

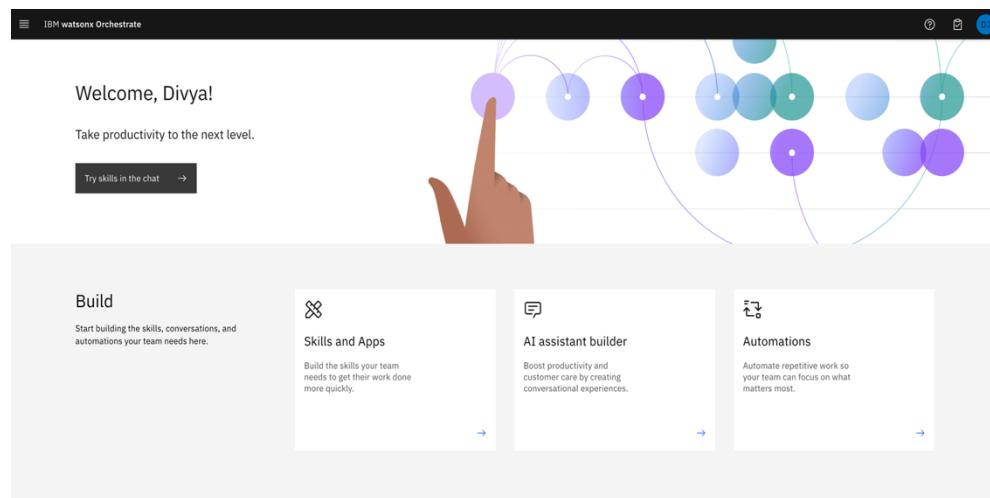
Lab 1b: Add and Use Custom Skills

In this lab, you will add and use custom skills to fetch data from a database. Using this, you will be able to query from the recent sales and inventory data.

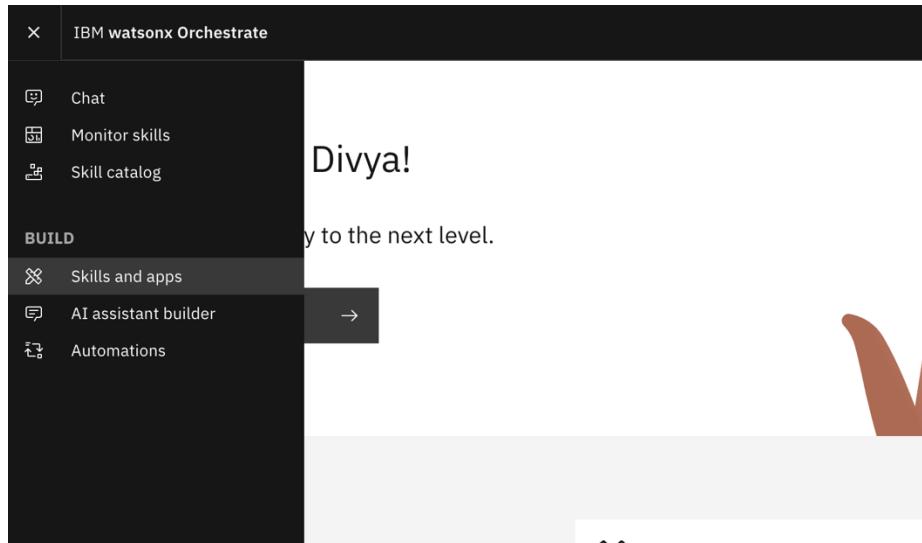


Add custom skills

1. Go to the menu from watsonx orchestrate home page.



2. Go to Skills and apps.



3. Go to “Skills” tab.

A screenshot of the "Skills and apps" tab in the IBM Watsonx Orchestrate interface. The top navigation bar shows "IBM watsonx Orchestrate" and "Skills and apps". The main content area has tabs for "Apps" and "Skills", with "Skills" currently selected. There is a search bar labeled "Find a skill". Below the search bar, the heading "Skills" is followed by a table. The table has columns: "Name", "Step in the process", and "Status". It lists two skills: "Retrieve recent sales data" and "Get inventory", both marked as "Ready to use" and "Pub".

Name	Step in the process	Status
▼ Retrieve recent sales data	Ready to use	✓ Pub
▼ Get inventory	Ready to use	✓ Pub

4. Click on “Add skills”.

A screenshot of the IBM Watsonx Orchestrate interface. At the top right, there are three icons: a question mark, a checkmark, and a user profile. Below the header, a blue button labeled "Add skills" is visible. To the right of the button is a dropdown arrow. The main area shows a table with columns: Status, Skill type, Author, and Last edited. The table has a light gray header row and white rows below. On the far right of the table, there are filter and sort icons.

5. Click on “From a file”.

A screenshot of the "Add skills" page in IBM Watsonx Orchestrate. The top navigation bar includes "IBM Watsonx Orchestrate", "Skills and apps", and a breadcrumb trail "Skills and apps / Add skills". The main section is titled "Add skills" and contains the instruction "Choose how you want to add skills and then select the skills you want to refer to from that source." Below this, there are two options: "Choose the source" (with a "From an app" button) and "Select the skills" (with a "From a file" button). The "From a file" button is highlighted with a dark background. A sub-section titled "Import a skill file" provides instructions: "Ensure your file is in the .json, or yaml format and no larger than 50 MB." It features a dashed rectangular area for dragging files and a "Drag and drop files here or click to upload" placeholder text.

6. In “Drag and drop files here or click to upload” section, upload openapi file/skill file. Before, uploading you need to make some changes in openapi file, as shown below so that one file doesn’t override the other’s file.

6.1 Update get_recentsales.json file

6.1.1 Open get_recentsales.json file in a text editor.

6.1.2 Update highlighted text to add your name in title (line 4), description (line 5), summary (line 24) and operationid (line 25) values. Please note there should be no spaces in operationid value.

Update title to “[Your Name] Sales text to sql API”

Update description to “[Your Name] Sales text to sql API”

Update summary to “[Your Name] Get Recent Sales”

Update operationid to “[Your Name]Sales”

```
1  {
2      "openapi": "3.0.1",
3      "info": {
4          "title": "SA Sales text to sql API",
5          "description": "SA Sales text to sql API",
6          "version": "0.1.0",
7          "x-ibm-skill-type": "imported",
8          "x-ibm-skill-subtype": "public"
9      },
10     "security": [
11         {
12             "basicAuth": []
13         }
14     ],
15     "servers": [
16         {
17             "url": "https://textsql-app.1foie2oh7ha9.us-south.codeengine.appdomain.cloud"
18         }
19     ],
20     "paths": {
21         "/getrecentsales/": {
22             "get": {
23                 "summary": "SA Get Recent Sales",
24                 "operationId": "SASales",
25                 "parameters": [
26                     {
27                         "name": "start"
28                     }
29                 ]
30             }
31         }
32     }
33 }
```

6.1.3 Save the file.

6.2 Update get_inventory.json file

6.2.1 Open get_inventory.json file in a text editor.

6.2.2 Update highlighted text to add your name in title (line 4), description (line 5), summary (line 24) and operationid (line 25) values. Please note there should be no spaces in operationid value.

```

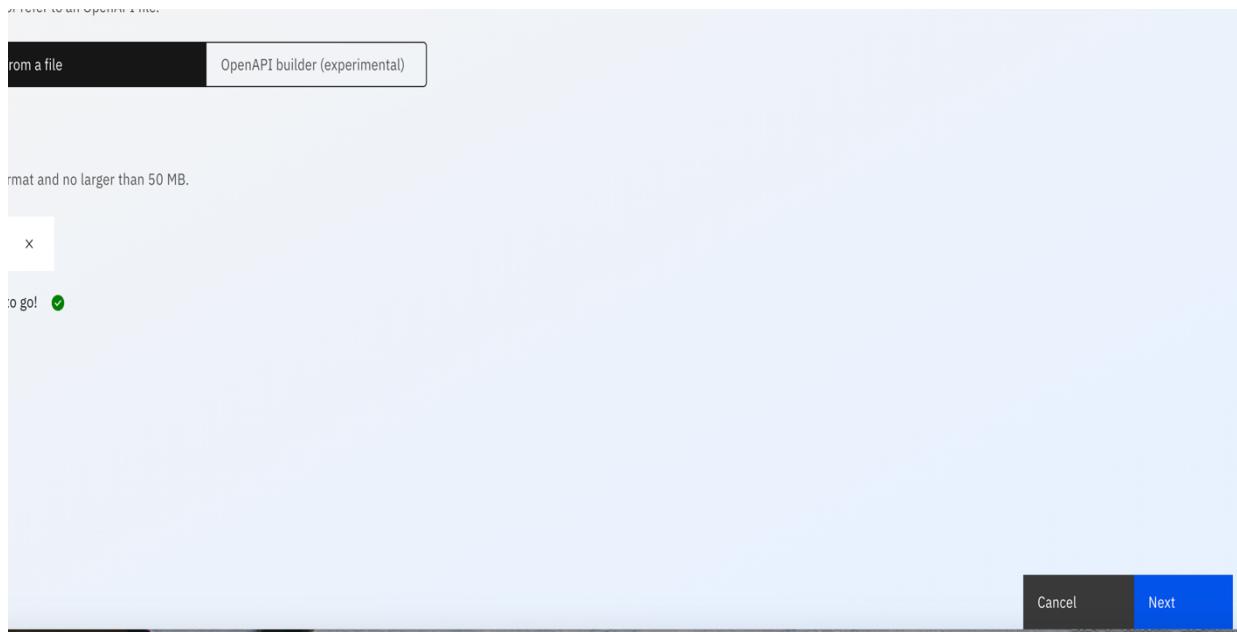
1   {
2     "openapi": "3.0.1",
3     "info": {
4       "title": "SA Inventory text to sql API",
5       "description": "SA Inventory text to sql API",
6       "version": "0.1.0",
7       "x-ibm-skill-type": "imported",
8       "x-ibm-skill-subtype": "public"
9     },
10    "security": [
11      {
12        "basicAuth": []
13      }
14    ],
15    "servers": [
16      {
17        "url": "https://textsql-app.1foie2oh7ha9.us-south.cod
18      }
19    ],
20    "paths": {
21      "/getinventory/": {
22        "get": {
23          "summary": "SA Get Inventory",
24          "operationId": "SAinventory",
25          "parameters": [
26            {

```

6.2.3 Save the file.

7. Upload get_inventory.json in “Drag and drop files here or click to upload”.

8. Click on “Next”.

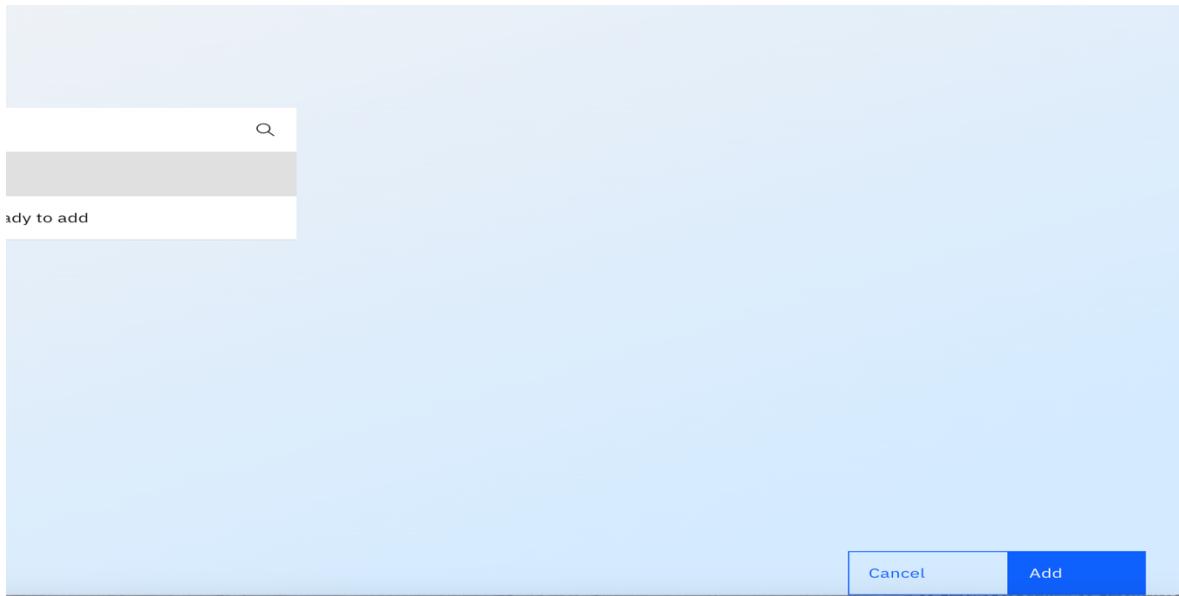


9. Check the box.

A screenshot of the "Skills and apps" section in IBM Watsonx Orchestrate. The title is "Add skills". It says "Choose how you want to add skills and then select the skills you want to refer to from that source." There are two options: "Choose the source" (radio button) and "Select the skills" (radio button). The "Select the skills" option is selected. A sub-section titled "Choose skills" shows a list with one item: "DJ Get inventory" which is selected (indicated by a checked checkbox).

Skill	Description	Status
DJ Get inventory	description not found	Re

10. Click on “Add”.



11. Status should be “Ready to publish”.

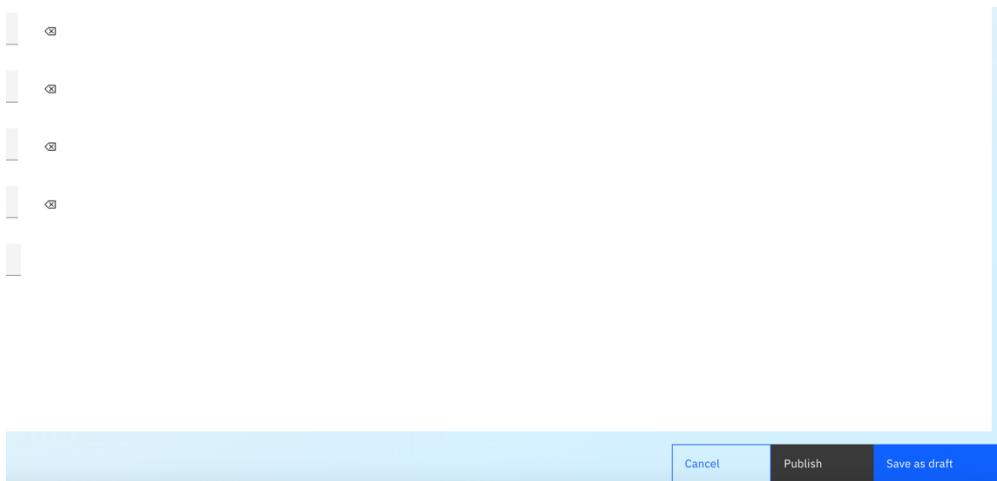
A screenshot of the Skills and apps page in IBM Watsonx Orchestrate. The top navigation bar includes "IBM Watsonx Orchestrate", "Skills and apps", and other icons. A green notification bar on the right says "1 skill was added successfully." with a timestamp "11:23:22". The main area shows a table of skills with columns: Name, Step in the process, Status, Skill type, Author, and Last edited. One row is visible: "DJ Get inventory", "Just 1 step away to be ready", "Ready to publish", "Imported", "divya.jadon@ibm.com", and "April 23 2024".

12. Click on three dots and then “Enhance this skill”.

The screenshot shows the IBM Watsonx Orchestrate interface with the 'Skills and apps' tab selected. A green success message at the top right states '1 skill was added successfully.' with a timestamp of '11:23:22'. Below the message is a table titled 'Skills' with columns: Name, Step in the process, Status, Skill type, Author, and Last edited. The table lists four skills: 'DJ Get inventory' (Ready to publish), 'Retrieve recent sales data' (Published), 'Get inventory' (Published), and 'Send quotation to customer' (Published). The 'Enhance this skill' button for 'Retrieve recent sales data' is highlighted with a blue box.

Name	Step in the process	Status	Skill type	Author	Last edited
DJ Get inventory	Just 1 step away to be ready	Ready to publish	Imported	divya.jadon@ibm.com	April 23 2024
Retrieve recent sales data	Ready to use	Published	Imported	divya.jadon@ibm.com	April 22
Get inventory	Ready to use	Published	Imported	divya.jadon@ibm.com	April 22
Send quotation to customer	Ready to use	Published	Skill flow	Sripriya.Arabala@ibm.com	April 22

13. Click on “Publish”.



14. The status changes from “Ready to publish” to “Published”.

The screenshot shows the 'Skills and apps' interface after publishing. A green success message at the top right states 'Published successful' with a timestamp of '11:25:07'. The message also says 'Published skill DJ Get inventory.'. Below the message is a table titled 'Skills' with columns: Name, Step in the process, Status, Skill type, Author, and Last edited. The table lists one skill: 'DJ Get inventory' (Published). The 'Published' status is highlighted with a blue box.

Name	Step in the process	Status	Skill type	Author	Last edited
DJ Get inventory	Ready to use	Published	Imported	divya.jadon@ibm.com	April 23 2024

15. Repeat steps from 7 to 14 for “get_recentsales.json” file.

16. Two custom skills are published.

Skills and apps

Skills and apps

Add new skills, train them to be more effective, and publish them to the catalog so your team can benefit from them quickly.

Apps Skills

Find a skill

Skills

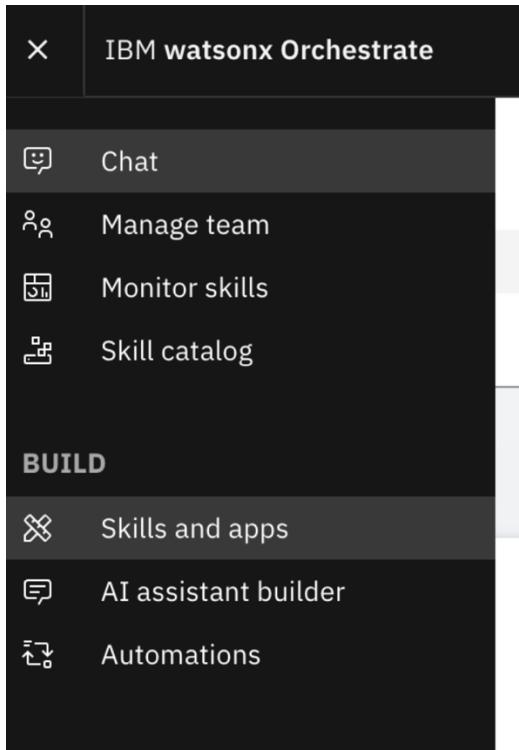
Name	Step in the process	Status	Skill type	Author	Last edited
DJ Retrieve recent sales data	Ready to use	Published	Imported	divya.jadon@ibm.com	April 23 2024
DJ Get inventory	Ready to use	Published	Imported	divya.jadon@ibm.com	April 23 2024

1 skill was added successfully. 13:48:20

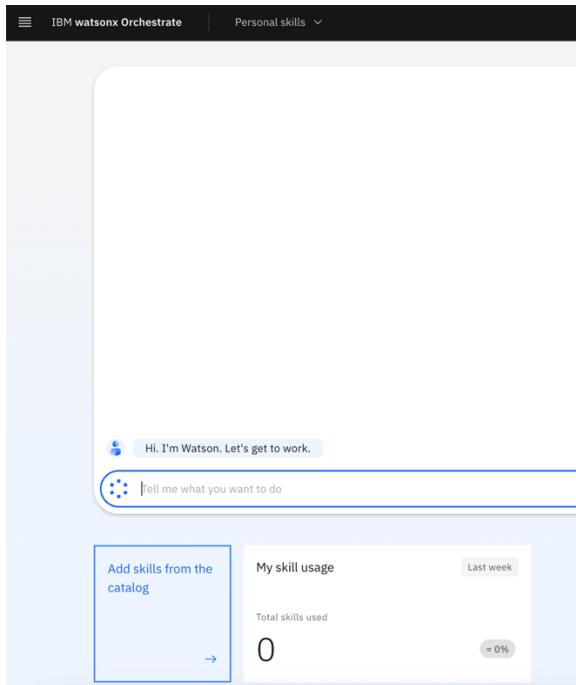
Published successful Published skill DJ Retrieve recent sales data. 13:49:14

Use skills

1. Click on chat from the menu



2. Check on “Add skills from the catalog” section.



3. Under “All Apps” search for “[Your Name] Get Inventory”.

A screenshot of the IBM Watsonx Orchestrate interface showing the "All Apps" section. At the top, there's a search bar with the placeholder "Search apps". Below it, there are two sections: "Most popular skills" and "All Apps". The "Most popular skills" section contains two items: "Send an email from Gmail" and "Send an email using Outlook", each with an "Add skill +" button. The "All Apps" section displays a grid of ten app cards: "TextSQL Inventory API" (1 skill), "TextSQL Sales API" (1 skill), "Content generation" (1 skill), "AWS Lambda" (2 skills), "Amazon S3" (8 skills), "Amazon SNS" (9 skills), "Amazon SQS" (6 skills), "Anaplan" (14 skills), "DJ TextSQL Inventory API" (1 skill), and "DJ TextSQL Sales API" (1 skill). Each card includes a small icon and a green checkmark.

4. Click on “Add skills”.



Skill catalog /
DJ TextSQL Inventory API (1)

Personal skills

Search skills

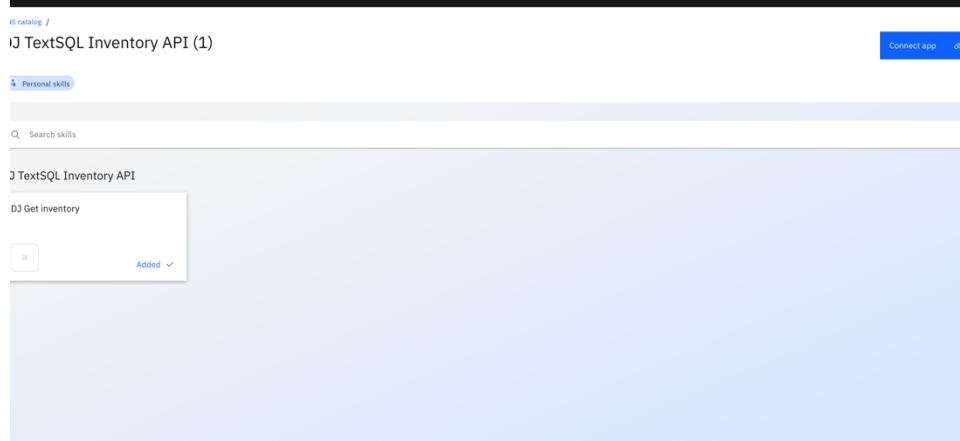
DJ TextSQL Inventory API

DJ Get inventory

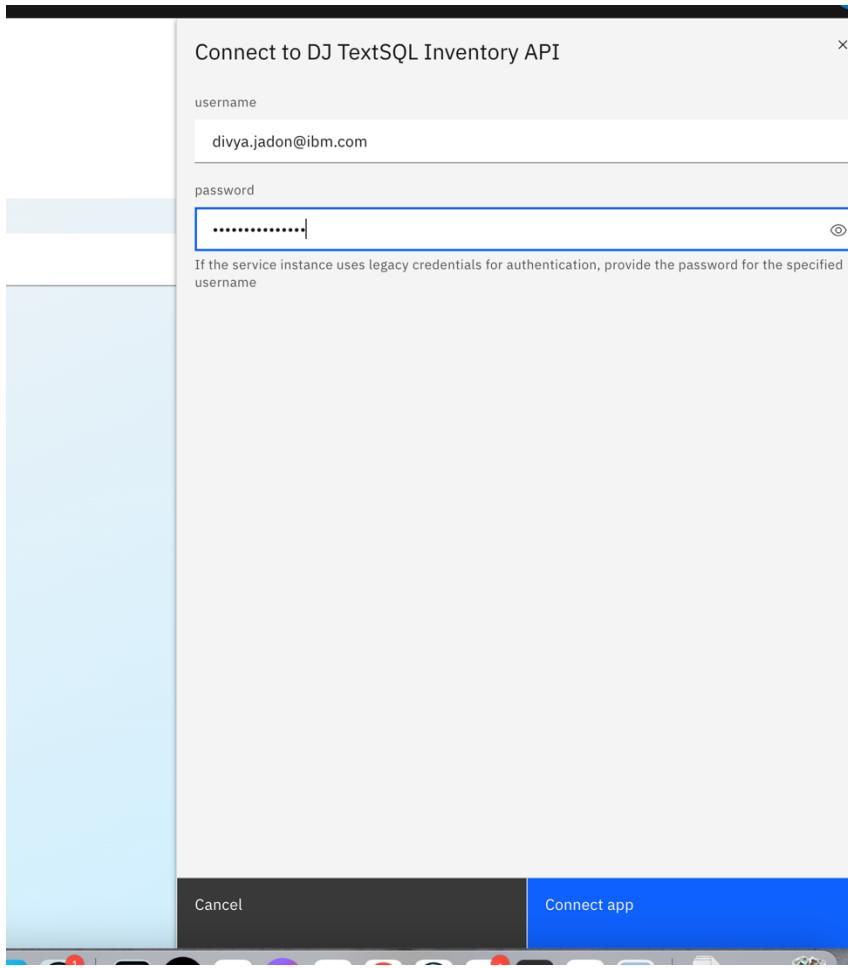


Added ✓

5. Click on “Connect app”.

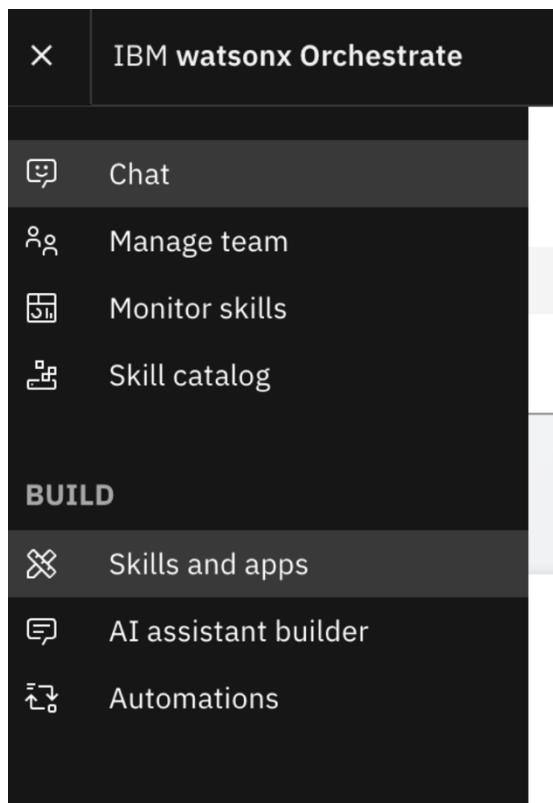


6. Write your IBM ID username and password, then click on “Connect app”.

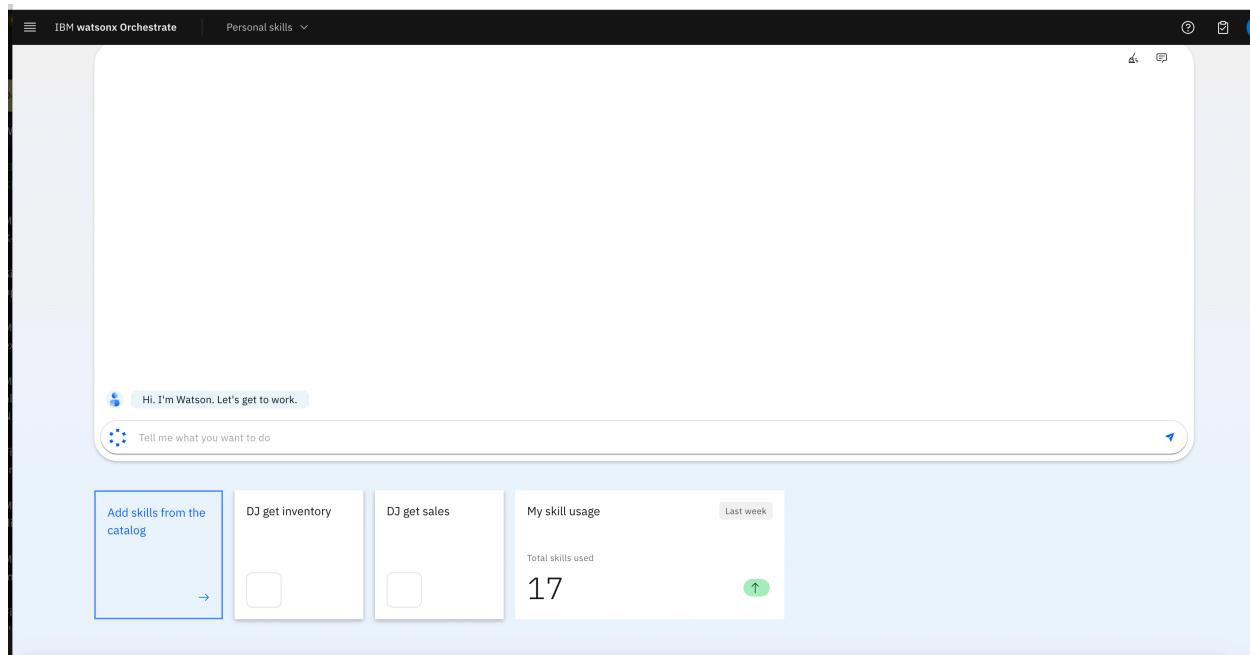


7. Similarly, repeat steps 3-6 to connect to “[Your Name] Get Recent Sales”. Now, both skills are added in Skill Catalog.

8. Go to Chat from menu again.



8. Click on “[Your Name] Get Inventory”.



9. Type the question “What is the inventory level of Xtralife?” in Query box. Then click on “Apply”.

The screenshot shows the IBM Watsonx Orchestrate interface. At the top, it says "IBM Watsonx Orchestrate" and "Personal skills". A message from Watson says "Hi. I'm Watson. Let's get to work." Below that, a skill named "DJ get inventory" is listed. Watson then says "You just need to complete this form first." A button labeled "DJ get inventory" is shown. A query input field contains "What is the inventory level of xtralife?". At the bottom of the main area are "Cancel" and "Apply" buttons. Below this, a search bar says "Tell me what you want to do". On the left, a blue box says "Add skills from the catalog" with an arrow pointing right. To the right, there are three cards: "DJ get inventory", "DJ get sales", and "My skill usage". The "My skill usage" card shows "Total skills used" and "17".

10. Similarly, you click on “[Your Name] Get Recent Sales” and ask query “What is the monthly sales for Xtralife for last 3 months?” and click on apply to view the results.

The screenshot shows the IBM Watsonx Orchestrate interface. At the top, it says "IBM Watsonx Orchestrate" and "Personal skills". A skill named "DJ get sales" is listed. Watson says "You just need to complete this form first." A button labeled "DJ get sales" is shown. A query input field contains "What is monthly sales of xtralife for last 3 months?". Below the input field, a progress bar says "Working on it...". At the bottom of the main area is a search bar that says "Tell me what you want to do". On the left, a blue box says "Add skills from the catalog" with an arrow pointing right. To the right, there are three cards: "DJ get inventory", "DJ get sales", and "My skill usage". The "My skill usage" card shows "Total skills used" and "18".