

# DOCUMENTATION

## ACD CALLBACK API

Version: 4.2.3

Date: 11.09.2020

ACD Version: 4.9.6 and up

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## ABOUT

In addition to the standard HTTP API, the ACD system also provides a Callback API in order to submit asynchronous status notifications to the customer. The Callback API requires the customer implement a servlet or CGI script on his side in order to receive the Callback API notifications from the ACD System.

Notifications are submitted as HTTP-HEAD, GET, or PUT requests, depending on configuration. The outgoing ip address is the external IP of the sending ACD system (i.e. ping your acd domain to identify the correct ip address).

Following is a description of the messagetypes the ACD may send. The discriminator is the parameter "cmd".

### MessageTypes:

- agentstate
- callevent
- recordedcall
- classificationevent
- enqueuecall
- schedulecallevent
- configchanged
- broadcastevent

## PHONE NUMBERS

Phone numbers can be formatted in three distinct ways:

Format setting	Description	Examples	
		German National Numbers	International Numbers
<b>ACD Format</b>	<p><i>German national numbers are prefixed with a leading zero and area code.</i></p> <p><i>International numbers are in international format with two leading zeros.</i></p>	02212601599	0015552243
<b>FQTN with double zero prefix</b>	All numbers are in international format with two leading zeros.	00492212601599	0015552243
<b>FQTN with plus prefix</b>	All numbers are in international format, prefixed with "+".	+492212601599	+15552243

## MESSAGETYPES

### AGENTSTATE

The agentState notification provides information on the current state of an agent.

#### Parameters for AgentState

Parameter	Value	Description
<b>cmd</b>	agentstate	Type of notification.
<b>agentid</b>	A 6-digit number	The 6-digit agentnumber given by the ACD System.
<b>mode</b>	0 / 1	0 = Inbound 1 = Outbound
<b>state</b>	<string>	The current state of the agent.
<b>hotline</b>	<string>	Optional If "Mode" is 0 (Inbound) and "State" is "Alerting" or "Connected" then this parameter will contain the name of the involved hotline.
<b>hotlineid</b>	<integer>	Optional If "Mode" is 0 (Inbound) and "State" is "Alerting" or "Connected" then this parameter will contain the internal id of the involved hotline.
<b>group</b>	<string>	Optional If "Mode" is 0 (Inbound) and "State" is "Connected" then this parameter will contain the name of the involved group.
<b>groupid</b>	<integer>	Optional If "Mode" is 0 (Inbound) and "State" is "Connected" then this parameter will contain the internal id of the involved group.
<b>mandator</b>	<string>	Optional If "Mode" is 1 (Outbound) and the state is not "Outonline" this parameter will contain the name of the dialed mandator.
<b>mandatorid</b>	<integer>	Optional If "Mode" is 1 (Outbound) and the state is not "Outonline" this parameter will contain the internal id of the dialed mandator.
<b>callingnumber</b>	<string>	Optional If "Mode" is 0 (Inbound) and "State" is "Alerting" or "Connected" then this parameter will contain the number of the caller. If "Mode" is 1 (Outbound) and the state is not "Outonline" this parameter will contain the number the agent.
<b>callednumber</b>	<string>	Optional If "Mode" is 0 (Inbound) and "State" is "Alerting" or "Connected" then this parameter will contain the dialed service number. If "Mode" is 1 (Outbound) and the state is not "Outonline" this parameter will

		contain the dialed number.
<b>dialer</b>	0 / 1	If "mode" is 1 and mass calling is going on for the agent, then "dialer" will be set to 1. If on the other hand the agent has made a simple call, then "dialer" will be 0. This parameter is not set if "mode" is 0.
<b>requesttext</b>	<string>	Optional If "Mode" is 1 (Outbound) and the state is "Outalerting", "Balerting" or "Outconnect" this parameter will contain information on the dialed number (if configured in the outbound request)
<b>eventtime</b>	<numerical>	Timestamp of the signal generation in number of milliseconds since January 1, 1970, 00:00:00 GMT
<b>agentphonenumber</b>	<string>	The phone number of the agent.
<b>taskid</b>	max. 24 hexadecimal digits	ID of the call (only present if a call is in process e.g. Alerting, Connected, Outalerting, ...)
<b>customerNumber</b>	<integer>	Customer number
<b>agent_id</b>	<integer>	Agent resource ID

The possible values for the parameter "State" are divided into inbound and outbound states:

#### Inbound

State	Description
<b>offline</b>	The agent is not available and can't receive calls.
<b>online</b>	The agent is available and can receive calls.
<b>alerting</b>	An incoming call is signaled.
<b>connected</b>	The agent and the caller are connected
<b>timeouted</b>	The agent didn't answer an incoming call.
<b>busy</b>	The agent is busy with a non ACD call, e.g. someone called him directly.
<b>working</b>	The connected call is finished and the agent can process the call related pieces of information.
<b>paused</b>	The agent is paused.

#### Outbound

State	Description
<b>outonline</b>	The agent is in outbound mode. He will not receive any calls.
<b>outalerting</b>	First step of an outbound call. An initiated call is signaled to the calling agent.
<b>outbusy</b>	The agent is busy with a non ACD call, e.g. someone called him directly.
<b>outtimeouted</b>	The agent didn't answer the initiated call.

<b>balerting</b>	Second step of an outbound call. The initiated call is ringing at the customer.
<b>bbusy</b>	The customers number is busy.
<b>btimeout</b>	The customer didn't answer the call.
<b>bunassigned</b>	The target number is unassigned.
<b>bconnected</b>	The customer answers the call.
<b>outconnect</b>	The Agent and the customer are connected.
<b>outworking</b>	The connected call is finished and the agent can process the call related pieces of information.
<b>outpaused</b>	The agent is paused.

## CALLEVENT

The callevnt notification provides information on every call event.

### Parameters for callevnt

Parameter	Value	Description
<b>cmd</b>	callevnt	Type of notification.
<b>id</b>	<long>	Unique ID of the event.
<b>taskid</b>	max. 24 hexadecimal digits	ID of the call.
<b>eventtype</b>	<string>	Type of call event.
<b>eventtime</b>	<string>	Timestamp of the call event.
<b>hotlineid</b>	<integer>	ID of the hotline.
<b>groupid</b>	<integer>	ID of the group.
<b>agentid</b>	A 6-digit number	The 6-digit agentnumber given by the ACD System.
<b>mode</b>	0 / 1	0 = Inbound 1 =Outbound
<b>mailboxid</b>	<integer>	ID of the mailbox.
<b>mandatorid</b>	<integer>	ID of the mandator.
<b>announcement</b>	<integer>	ID of the announcement.
<b>callingnumber</b>	<string>	The number of the caller. If number suppression is active the last 3 digits are replaced with xxx.
<b>callednumber</b>	<string>	The dialed number.
<b>tried</b>	0 / 1	Only present if eventtype is "CallEnd", 0 = alerting did not occur 1 = alerting occurred
<b>connected</b>	0 / 1	Only present if eventtype is "CallEnd", 0 = connected did not occur 1 = connected occurred
<b>agent_id</b>	<integer>	Agent resource ID
<b>conf_agent</b>	A 6-digit number	A consultation target 6-digit agentnumber given by the ACD System
<b>conf_number</b>	<string>	A consultation target external number
<b>conf_agent_terminated</b>	A 6-digit number	The 6-digit agentnumber has ended a consultation
<b>conf_number_terminated</b>	<string>	The external number has ended a consultation
<b>customerNumber</b>	<integer>	Customer number

Possible values for the parameter "eventtype" are:

Eventtype	Description
<b>CallStart</b>	First event of a new call.
<b>Alerting</b>	The connection is being build up.

<b>Timeout</b>	The target did not answer the call.
<b>BTimeout</b>	The outbound-target did not answer the call (Outbound only).
<b>Busy</b>	The target is busy.
<b>BBusy</b>	The outbound-target is busy (Outbound only).
<b>Connected</b>	The caller is connected.
<b>AConnected</b>	The outbound-agent is connected (Outbound only).
<b>BConnected</b>	The outbound-customer answered the call (Outbound only).
<b>ForwardAgent</b>	The call is forwarded to an agent. (Inbound only)
<b>ForwardGroup</b>	The call is forwarded to a group. (Inbound only)
<b>ForwardHotline</b>	The call is forwarded to a hotline. (Inbound only)
<b>ForwardNumber</b>	The call is forwarded to an external number. (Inbound only)
<b>ConfAgent</b>	A consultation with an agent is started.
<b>ConfGroup</b>	A consultation with a group is started.
<b>ConfNumber</b>	A consultation with an external number is started.
<b>ConfBusy</b>	The target is busy.
<b>ConfTimeout</b>	The target did not answer the call.
<b>ConfConnected</b>	The caller is connected.
<b>ConfEnd</b>	The consultation has ended, and the customer is talking to the agent.
<b>WaitingQueue</b>	Call is put in a waitingqueue.
<b>Mailbox</b>	Call was connected with a mailbox.
<b>Announcement</b>	Start of an announcement.
<b>Rejected</b>	Call could not be connected to an acd resource e.g. all agents are busy, and the waiting queue is full.
<b>BadCall</b>	The call could not be connected because of an error in the SS7 protocol e.g. max hop-counter exceeded.
<b>CallEnd</b>	Call has ended.
<b>Holdstart</b>	The call is put on hold by an agent.
<b>Holdstop</b>	The call is no longer put on hold.
<b>ConfConnectedWithAgent</b>	The agent transfers the call to another agent and is connected to this agent while the caller waits on hold.
<b>ConfConnectedWithCaller</b>	The agent has returned to the caller during transfer and the transfer destination is waiting.
<b>ConfConnectedWithNumber</b>	The agent transfers the call to an external number and is connected to this number while the caller waits on hold.
<b>ConfConference</b>	The agent is connected to both destinations and starts a conference.
<b>ConfTransfer</b>	The agent transfers the call to destination.
<b>Working</b>	The agent is in the wrap-up time of an incoming call.
<b>OutWorking</b>	The agent is in the wrap-up time of an outgoing call.

## RECORDEDCALL

The recordedcall notification provides information on a currently recorded call.

### Parameters for recordedcall

Parameter	Value	Description
<b>cmd</b>	recordedcall	Type of notification.
<b>taskid</b>	max. 24 hexadecimal digits	ID of the call.
<b>agentid</b>	A 6-digit number	The 6-digit agentnumber given by the ACD System.
<b>mode</b>	0 / 1	0 = Inbound 1 = Outbound
<b>eventtime</b>	<string>	Timestamp when the recording started.
<b>agent_id</b>	<integer>	Agent resource ID
<b>customerNumber</b>	<integer>	Customer number



## CLASSIFICATIONEVENT

The classificationevent notification provides information on every classification-event.

### Parameters for classificationevent

Parameter	Value	Description
<b>cmd</b>	classificationevent	Type of notification.
<b>callid</b>	A number	ID of the call.
<b>timestamp</b>	<string>	Timestamp of the actual moment at which the call was classified by the agent.
<b>agent</b>	A 6-digit number	The 6-digit agentnumber given by the ACD System.
<b>classificationreason</b>	<string>	The actual classification.
<b>hotlineid</b>	A number	(Optional, sent only if mode is 0 (which means inbound)) The hotlinenumber given by the ACD System.
<b>mandatorid</b>	A number	(Optional, sent only if mode is 1 (which means outbound)) The mandatornumber given by the ACD System.
<b>classificationcategoryid</b>	A number	The classificationcategorynumber given by the ACD System.
<b>mode</b>	0 / 1	0 = Inbound 1 = Outbound
<b>agent_id</b>	<integer>	Agent resource ID
<b>customerNumber</b>	<integer>	Customer number
<b>eventtime</b>	<numerical>	Timestamp of the actual moment at which the call was classified by the agent.

## ENQUEUECALL

The enqueuecall notification provides information on every enqueue-event.

### Parameters for enqueueevent

Parameter	Value	Description
<b>cmd</b>	enqueuecall	Type of notification.
<b>taskid</b>	max. 24 hexadecimal digits	ID of the call.
<b>agent</b>	A number	ID of the agent
<b>mandatorid</b>	A number	The mandatornumber given by the ACD System.
<b>agent_id</b>	<integer>	Agent resource ID
<b>customerNumber</b>	<integer>	Customer number
<b>eventtime</b>	<numerical>	Timestamp of the signal generation in number of milliseconds since January 1, 1970, 00:00:00 GMT

## SCHEDULECALLEVENT

The schedulecallevent notification provides information on a call which has just been scheduled.

### Parameters for schedulecallevent

Parameter	Value	Description
<b>cmd</b>	schedulecallevent	Type of notification.
<b>scheduleid</b>	<number>	The unique id of the schedule call.
<b>agentid</b>	<integer>	The unique id of the agent as given by the ACD System.
<b>callednumber</b>	<string>	the called number
<b>timefrom</b>	<string>	Timestamp as HH:MM e.g. 17:20
<b>timeto</b>	<string>	Timestamp as HH:MM e.g. 17:20
<b>weekdays</b>	0/1	Flag whether the call is planned for week days
<b>saturday</b>	0/1	Flag whether the call is planned for Saturdays
<b>sunday</b>	0/1	Flag whether the call is planned for Sundays
<b>nextretrystartdate</b>	<Date>	nextretrystartdate and nextretryenddate forms an interval between which there will be an attempt to initiate the call. Date as YYYY-MM-DD HH:MM
<b>nextretryenddate</b>	<Date>	See nextretrystartdate. Date as YYYY-MM-DD HH:MM
<b>agenttype</b>	<string>	ONLY_AGENT or EVERYONE
<b>requesttext</b>	<string>	The request text.
<b>schedulestartdates</b>	<string>	The dates at which the call has been scheduled. (The different dates are separated by a semicolon ';')
<b>agent_id</b>	<integer>	Agent resource ID
<b>customerNumber</b>	<integer>	Customer number
<b>eventtime</b>	<numerical>	Timestamp of the signal generation in number of milliseconds since January 1, 1970, 00:00:00 GMT

## CONFIGCHANGED

The configchanged notification provides information whenever the configuration of one of the following items has changed:

- agent
- group
- hotline
- mandator
- pause reason
- classifier

### Parameters for configchanged

Parameter	Value	Description
<b>cmd</b>	configchanged	Type of notification.
<b>action</b>	<string>	name of the action within the ACD system.
<b>type</b>	<string>	The item that has changed. See the list above.
<b>secondtype</b>	<string>	Is set if the action has changed more than an item. Can be agent, group, hotline or mandator.
<b>customerNumber</b>	<integer>	Customer number
<b>eventtime</b>	<numerical>	Timestamp of the signal generation in number of milliseconds since January 1, 1970, 00:00:00 GMT

## BROADCASTEVENT

The broadcastevent notification provides information whenever a group receives a multi group message:

### Parameters for broadcastevent

Parameter	Value	Description
<b>cmd</b>	broadcastevent	Type of notification.
<b>admin</b>	<string>	name of the admin who has sent the message.
<b>groupid</b>	<string>	The unique id of the group who has received the message.
<b>message</b>	<string>	The message sent.
<b>customerNumber</b>	<integer>	Customer number
<b>eventtime</b>	<numerical>	Timestamp of the signal generation in number of milliseconds since January 1, 1970, 00:00:00 GMT

**EXAMPLE**

The following java source code gives an example how to implement the communication with the ACD API (http-POST).

```
try {  
  
    // Construct data  
  
    String command = "loginagent";  
  
    String admin = "9999999";  
  
    String password = "secret";  
  
    String agent = "8888888";  
  
  
    String data = URLEncoder.encode("command", "UTF-8") + "=" +  
    URLEncoder.encode(command, "UTF-8");  
  
    data += "&" + URLEncoder.encode("admin", "UTF-8") + "=" +  
    URLEncoder.encode(admin, "UTF-8");  
  
    data += "&" + URLEncoder.encode("password", "UTF-8") + "=" +  
    URLEncoder.encode(password, "UTF-8");  
  
    data += "&" + URLEncoder.encode("agent", "UTF-8") + "=" +  
    URLEncoder.encode(agent, "UTF-8");  
  
  
    // Send data  
  
    URL url = new URL("http://www.jinacd.de/inacd/ACDServlet");  
    URLConnection conn = url.openConnection();  
  
    conn.setDoOutput(true);  
  
    OutputStreamWriter wr = new OutputStreamWriter(conn.getOutputStream());  
  
    wr.write(data);  
  
    wr.flush();  
  
  
    // Get the response  
  
    InputStream inStream = conn.getInputStream();  
  
    inStream.close();  
  
    Iterator it = conn.getHeaderFields().entrySet().iterator();  
  
    while (it.hasNext()) {  
  
        Map.Entry entry = (Map.Entry) it.next();  
  
        if (entry.getKey() != null) {  
  
            Collection valueCollection = (Collection) entry.getValue();  
  
            Iterator valueIt = valueCollection.iterator();  
  
            while (valueIt.hasNext()) {  
  
                System.out.println("key: " + entry.getKey() +
```

```
        " value: " + valueIt.next());
    }
}

}

}

    wr.close();
} catch (Exception e) {
    e.printStackTrace();
}
}
```

## RELEASE NOTES

Version	Change	Description
4.2.1	Number formats	Section phone numbers added
4.2.0	Outbound Consultation Events	Consultation events for outbound calls
4.1.3	Agentstate, callevent, recordedcall, enqueuecall	Taskid now max. 24 hexadecimal digits (Before: 10 digits)
4.1.2	Callevnt	New parameters "conf_agent", "conf_number", "conf_agent_terminated", "conf_number_terminated"