kama DEI API document (v2.3)

Release Information

Version: 2.3

Status: Released

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Overview

kama DEI APIs are fully compatible with JSON and REST. Our APIs allow third parties to integrate our services to your applications. Using a combination of the APIs as selected by you for your project and service, your application(s) can send requests and receive kama DEI conversational intelligence service in an efficient, reliable and secure manner.

Efficiency:

For kama DEI services, every effort from design to development to deployment architecture is based on a goal of achieving optimized response times. Our current 3-tier server architecture is structured to provide dedicated functions within different service layers so that we can scale our service to meet the growing demand within any level or function of our service. As we evolve our service capabilities, we continuously look to optimize our code, server architecture, database implementation and queries to deliver peak performance that is best in class in the services that we provide.

Reliability:

kama DEI's services (applications and APIs) are hosted on Amazon's AWS cloud services which is the largest and arguably one of the most reliable cloud service providers in the world. Further to this, we optimize our own service reliability by minimizing downtime for upgrades with a goal of achieving hitless upgrades. Where an upgrade requires a service downtime, these are planned in low traffic periods, and to

limited maintenance service windows, which we communicate to our clients. Our reliability uptime target is 99.99%, within the service portions that we control, which is amongst the best-in-class.

Security

Security is always within our first priority. In addition to hosting on one of the most experienced and secure cloud service providers (AWS) we further secure our own service platform with best practice industry methods. To ensure the security of our applications and APIs, our registration system is OAuth 2.0 protocol compliant to protect clients' credentials. All of our data communication through the internet is encrypted and secured with SSL protocols. We employ expirable API keys and perform various other security measures and checks to avoid access from hackers and bots that attempt to infiltrate our service platform. While no system is infallible, our combined security architecture is enterprise class if not industry leading.

APIs within the kama DEI Service Platform (v1.8)

Identification API (v1.8)

URL: https://api.kama-dei.com/api/v1/chatbox/consumer_identify

Request Parameters

Name	Type	constraints		Description
portalcode	string	6 alphanumeric	required	valid portal code
email / fbid	string	Max 254 characters	required	valid email address or valid facebook id
orgid	integer	Max 10^{10}	required	active organization ID
name	string	Max 100 characters	optional	user name [nickname]

Response

Result	Request state
200	OK Identified:

<table>
<tr><td></td><td>
<pre>{
    "result": 0,
    "id": 491,
    "apikey": "4xxxxx60dcd4e5716ca750e65010f9139f8583"
}</pre>
Not identified:
<pre>{
    "result": 1,
    "id": 0,
    "name": ""
}</pre>
</td></tr>
<tr><td>400</td><td>Bad Request</td></tr>
</table>

Registration API (v1.8)

URL: https://api.kama-dei.com/api/v1/chatbox/consumer_register

Request Parameters

Name	Type	constraints		Description
portalcode	string	6 alphanumeric	required	valid portal code
email / fbid	string	Max 254 characters	required	valid email address or valid facebook id
orgid	integer	Max 10^{10}	required	active

				organization ID
name	string	Max 100 characters	optional	user name [nickname]

Response

Result	Request State

200	OK
	<pre>{
	"result": 0,
	"id": 491,
	"apikey": "4xxxxx60dcd4e5716ca750e65010f9139f8583"
	}</pre>

400	Bad Request

Chatbox & KaaS API (v1.8)

URL: https://python.kama-dei.com/python_api/v1/multiple_language

Request Parameters

Header

Name	Type	Constraints		Description
apikey	String	38 alphanumeric	required	api key obtained with Identification API or Registration API call

Body

Name	Type	constraints		Description
userid	integer	Max 10^{20}	required	active user ID
orgid	integer	Max 10^{10}	required	active organization ID
state	integer	Max 9,999	required	reserved
botName	string	Max 250 alphanumeric	required	assist target bot name

botVersion	integer	Max 1,000	optional	assist target bot version
botAlias	string	Max 250 alphanumeric	required	assist target bot alias
botState	string	“ElicitIntent” “ElicitSlot”	required	assist target bot state at the moment of requesting KaaS
intentName	string	Max 250 alphanumeric	optional*[1]	target bot extracted intent at the moment of requesting KaaS (if applies)
slotName	string	Max 250 alphanumeric	optional*[1]	the slot that target bot stays at the moment of requesting KaaS (if applies)
language	string	{ "decided": "en", "detected": "en", "message": "en"}	optional	language code

inquiry	string	JSON format inquiry	required	In the latest KaaS, for most of the cases, this parameter is not used and can be left blank or can be given like this: {"request":{ "type":"text", "message":"", "answers":[] }} Except when Front-End is going to send “Slidebar values” to KaaS. Slidebar values are going to be send as “answers” within “inquiry”. An example has been given below: {"request":{ "type":"text", "message":"", "answers":[{"text":"knowledge","nameId":"1222","value":5}, {"text":"process","nameId":"35876","value":1}, {"text":"service","nameId":"1848","value":9}, {"text":"timesaving","nameId":"694","value":9}] }}

utterance_orig	string	Original user input	optional*2	Original inquiry string from user, which could be user input inquiry or the button value from a button click.
utterance_3PB	string	3rd party bot processed input	optional*2	3rd party bot processed inquiry string.

*1Here “intentName” and “slotName” become required when “botState” is “ElicitSlot”. When “botState” is “ElicitIntent”, “intentName” and “slotName” are not required.

*2 Here optional means for “utterance_3PB” and “utterance_orig”, if any one of them is available, the other one is optional. They can be both available, however if both of them are missing, an error will be returned.

Response

Result	**Request State**

200	OK
	
	Without mapping
	
	{
	"response": {
	"answers": [
	{
	"intent": "",
	"language": "en",
	"slot": "",
	"slotvalue": "",
	"subject": "sleep",
	"text": "sleep can reduce tiredness",
	"value": "*****0000004725*0*0000000000"
	},
	{
	"intent": "",
	"language": "en",
	"slot": "",
	"slotvalue": "",
	"subject": "nap",
	"text": "nap can reduce tiredness",
	"value": "*****0000004726*0*0000000000"
	}
	],
	"contentType": "kr",
	"language": {
	"decided": "en",
	"detected": "en",
	"message": "en"
	},
	"lexState": "ElicitIntent",
	"message": "I found these results. Please select one for more information. ",
	"slotName": " ",
	"state": 802,
	"type": "radiobutton"
	}
	}
	
	With mapping:
	
	{
	"response": {
	"contentType": "kr",
	"language": {
	"decided": "en",
	"detected": "en",
	"message": "en"
	},
	"lexState": "ElicitIntent",
	"mapping": "{\"bot\":\"BookTrip\",\"botversion\":\"BookTripAlias\",\"intent\":\"BookCar\",\"intentVersion\":\"11\",
	\"sampleUtterance\":\"Book a trip, Reserve a car, Make a car reservation, I would like to book a trip\",\"Intent-krId\":4209}",
	"message": "I found these results. Please select one for more information. ",
	"slotName": " ",
	"state": 804,
	"type": "mapping"
	}
	}

400	Bad Request (Parameters are not complete)

Spell Check API (v1.8)

URL: https://python.kama-dei.com/python_api/v1/spell_check

Request Parameters

Body

Name	Type	constraints		Description
userid	Integer	Max 10^{20}	required	For the definition, please see Chatbox API
orgid	Integer	Max 10^{10}	required	For the definition, please see Chatbox API
wordseq	string	{word, word, word}	required	word sequence for spell check
funcseq	string	spell suggest	required	Corresponding function sequence, or one function for all words

samefunc	boolean	true false	required	Default=True True: all words are checked using the same function funcseq[0] False: word wordseq[i] check the corresponding function funcseq[i], i=0,1…

Response

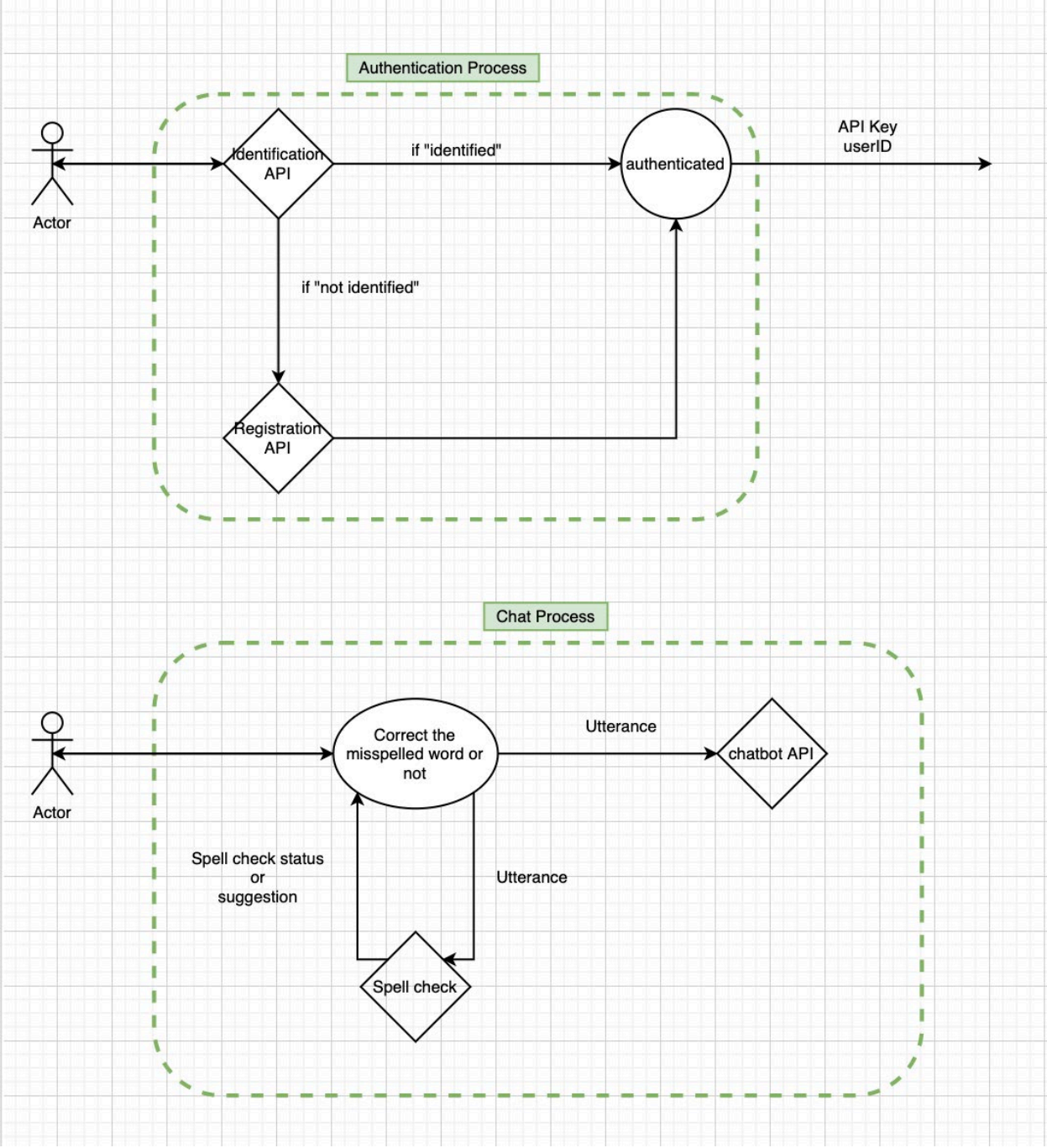
Result	Reason

200	OK
	<pre>{
	"ret_code": 1,
	"ret_msg": "{\"response\": \"True;True;True;False;False;True;True;True;True;True;True;False\"}"
	}</pre>

400	Unauthorized

Best Practices

The following flowchart describes a recommended approach for developers to follow for integrating the kama DEI APIs into their application.



Firstly, the Identification API should be called to identify if the user has already been registered in the kama DEI system. Based on the result of this first API call, if the user is registered already, an API key will be assigned. If Identification API returns “not identified”, then the Registration API should be called to get the user registered, and if the registration is successful, an API key will be assigned.Once the authentication process is completed, chatbox API can be called when the API key as the request header and valid request body are both ready.

Furthermore, our Spell Check API is specifically designed for our system and performs customized word-by-word spell check, in order to provide a better chat user experience and ensure the integrity of the overall conversational intelligence service.

We highly recommend you utilize the Spell Check API as part of your application. You can use this API call right after the user is identified/registered, and before the Chatbox and KaaS API call to ensure that the inquiry for the chatbox can be processed by the words are both spelled correctly and known to kama DEI to improve your chatbot’s performance and user experience.

For greater clarification of the above, customers will often have to identify a proprietary word (“Enterprise Words” in kama DEI) for particular product name for example. It is necessary that this word be in kama DEI’s Knowledge Base so that kama DEI can understand the proper contextual and emotional response for a particular inquiry or utterance. If a 3rd party spell checker is used for your chatbot, this word may be identified as a spelling mistake and if blocked, and the intelligent end-to-end inquiry/response process cannot be completed.

Appendix:

Supplementary Instructions:

1. Initially, an authentication process occurs before the front-end third party bot (3PB) can make the KaaS API call. After obtaining the valid API key, it can keep using it until the API key expires.

2. “state” needs to be taken into consideration for the 3PB traffic management. As the table shown below, in KaaS response, “state” is included to indicate the current KaaS conversation status. In order to help the 3PB front-end to determine where to deliver this response (i.e. to the end user or 3PB backend), as well as, determining whether to send the follow-up user response to KaaS or the 3PB backend.

3. “state” is an important parameter for KaaS to track the conversation logic. However, KaaS has a internal state tracking mechanism, in order to simplify the use of our KaaS API. Instead of managing/storing every KaaS state and send it back to KaaS, you can just send “0” as “state” all the time.

STATE	MEANING	SEND RESPONSE TO THE USER (Outbound)	SEND RESPONSE TO 3PB backend (Outbound)	SEND USER’S RESPONSE TO (Inbound)
804	ElicitIntent. Solution found in Mapping data		x	3PB backend
805	ElicitSlot. Solution found in Mapping data		x	3PB backend
818	kama DEI found solution before, and then user clicked exit button.	x		KaaS
991	The user clicked a solution button and there is no additional information	x		KaaS

998	No solution found. Double failure	x		3PB backend
999	No solution found	x		KaaS
802	More than solution found in kama DEI	x		KaaS
813	One solution found in kama DEI	x		KaaS
841	One solution found in kama DEI	x		KaaS
830	Solution found in kama DEI. The user clicked a button.	x		KaaS
806	Solution found in kama DEI. The user clicked a button.	x		KaaS
810	Solution found in kama DEI. The user clicked a button.	x		KaaS
814	Solution found in kama DEI. The user clicked a button.	x		KaaS
832	Solution found in kama DEI. Extended data contains Address.	x		KaaS
842	Solution found in kama DEI. The user clicked a button, and solution has risk, requirement, and option.	x		KaaS