



6

External IVR

5. External IVR

5.1. Method name: GET_IVR_ACTION

This method's request is sent by voicenter server to a designated URL on the client's server, with the incoming call details:

IVR_MENU REQUEST:

Field name	Description	Type	Remarks
CALLER_ID	Caller ID	String	
CALLER_NAME	Caller name	String	
DID	The number called	String	
MENU	Client's menu identifier	String	will be "-1" at the beginning of the call
PREVIOUS_MENU	Client's menu identifier	String	will be "-1" at the beginning of the call
DTMF	The DTMF the caller pressed	String	
IVR_UNIQUE_ID	A unique ID for the incoming call	String	
IVR_UNIQUE_ID	A unique ID for the incoming call	String	32 chars long

EXAMPLES

Xml-rpc:

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <methodCall>
3      <methodName>GET_IVR_ACTION</methodName>
4      <params>
5          <param>
6              <value>
7                  <struct>
8                      <member>
9                          <name>DID</name>
10                         <value>
11                             <string>0730000000</string>
12                         </value>
13                     </member>
14                     <member>
15                         <name>CALLER_ID</name>
16                         <value>
17                             <string>0540000000</string>
18                         </value>
19                     </member>
20                     <member>
21                         <name>CALLER_NAME</name>
22                         <value>
23                             <string>017W</string>
24                         </value>
25                     </member>
26                     <member>
27                         <name>IVR_UNIQUE_ID</name>
28                         <value>
29                             <string>ced4619f30fc17182d8e41ddf4
30                             d6869X</string>
31                         </value>
32                     </member>
33                 </struct>
            </param>
        </params>
    </methodCall>

```

```

34         <name>DTMF</name>
35         <value>
36             <string/>
37         </value>
38     </member>
39     <member>
40         <name>MENU</name>
41         <value>
42             <string>-1</string>
43         </value>
44     </member>
45     <member>
46         <name>PREVIOUS_MENU</name>
47         <value>
48             <string>-1</string>
49         </value>
50     </member>
51 </struct>
52 </value>
53 </param>
54 </params>
55 </methodCall>

```

JSON:

```

1  {
2      METHOD: "GET_IVR_ACTION",
3      DATA: {
4          DID: "0732793256",
5          CALLER_ID: "n5zx1C2a",
6          CALLER_NAME: "n5zx1C2a",
7          IVR_UNIQUE_ID: "1bcd7954224861f85a2d70612f248282",
8          DTMF: "",
9          MENU: "-1",
10         PREVIOUS_MENU: "-1"
11     }
12 }

```

IVR_MENU REQUEST:

Field name	Description	Type	Appearance
STATUS	0 - OK 1- Error	Integer	Mandatory
ACTION	One of the following options in the next table: • MENU • CALL • HANGUP • SAYDIGITS • VO • SILENTRECORD	String	Mandatory
LANGUAGE	• he • en	String	Mandatory
DATA	Structure contains relevant data of: MENU / CALL / HANGUP /...	Structure	Mandatory

Action options

MENU - another IVR menu			
Field name	Description	Type	Apearance
REC	The file name of the record to play	String	Mandatory
LOOP	The number of times to loop-play the record	Integer	Mandatory
DELAY	The number of seconds to wait between each loop	Integer	Mandatory
SIZE	The Maximum number of digits from the caller	Integer	Mandatory
MENU	Client's menu identifier	String	Mandatory
VALIDATION	DTMF input validation 1 - validation 0 - no validation	Integer	Mandatory
CALL - Dial and connect any destination world wide			
TARGET	The destination to call	String	Mandatory
CALLERID	The Caller number Shown to the destination	String	Mandatory
CALLERNAME	The Caller name Shown to the destination	String	Mandatory
CALLER_REC	The record the caller will hear before dialing destination	String	Optional
MOH_CLASS	The music class heard while dialing a destination	String	Optional
TARGET_REC	The record the target will hear before connecting to the caller	String	Optional
TARGET_REC	The record the target will hear before connecting to the caller	String	Optional
CALL_MAX_DIAL	Maximum time in seconds to wait while dialing	Integer	Mandatory
CALL_MAX	Maximum duration in seconds for the call	Integer	Mandatory
NEXT_MENU	Next menu the call will be redirected to in case of call failure	String	Optional. If Empty - call will be disconnected.
NEXT_MENU_RECORD	The name of the record of the menu the call will redirected to in case of call failure	String	Optional
NEXT_MENU_LOOP	The number of times to loop-play the record of the next menu	Integer	Optional
NEXT_MENU_SIZE	The Maximum number of digits from the caller	Integer	Optional
NEXT_MENU_WAIT	The number of seconds to wait between each loop, in the next menu	Integer	Optional
REC_STATUS	0 - Don't record 1 - Record call	Integer	Mandatory
DTMF_PLAY	After the called party answers, send digits as a DTMF stream	String	Optional
DIALSTRINGS	Array of ready dialstrings for dial	Array	Optional
SAYDIGITS - Say gigits			
REC	The file name of the record to play	String	Mandatory
LOOP	The number of times to loop-play the record	Integer	Mandatory
DELAY	The number of seconds to wait between each loop	Integer	Mandatory
SIZE	The Maximum number of digits from the caller	Integer	Mandatory
MENU	Client's menu identifier	String	Mandatory
VALIDATION	DTMF input validation 1 - validation 0 - no validation	Integer	Mandatory
SAYDIGITSRECORD	Record to play before DIGITS	String	Mandatory
DIGITS	DIGITS to play • Pay attention to string type! Do not use integer type to prevent zero loose in zero - leading numbers like '0547.....' Any characters other than numbers will be ignored.		Mandatory

SILENTRECORD - Answer the call & record it			
Field name	Description	Type	Apearance
REC	The file name of the record to play before recording starts	String	Optioinal
MAXDURATION	Maximum call duration	Integer	Optioinal
VO - go to IVR layer			
LAYER	Layer number to go to	Integer	Mandatory
RECORD	Record to play	String	Mandatory
LOOP	The number of times to loop-play the record	Integer	Mandatory
DELAY	The number of seconds to wait between each loop	Integer	Mandatory
HANGUP - Hang up the call			
HANGUP_REC	The "good bye" message before hangup.	String	Optional
HANGUP_CAUSE	Cause of the hangup	Integer	Optional

HANGUP CALL EXAMPLE

Xml-rpc:

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <methodResponse>
3    <params>
4      <param>
5        <value>
6          <struct>
7            <member>
8              <name>STATUS</name>
9              <value> <int>0</int> </value>
10           </member>
11          <member>
12            <name>LANGUAGE</name>
13            <value><string>he</string></value>
14          </member>
15          <member>
16            <name>ACTION</name>
17            <value>
18              <string>HANGUP</string>
19            </value>
20          </member>
21          <member>
22            <name>DATA</name>
23            <value>
24              <struct>
25                <member>
26                  <name>HANGUP_REC</name>
27                  <value>
28                    <string>blank</string>
29                  </value>
30                </member>
31                <member>
32                  <name>HANGUP_CAUSE</name>
33                  <value>

```

```

34         <int>16</int>
35     </value>
36 </member>
37 </struct>
38 </value>
39 </member>
40 </struct>
41 </value>
42 </param>
43 </params>
44 </methodResponse>

```

JSON:

```

1  {
2    "STATUS" : 0,
3    "ACTION" : "HANGUP",
4    "LANGUAGE" : "HE",
5    "DATA" : {
6      "HANGUP_REC": "blank",
7      "HANGUP_CAUSE": 16
8    }
9  }

```

CALL EXAMPLE

Xml-rpc:

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <methodResponse>
3    <params>
4      <param>
5        <value>
6          <struct>
7            <member>
8              <name>STATUS</name>
9              <value>
10               <int>0</int>
11             </value>
12            </member>
13            <member>
14              <name>LANGUAGE</name>
15              <value>
16                <string>he</string>
17              </value>
18            </member>
19
20            <member>
21              <name>ACTION</name>
22              <value>
23                <string>CALL</string>
24              </value>
25            </member>
26            <member>

```

```
27     <name>DATA</name>
28     <value>
29         <struct>
30             <member>
31                 <name>TARGET</name>
32                 <value>
33                     <string>0540123456</string>
34                     </value>
35                 </member>
36             <member>
37                 <name>CALLERID</name>
38                 <value>
39                     <string>Unknown</string>
40                     </value>
41             </member>
42             <member>
43                 <name>CALLERNAME</name>
44                 <value>
45                     <string>?????</string>
46                     </value>
47             </member>
48             <member>
49                 <name>CALLER_REC</name>
50                 <value>
51                     <string>now_calling</string>
52                     </value>
53             </member>
54             <member>
55                 <name>MOH_CLASS</name>
56                 <value>
57                     <string>californication</string>
58                     </value>
59             </member>
60             <member>
61                 <name>TARGET_REC</name>
62                 <value>
63                     <string>blank</string>
64                     </value>
65             </member>
66             <member>
67                 <name>CALL_MAX_DIAL</name>
68                 <value>
69                     <int>35</int>
70                     </value>
71             </member>
72             <member>
73                 <name>CALL_MAX</name>
74                 <value>
75                     <int>600</int>
76                     </value>
77             </member>
78             <member>
79                 <name>NEXT_MENU</name>
80                 <value>
81                     <string>SOME-MENU</string>
82                     </value>
83             </member>
84             <member>
85                 <name>NEXT_MENU_RECORD</name>
86                 <value>
87                     <string>record-filename</string>
```

```

88         </value>
89     </member>
90     <member>
91     <name>NEXT_MENU_LOOP</name>
92     <value>
93         <string>3</string>
94     </value>
95 </member>
96 <member>
97 <name>NEXT_MENU_WAIT</name>
98 <value>
99     <string>1</string>
100 </value>
101 </member>
102 <member>
103 <name>NEXT_MENU_SIZE</name>
104 <value>
105     <string>4</string>
106 </value>
107 </member>
108 <member>
109     <name>REC_STATUS</name>
110 <value>
111     <string>1</string>
112 </value>
113 </member>
114 <member>
115     <name>DTMF_PLAY</name>
116 <value>
117     <string>3
118     </string>
119 </value>
120 </member>
121 <member>
122     <name>DIALSTRINGS</name>
123 <value>
124     <array>
125         <data>
126     <value> SIP/972547000000@provider1</value>
127     <value>SIP/972547000000@provider2</value>
128         </data>
129     </array>
130 </value>
131 </member>
132 </struct>
133 </value>
134 </member>
135 </struct>
136 </value>
137 </param>
138 </params>
139 </methodResponse>

```


JSON:

```
1  {
2    "STATUS": 0,
3    "ACTION": "CALL",
4    "LANGUAGE" : "HE",
5    "DATA": {
6      "TARGET": "0540123456",
7      "CALLERID": "0500000000",
8      "CALLERNAME": "",
9      "CALLER_REC": "rec",
10     "MOH_CLASS": "musiconhold",
11     "TARGET_REC": "",
12     "CALL_MAX_DIAL": "25",
13     "CALL_MAX": "3200",
14     "NEXT_MENU": "16",
15     "NEXT_MENU_RECORD": "rec",
16     "NEXT_MENU_LOOP": 1,
17     "NEXT_MENU_SIZE": 2,
18     "NEXT_MENU_WAIT": 1,
19     "REC_STATUS": "0",
20     "DTMF_PLAY": "16",
21     "DIALSTRINGS": [
22       "SIP/972547000000@provider1",
23       "SIP/972547000000@provider2"
24     ]
25   }
26 }
```

MENU EXAMPLE**Xml-rpc:**

```
1  <?xml version="1.0" encoding="utf-8"?>
2  <methodResponse>
3    <params>
4      <param>
5        <value>
6          <struct>
7            <member>
8              <name>STATUS</name>
9              <value>
10               <int>0</int>
11             </value>
12            </member>
13            <member>
14              <name>ACTION</name>
15              <value>
16                <string>MENU</string>
17              </value>
18            </member>
19            <member>
20              <name>LANGUAGE</name>
21              <value>
22                <string>he</string>
23              </value>
24            </member>
25            <member>
26              <name>DATA</name>
```

```

27         <value>
28             <struct>
29                 <member>
30                     <name>REC</name>
31                     <value>
32                         <string>record_filename</string>
33                         </value>
34                     </member>
35                 <member>
36                     <name>LOOP</name>
37                     <value>
38                         <int>2</int>
39                     </value>
40                 </member>
41                 <member>
42                     <name>DELAY</name>
43                     <value>
44                         <int>1</int>
45                     </value>
46                 </member>
47                 <member>
48                     <name>SIZE</name>
49                     <value>
50                         <int>4</int>
51                     </value>
52                 </member>
53                 <member>
54                     <name>MENU</name>
55                     <value>
56                         <string>menu_name</string>
57                         </value>
58                 </member>
59                 <member>
60                     <name>VALIDATION</name>
61                     <value>
62                         <int>1</int>
63                     </value>
64                 </member>
65             </struct>
66         </value>
67     </member>
68 </struct>
69 </value>
70 </param>
71 </params>
72 </methodResponse>

```

JSON:

```

1  {
2      "STATUS" : 0,
3      "ACTION" : "MENU",
4      "LANGUAGE" : "HE",
5      "DATA" : {
6          "REC": "record",
7          "LOOP": 4,
8          "DELAY": 3,
9          "SIZE": 2,
10         "MENU": "menu",
11         "VALIDATION": 0
12     }
13 }

```

SAYDIGITS EXAMPLE

Xml-rpc:

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <methodResponse>
3   <params>
4     <param>
5       <value>
6         <struct>
7           <member>
8             <name>STATUS</name>
9             <value>
10              <int>0</int>
11            </value>
12          </member>
13          <member>
14            <name>ACTION</name>
15            <value>
16              <string>SAYDIGITS</string>
17            </value>
18          </member>
19          <member>
20            <name>LANGUAGE</name>
21            <value>
22              <string>he</string>
23            </value>
24          </member>
25          <member>
26            <name>DATA</name>
27            <value>
28              <struct>
29                <member>
30                  <name>REC</name>
31                  <value>
32                    <string>record_filename</string>
33                  </value>
34                </member>
35                <member>
36                  <name>LOOP</name>
37                  <value>
38                    <int>2</int>
39                  </value>
40                </member>
41                <member>
42                  <name>DELAY</name>
43                  <value>
44                    <int>1</int>
45                  </value>
46                </member>
47                <member>
48                  <name>SIZE</name>
49                  <value>
50                    <int>4</int>
51                  </value>
52                </member>
53                <member>
54                  <name>MENU</name>
55                  <value>
56                    <string>menu_name</string>
57                  </value>
58                </member>
59              </struct>

```

```
60         <name>VALIDATION</name>
61         <value>
62             <int>1</int>
63         </value>
64     </member>
65 </member>
66
67     <name>SAYDIGITSRECORD</name>
68     <value>
69     <string>blank</string>
70     </value>
71 </member>
72 </member>
73     <name>DIGITS</name>
74     <value>
75
76     <string>154654</string>
77     </value>
78 </member>
79 </struct>
80 </value>
81 </member>
82 </struct>
83 </value>
84 </param>
85 </params>
86 </methodResponse>
```

JSON:

```
1  {
2  "STATUS" : 0,
3  "ACTION" : " SAYDIGITS ",
4  "LANGUAGE" : "HE",
5  "DATA" : {
6      "REC": "record",
7      "LOOP": 4,
8      "DELAY": 3,
9      "SIZE": 2,
10     "MENU": "menu",
11     "VALIDATION": 0,
12     "VALIDATION": "SAYDIGITSRECORD",
13     "VALIDATION": "DIGITS"
14 }
```

5.2. Method name: HANGUP_CALL

This method request is sent by voicenter server to report the client server at an end of a call.

HANGUP_CALL REQUEST:

Field name	Description	Type	Example
CALLER_ID	Caller ID	String	0721234567
DID	The number called	String	0721231231
IVR_UNIQUE_ID	A unique ID for the incoming call	String	aO6Hsr46344rfiEbjUmnpl0324dfjG3F
TARGET	The destination of the call	String	0501234567
CALL_TIME_EPOCH	Hour and date of the call in Linux EPOCH	Integer	123123123
CALL_START_EPOCH	Hour and date of the call flow start in Linux EPOCH	Integer	123123123
IVR_UNIQUE_ID	A unique ID for the incoming call	String	
CALL_DURATION	Total call duration in seconds	Integer	243
CALL_DAILTIME	Dialing time until destination answered in seconds	Integer	12
CALL_STATUS	Status of the call	String	ANSWERED

CALL_STATUS options:

- **ANSWER:** Call is answered. A successful dial. The caller reached the callee.
- **BUSY:** Busy signal. The dial command reached its number but the number is busy.
- **NOANSWER:** No answer. The dial command reached its number, the number rang for too long, then the dial timed out.
- **CANCEL:** Call is cancelled. The dial command reached its number but the caller hung up before the callee picked up.
- **CONGESTION:** Congestion. This status is usually a sign that the dialled number is not recognised.
- **CHANUNAVAIL:** Channel unavailable. On SIP, peer may not be registered.
- **DONTCALL:** Privacy mode, callee rejected the call
- **TORTURE:** Privacy mode, callee chose to send caller to torture menu
- **INVALIDARGS:** Error parsing Dial command arguments

SIP RFC error codes

Definition	SIP Equivalent	Cause code (ISUP)
Unallocated (unassigned) number	404 Not Found	1
no route to network	404 Not found	2
no route to destination	404 Not found	3
normal call clearing	BYE or CANCEL (*)	16
user busy	486 Busy here	17
no user responding	408 Request Timeout	18
no answer from the user	480 Temporarily unavailable	19
subscriber absent	480 Temporarily unavailable	20
call rejected	403 Forbidden (+)	21
number changed (w/o diagnostic)	410 Gone	22
number changed (w/ diagnostic)	301 Moved Permanently	22
redirection to new destination	410 Gone	23
non-selected user clearing	404 Not Found (=)	26
destination out of order	502 Bad Gateway	27
address incomplete	484 Address incomplete	28
facility rejected	501 Not implemented	29
normal unspecified	480 Temporarily unavailable	31
no circuit available	503 Service unavailable	34
network out of order	503 Service unavailable	38
temporary failure	503 Service unavailable	41
switching equipment congestion	503 Service unavailable	42
resource unavailable	503 Service unavailable	47
incoming calls barred within CUG	403 Forbidden	55
bearer capability not authorized	403 Forbidden	57
bearer capability not presently	503 Service unavailable	58
bearer capability not implemented	488 Not Acceptable Here	65
only restricted digital avail	488 Not Acceptable Here	70
service or option not implemented	501 Not implemented	79
user not member of CUG	403 Forbidden	87
incompatible destination	503 Service unavailable	88
recovery of timer expiry	504 Gateway timeout	102
protocol error	500 Server internal error	111
interworking unspecified	500 Server internal error	127

HANGUP_CALL REQUEST:

Field name	Description	Type	Mandatory
STATUS	0 - OK 1 - Error	Integer	Mandatory

REQUEST EXAMPLE

Xml-rpc:

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <methodCall>
3   <methodName>HANGUP_CALL</methodName>
4   <params>
5     <param>
6       <value>
7         <struct>
8           <member>
9             <name>DID</name>
10            <value>
11              <string>0730000000</string>
12            </value>
13          </member>
14          <member>
15            <name>CALLER_ID</name>
16            <value>
17              <string>0540000000</string>
18            </value>
19          </member>
20          <member>
21            <name>IVR_UNIQUE_ID</name>
22            <value>
23              <string>ced4619f30fc17182d8e41ddf4d6869X</string>
24            </value>
25          </member>
26          <member>
27            <name>TARGET</name>
28            <value>
29              <string>0500000555</string>
30            </value>
31          </member>
32          <member>
33            <name>CALL_TIME_EPOCH</name>
34            <value>
35              <int>15616841651</int>
36            </value>
37          </member>
38          <member>
39            <name>CALL_START_EPOCH</name>
40            <value>
41              <int>15616841612</int>
42            </value>
43          </member>
44          <member>
45            <name>CALL_DURATION</name>
46            <value>
47              <int>125</int>
48            </value>
49          </member>
50          <member>
51            <name>CALL_DAILTIME</name>
52            <value>
53              <int>15</int>
54            </value>
```

```

55         </member>
56         <member>
57             <name>CALL_STATUS</name>
58             <value>
59                 <string>ANSWERED</string>
60             </value>
61         </member>
62     </struct>
63 </value>
64 </param>
65 </params>
66 </methodCall>

```

JSON:

```

1  {
2    "METHOD" : "HANGUP_CALL",
3    "DATA" : {
4        "DID": "0730000000",
5        "CALLER_ID": "0540000000",
6        "IVR_UNIQUE_ID": "ced4619f30fc17182d8e41ddf4d6869X",
7        "TARGET": "0500000555",
8        "CALL_TIME_EPOCH": 15616841651,
9        "CALL_START_EPOCH": 15616841612,
10       "CALL_DURATION": 650,
11       "CALL_DAILTIME": 15,
12       "CALL_STATUS": "ANSWERED"
13     }
14 }

```

RESPONSE EXAMPLE

Xml-rpc:

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <methodResponse>
3      <params>
4          <param>
5              <value>
6                  <struct>
7                      <member>
8                          <name>STATUS</name>
9                          <value>
10                             <int>0</int>
11                         </value>
12                     </member>
13                 </struct>
14             </value>
15         </param>
16     </params>
17 </methodCall>

```

JSON:

```

1  {
2    "STATUS": 0
3  }

```