Alexa Alarm Manager Skill User Guide

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Purpose

This guide should serve as a user manual or help source for the “Record Organizer” Alexa skill. It will list all commands and expected responses written as of the date above.

Notes

Before using the Alexa, make sure that it is plugged into a power source, either a computer or a wall outlet. Also, understand that Alexa will most likely be listening to you whenever it is plugged into power, even if the mute button is activated. I highly doubt that Amazon doesn’t collect as much data as it can without the complete knowledge of its users.

In order for the skill to work, ensure that the SQL connection is open, and a table named ##TempTable has been created with the appropriate data by executing the “TempTableSplitDateTimeQuery.sql” file. The web service also has to be running. This can be done with ngrok on the command prompt, using the command ngrok http 443. This will show you a few different links. Copy and paste the https:// forwarding link into the default region url box of the “Endpoint” section of the Alexa interface online. Make sure that the radio button for HTTPS is selected and that the certificate dropdown menu below the url box is set to “My development endpoint is a sub-domain of a domain that has a wildcard certificate from a certificate authority.” You do not have to do any of these things if you do it a different way. This is only how I did it, in case someone wants to replicate it.

Also, ensure that the Alexa unit being used is approved for either beta testing by the original owner (the automation account) or that the skill is published properly.

Launch the Skill

To launch the skill, the user can say one of the following two things:

1. Alexa, launch record organizer.
2. Alexa, ask record organizer for <insert valid skill command here>
   1. i.e. Alexa, ask record organizer for the total number of records.

After launching the skill, you will receive output from the Alexa as follows:

1. If launched with option 1, Alexa will respond with the instructions for the skill, which currently are “Welcome to <skill name>. You can fetch information with the following commands: get record, get number of records, and get most recent record. For more information, say help.”
2. If launched with option 2, Alexa will respond with the output matched to the skill command that was spoken by the user. This will be clarified below, where I cover the different skills.

Valid Skill Commands

The following skill commands, or intents, are currently available:

1. GetRecordIntent
2. NumRecordsIntent
3. GetMostRecentRecordIntent
4. FallbackIntent
5. CancelIntent
6. HelpIntent
7. StopIntent

Get Record

To invoke this command, say one of the following:

1. Get record
2. Get the top record
3. Get first record
4. Get top record
5. Get the first record
6. Get a record

This command will grab the top record in the SQL database and produce a response with the following format:

* “The top alarm occurred on <date> at <time> and has a description of <description> and a level of <level>

Num Records

To invoke this command, say one of the following:

1. Get number of records
2. Total <type> records
3. How many <type> records are there
4. How many records are of type <type>
5. Get total number of <type> records
6. Get number of <type> records

Valid values for <type> include “Process”, “Instrument”, “Critical”, “Warning”, “15-Critical”, “11-Warning”, and “All”. If you do not include a valid parameter for <type>, then Alexa will prompt you for one by saying something along the following lines:

* “What level or category are you interested in?”

Alexa will expect a response similar to the following formats:

* <type>
* <type> records
* Records of type <type>

If done correctly, Alexa will say something similar to the following:

* There are ### records with a category of <type>

If done incorrectly, Alexa will say something similar to the following:

* Error. Invalid type received. Please relaunch the skill.

When Alexa says, “please relaunch the skill,” the skill has shut down and will need to be relaunched as described above.

Get Most Recent Record

To invoke this command, say one of the following:

1. Most recent record
2. Get me the most recent record
3. Tell me the most recent record
4. What’s the most recent record
5. Last record
6. Get me the last record
7. Tell me the last record
8. What’s the last record

This will return something similar to the following format:

* “The most recent alarm was a <category> alarm with level <level> and occurred on <date> at <time> with description <description>”

Fallback

The fallback intent is activated when Alexa hears something that does not match a valid command or saying. When activated, Alexa will say something like the following:

* “I’m not sure I understand. Please say a valid command or repeat yourself.”

Note: Sometimes Alexa will repeat the last thing said if it does not properly understand the latest command. Just repeat yourself if this happens.

Cancel

The cancel intent is activated by saying something like “cancel”.

Alexa will respond as follows:

* “Skill operation cancelled. Please say another command to continue or ‘stop’ to exit.”

Saying another command will continue operation as normal. Saying “stop” will trigger the stop intent, covered below.

Help

The help intent is triggered by saying something like “help”.

When prompted for help, Alexa will repeat the instructions first stated upon launch that were included above. For reference:

* “Welcome to <skill name>. You can fetch information with the following commands: get record, get number of records, and get most recent record. For more information, say help.”

Stop

The stop intent is triggered by saying something like “stop”.

When prompted to stop, Alexa will say

* “Skill stopped. Shutting down.”

This will end the skill’s operation. In order to continue using it, the skill must be relaunched.

Afterword

Contacts

For details related to the OCN automation Alexa account, contact Ravi, who originally made the account. I worked with Collin Blomquist in OCN IT on the web service behind this project, so, if more assistance is necessary, please contact him or contact me at [zachary.m.zhao@gmail.com](mailto:zachary.m.zhao@gmail.com).

Future Development

As far as development for this project and similar projects in the future, I have a few things in mind.

1. Related to the actual deployment of this project and Alexa in general, a central server will be needed to host the web service code found in this folder.
   1. The server will need to have the service running, which can be activated by running “npm run start” in a terminal.
   2. The server will need to be accessible through a singular port (port 443) with an https connection.
   3. An automatic task should be set up to execute the SQL query on a set interval, as it currently takes snapshots of the real-time alarm database in DEV. For information related to the account used on DEV, please contact Myles Sumlin.
2. As far as future ideas and applications, as well as the challenges faced by them, I can think of one solid direction for expansion.
   1. Branch out from alarms to equipment statuses or other properties that are more relevant.
      1. This seems to be a strong direction to follow, as it will be much more applicable I believe. The primary challenge that I can see with this idea is how the relevant data will be accessed and retrieved by a query of sorts, like the SQL query that I used.