

DOCUMENTATION

ACD CALLBACK API

Version: 4.2.2

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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
ACD Format	<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
FQTN with double zero prefix	All numbers are in international format with two leading zeros.	00492212601599	0015552243
FQTN with plus prefix	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
cmd	agentstate	Type of notification.
agentid	A 6-digit number	The 6-digit agentnumber given by the ACD System.
mode	0 / 1	0 = Inbound 1 = Outbound
state	<string>	The current state of the agent.
hotline	<string>	Optional If "Mode" is 0 (Inbound) and "State" is "Alerting" or "Connected" then this parameter will contain the name of the involved hotline.
hotlineid	<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.
group	<string>	Optional If "Mode" is 0 (Inbound) and "State" is "Connected" then this parameter will contain the name of the involved group.
groupid	<integer>	Optional If "Mode" is 0 (Inbound) and "State" is "Connected" then this parameter will contain the internal id of the involved group.
mandator	<string>	Optional If "Mode" is 1 (Outbound) and the state is not "Outonline" this parameter will contain the name of the dialed mandator.
mandatorid	<integer>	Optional If "Mode" is 1 (Outbound) and the state is not "Outonline" this parameter will contain the internal id of the dialed mandator.
callingnumber	<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.
callednumber	<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.
dialer	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.
requesttext	<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)
eventtime	<numerical>	Timestamp of the signal generation in number of milliseconds since January 1, 1970, 00:00:00 GMT
agentphonenumber	<string>	The phone number of the agent.
taskid	max. 24 hexadecimal digits	ID of the call (only present if a call is in process e.g. Alerting, Connected, Outalerting, ...)
customerNumber	<integer>	Customer number
agent_id	<integer>	Agent resource ID

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

Inbound

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

Outbound

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

bbusy	The customers number is busy.
btimeout	The customer didn't answer the call.
bunassigned	The target number is unassigned.
bconnected	The customer answers the call.
outconnect	The Agent and the customer are connected.
outworking	The connected call is finished and the agent can process the call related pieces of information.
outpaused	The agent is paused.

CALLEVENT

The callevnt notification provides information on every call event.

Parameters for callevnt

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

Possible values for the parameter "eventtype" are:

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

Timeout	The target did not answer the call.
BTimeout	The outbound-target did not answer the call (Outbound only).
Busy	The target is busy.
BBusy	The outbound-target is busy (Outbound only).
Connected	The caller is connected.
AConnected	The outbound-agent is connected (Outbound only).
BConnected	The outbound-customer answered the call (Outbound only).
ForwardAgent	The call is forwarded to an agent. (Inbound only)
ForwardGroup	The call is forwarded to a group. (Inbound only)
ForwardHotline	The call is forwarded to a hotline. (Inbound only)
ForwardNumber	The call is forwarded to an external number. (Inbound only)
ConfAgent	A consultation with an agent is started.
ConfGroup	A consultation with a group is started.
ConfNumber	A consultation with an external number is started.
ConfBusy	The target is busy.
ConfTimeout	The target did not answer the call.
ConfConnected	The caller is connected.
ConfEnd	The consultation has ended, and the customer is talking to the agent.
WaitingQueue	Call is put in a waitingqueue.
Mailbox	Call was connected with a mailbox.
Announcement	Start of an announcement.
Rejected	Call could not be connected to an acd resource e.g. all agents are busy, and the waiting queue is full.
BadCall	The call could not be connected because of an error in the SS7 protocol e.g. max hop-counter exceeded.
CallEnd	Call has ended.

RECORDEDCALL

The recordedcall notification provides information on a currently recorded call.

Parameters for recordedcall

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

CLASSIFICATIONEVENT

The classificationevent notification provides information on every classification-event.

Parameters for classificationevent

Parameter	Value	Description
cmd	classificationevent	Type of notification.
callid	A number	ID of the call.
timestamp	<string>	Timestamp of the actual moment at which the call was classified by the agent.
agent	A 6-digit number	The 6-digit agentnumber given by the ACD System.
classificationreason	<string>	The actual classification.
hotlineid	A number	(Optional, sent only if mode is 0 (which means inbound)) The hotlinenumber given by the ACD System.
mandatorid	A number	(Optional, sent only if mode is 1 (which means outbound)) The mandatornumber given by the ACD System.
classificationcategoryid	A number	The classificationcategorynumber given by the ACD System.
mode	0 / 1	0 = Inbound 1 = Outbound
agent_id	<integer>	Agent resource ID
customerNumber	<integer>	Customer number
eventtime	<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
cmd	enqueuecall	Type of notification.
taskid	max. 24 hexadecimal digits	ID of the call.
agent	A number	ID of the agent
mandatorid	A number	The mandatornumber given by the ACD System.
agent_id	<integer>	Agent resource ID
customerNumber	<integer>	Customer number
eventtime	<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
cmd	schedulecallevent	Type of notification.
scheduleid	<number>	The unique id of the schedule call.
agentid	<integer>	The unique id of the agent as given by the ACD System.
callednumber	<string>	the called number
timefrom	<string>	Timestamp as HH:MM e.g. 17:20
timeto	<string>	Timestamp as HH:MM e.g. 17:20
weekdays	0/1	Flag whether the call is planned for week days
saturday	0/1	Flag whether the call is planned for Saturdays
sunday	0/1	Flag whether the call is planned for Sundays
nextretrystartdate	<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
nextretryenddate	<Date>	See nextretrystartdate. Date as YYYY-MM-DD HH:MM
agenttype	<string>	ONLY_AGENT or EVERYONE
requesttext	<string>	The request text.
schedulestartdates	<string>	The dates at which the call has been scheduled. (The different dates are separated by a semicolon ';')
agent_id	<integer>	Agent resource ID
customerNumber	<integer>	Customer number
eventtime	<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
cmd	configchanged	Type of notification.
action	<string>	name of the action within the ACD system.
type	<string>	The item that has changed. See the list above.
secondtype	<string>	Is set if the action has changed more than an item. Can be agent, group, hotline or mandator.
customerNumber	<integer>	Customer number
eventtime	<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
cmd	broadcastevent	Type of notification.
admin	<string>	name of the admin who has sent the message.
groupid	<string>	The unique id of the group who has received the message.
message	<string>	The message sent.
customerNumber	<integer>	Customer number
eventtime	<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 = "999999";

    String password = "secret";

    String agent = "888888";

    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());
    }
}

}

} 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"