+1125W++++I++SN-LAN:::LANTAU%20BRIDE%27NAD+CF+CSC+CSC%27EQD+CN+CCLU6523850+4500++3+5%27RFF+BM:YOKSHA001449%27DTM+997:201106302030:203%27LOC+11+CNSHA%27MEA+WT+AAG+KGM:29300%27SEL+I828157%27TDT+1++1+35:T513+CSC:::CSC%27LOC+80+:::WH%27CNT+16:1:CH%27UNT+16+0000056050%27UNE+1+0000013664%27UNZ+1+0000013666%27>

注：如果报文长度超过浏览器限制，则应使用 POST 方法，本接口理论上可接受最长报文为 100MB。

■ 返回消息:

```
[
  {
    "original_msg": "UNH+0000056062+CODECO:D:95B:UN", //原报文
    "type": "UNH", //本段报文类型
    "name": "Message header", //本段报文名称
    "desc": "A service segment starting and uniquely identifying a message. The message type code for the Container gate-in/gate-out report message is CODECO.", //本段报文解释
    "illegal_lost": false, //是否非法缺失（即本段在标准中为必填字段但报文中缺失）

    "translations": [ //翻译，本条无需机器翻译，则为空列表

  ]
},
//省略若干条
{
  "original_msg": "",
  "type": "DGS",
  "name": "DANGEROUS GOODS",
  "desc": "A segment to indicate the dangerous goods regulations for the corresponding mode of transport, class of dangerous goods, a dditional dangerous goods code, UN-number and shipment flash point.", //本段报文解释
  "illegal_lost": true, //本段在标准中为必填字段，但此报文中缺失，本翻译接口会在返回结果中此字段该出现的位置如此标出

  "translations": [

]
},
//省略若干条
{
  "original_msg": "MEA+WT+AAG+KGM:26173",
  "type": "MEA",
  "name": "MEASUREMENTS",
  "desc": "A service segment starting and uniquely identifying a message. The message type code for the Container gate-in/gate-out report message is CODECO.",
  "illegal_lost": false,
  "translations": [ //本段报文翻译内容
    {
      "original_text": "WT", //报文原文
      "possible_code": "6311", //可能的编码
    }
  ]
}
```

```
"name": "Weights", //编码名称
"desc": "The measured attribute is weight." //含义
},
{
  "original_text": "WT",
  "possible_code": "6313",
  "name": "Weight",
  "desc": "[6150] Numeric value of weight."
},
{
  "original_text": "AAG",
  "possible_code": "6311",
  "name": "Alcohol content",
  "desc": "The measurement of the alcohol content."
},
{
  "original_text": "AAG",
  "possible_code": "6313",
  "name": "Stern thrust",
  "desc": "Force exerted by a thruster installed at the stern of a vessel."
}
]
//省略若干条
]
```

5. 后期维护

数据库配置

配置文件：src/main/resources/application.properties

端口配置

本接口运行于 8080 端口上，如果一定要修改端口，需要同时修改 src/main/java/tools/edifact/service/MessageService.java 中的 api、api2、api3 中的端口。