



AskHR: Automate HR tasks with Agentic AI

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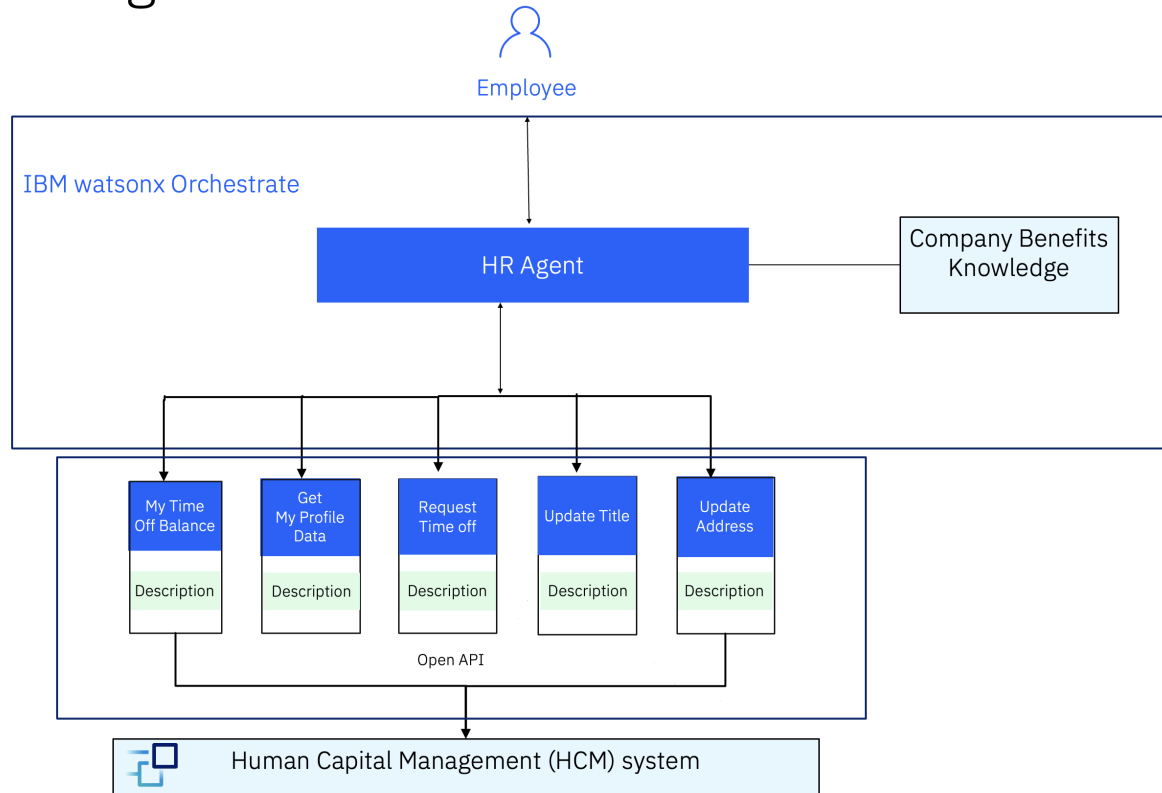
Use Case Description

This use case targets developing and deploying an AskHR agent leveraging IBM watsonx Orchestrate, as depicted in the provided architecture diagram. This agent will empower employees to interact with HR systems and access information efficiently through conversational AI.

In this lab we will build an HR agent in watsonx Orchestrate, leveraging tools and external knowledge to connect to a simulated Human Capital Management System. This agent retrieves relevant information from documents to answer user queries and allows users to view and manage their profiles.

Architecture

AskHR agent with Orchestrate



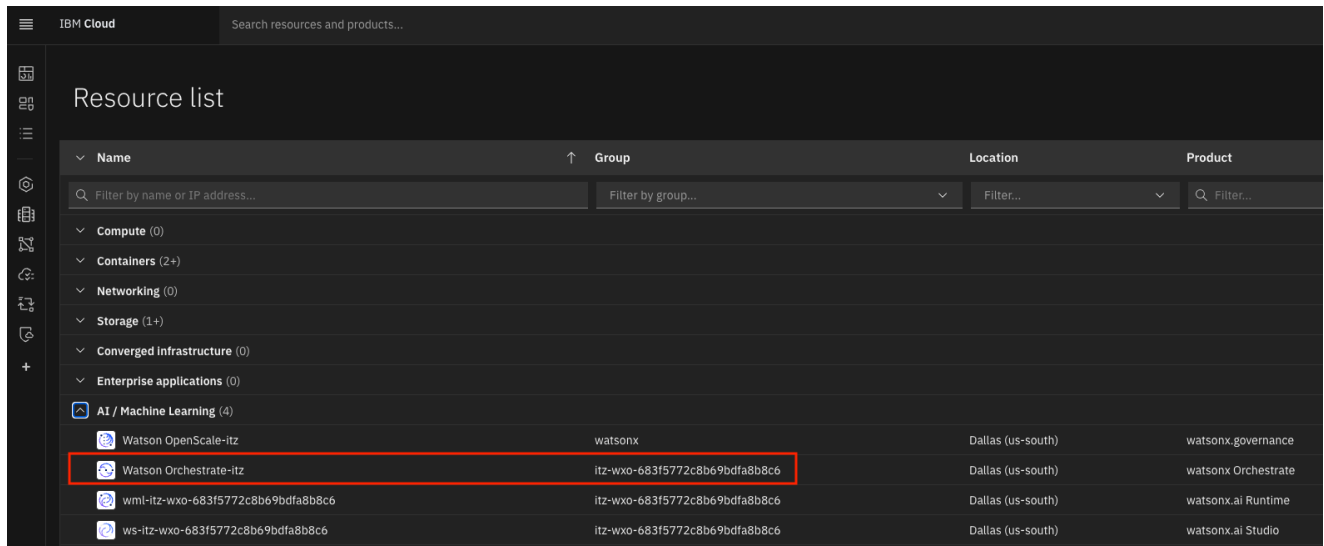
Pre-requisites

- Check with your instructor to make sure **all systems** are up and running before you continue.
- Validate that you have access to the right techzone environment for this lab.
- Validate that you have access to a credentials file that your instructor will share with you before starting the labs.
- If you're an instructor running this lab, check the **Instructor's guides** to set up all environments and systems.

Instructions

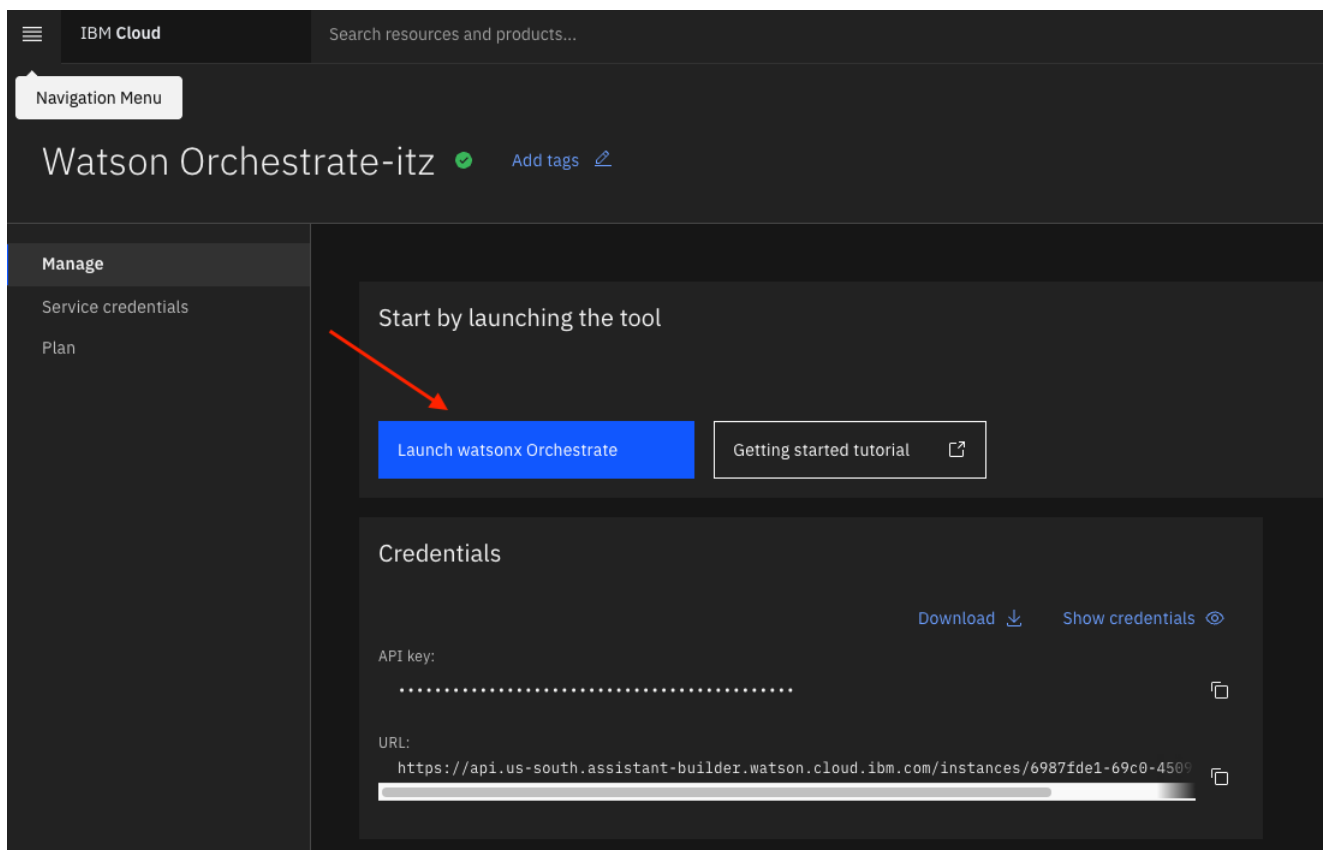
Open Agent Builder

- Log in to IBM Cloud (cloud.ibm.com). Navigate to top left hamburger menu, then to Resource List. Open the AI/Machine Learning section. You should see a **watsonx Orchestrate** service, click to open.



Name	Group	Location	Product
Watson OpenScale-itx	watsonx	Dallas (us-south)	watsonx.governance
Watson Orchestrate-itx	itz-wxo-683f5772c8b69bdfa8b8c6	Dallas (us-south)	watsonx Orchestrate
wml-itx-wxo-683f5772c8b69bdfa8b8c6	itz-wxo-683f5772c8b69bdfa8b8c6	Dallas (us-south)	watsonx.ai Runtime
ws-itx-wxo-683f5772c8b69bdfa8b8c6	itz-wxo-683f5772c8b69bdfa8b8c6	Dallas (us-south)	watsonx.ai Studio

- Click the “Launch watsonx Orchestrate” button.



Navigation Menu

Watson Orchestrate-itx ✓ [Add tags](#) [🔗](#)

Manage

- Service credentials
- Plan

Start by launching the tool

[Launch watsonx Orchestrate](#) [Getting started tutorial](#) [🔗](#)

Credentials

[Download](#) [📄](#) [Show credentials](#) [👁](#)

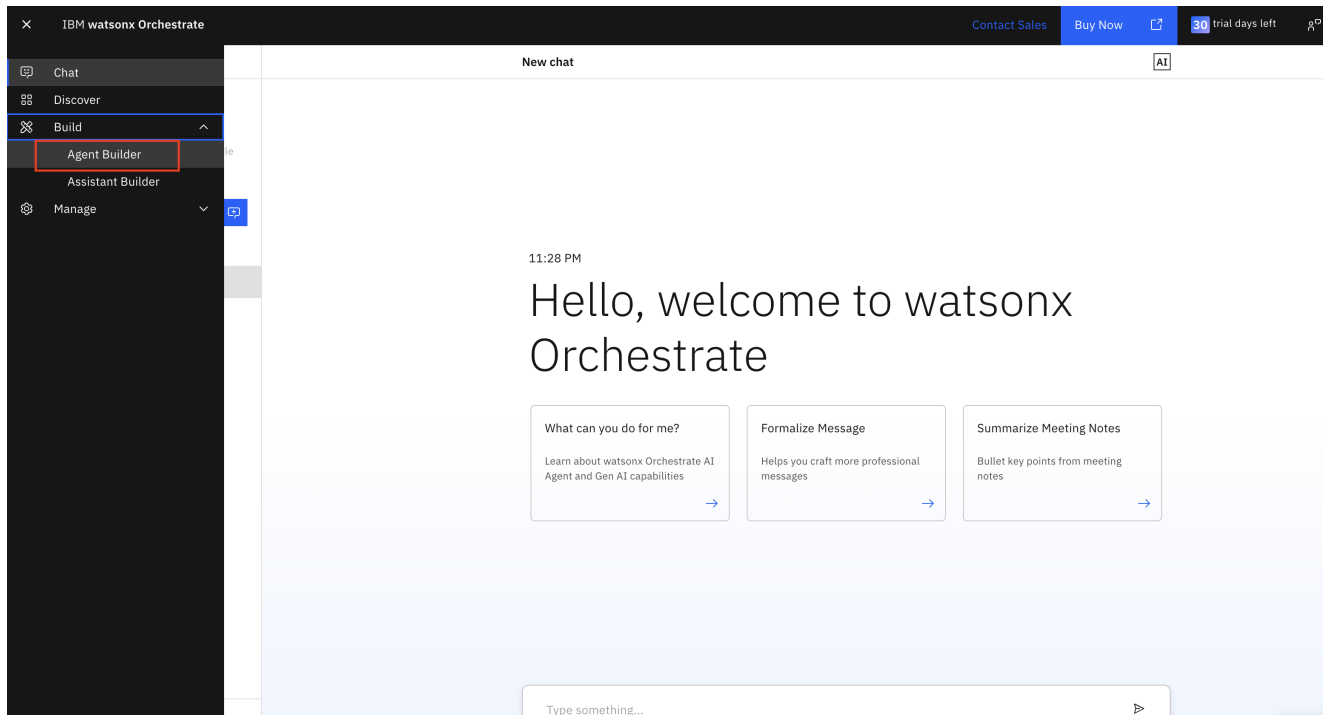
API key:

..... [📄](#)

URL:

<https://api.us-south.assistant-builder.watson.cloud.ibm.com/instances/6987fde1-69c0-4509> [📄](#)

- Welcome to watsonx Orchestrate. Open the hamburger menu, click on the down arrow next to **Build**. Then click on **Agent Builder**:

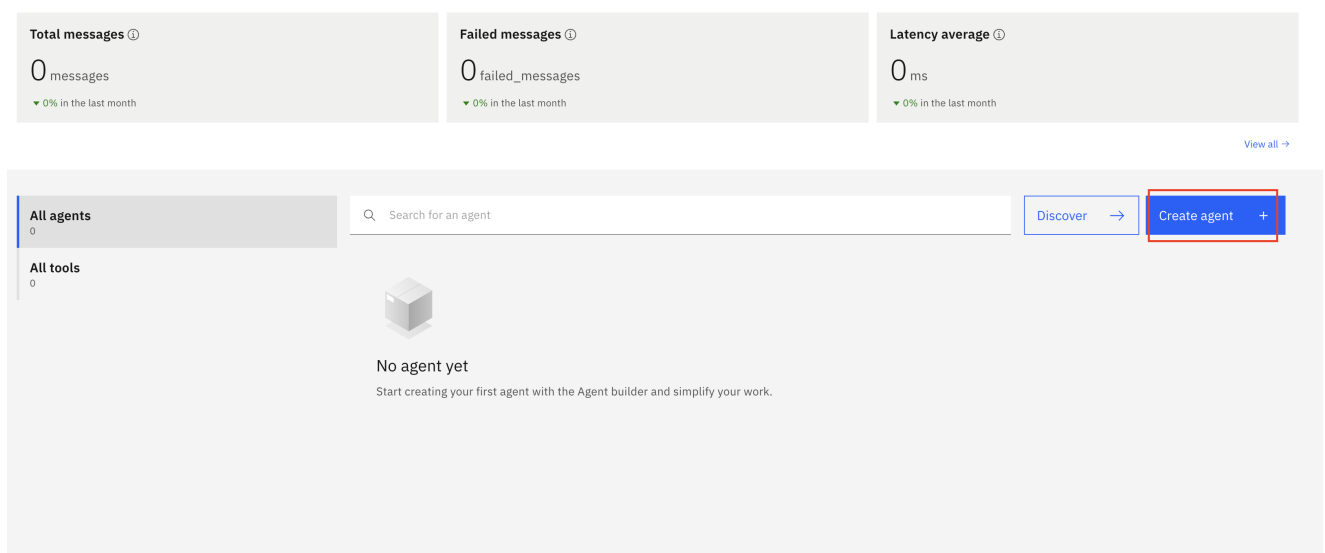


Create HR Agent

1. Click on **Create agent +**:

Agent chat /

Build agents and tools



1. Select **Create from scratch**, give your agent a name, e.g. HR Agent, and fill in the **Description** as shown below:

You are an agent who handles employee HR queries. You provide short and crisp responses, keeping the output to 200 words or less. You can help users check their profile data, retrieve latest time off balance, update title or address, and request time off. You can also

answer general questions about company benefits.

Click on **Create**:

The screenshot shows the 'Create an agent' interface in IBM watsonx Orchestrate. The form is titled 'Create an agent' and has two main options: 'Create from scratch' and 'Create from template'. The 'Create from scratch' option is selected, indicated by a red box and a red arrow labeled '1'. Below this, there are three input fields: 'Name', 'Description', and 'What makes a good description?'. The 'Name' field contains 'HR Agent' and is highlighted with a red box and a red arrow labeled '2'. The 'Description' field contains a detailed description of the agent's role and is highlighted with a red box and a red arrow labeled '3'. The 'What makes a good description?' field is a link. At the bottom right, there is a blue 'Create' button highlighted with a red box and a red arrow labeled '4'. The top navigation bar includes 'Contact Sales', 'Buy Now', and a '30 trial days left' indicator.

IBM watsonx Orchestrate

Contact Sales Buy Now 30 trial days left

Create an agent

Create from scratch
Build your custom agent step by step to create a custom solution.

Create from template
Browse the catalog and use the attributes of another agent as a template to create your agent.

Name

HR Agent

Description

You are an agent who handles employee HR queries. You provide short and crisp responses, keeping the output to 200 words or less. You can help users check their profile data, retrieve latest time off balance, update title or address, and request time off. You can also answer general questions about company benefits.

Describe your agent, including its purpose, tools, and agents, to help other agents and users know when to use it.

[What makes a good description?](#)

Cancel Create

1. Select **Default** in **Agent style** section.



HR Agent

AI Model : llama-3-405b-instr...

Profile

Knowledge

Toolset

Behavior

Channels

Agent style

Define how your agent interprets prompts and decide what action to take.

Default

Recommended



Relies on the models intrinsic ability to understand, plan and call tools and knowledge.

ReAct



Enables the model to think, act, observe and refine its approach until a task is completed.

Good for: High stakes apps

Voice modality

To enable the voice modality for this agent, you must create a voice configuration.



Voice is currently limited to the Agent builder preview and cannot be deployed to channels.

Select the voice configuration for this agent.

No voice configuration



[Explore voice configurations](#)

1. Scroll down the screen to the **Knowledge** section. Click on **Choose knowledge**.

The screenshot shows the 'HR Agent' configuration interface. On the left is a sidebar with 'Knowledge' selected. The main area is titled 'Knowledge' and contains instructions to provide specific knowledge for the agent. A red arrow points to a 'Choose knowledge' button with a plus icon. On the right, a chat window shows a greeting from 'Orchestrat'.

HR Agent

Model: llama-3-405b-instr...

3:08 AM

Hello, welc
Orchestrat

Accuracy of generated answers may vary

What can you do for me?

Learn about watsonx Orchestrate AI #

Formalize Message

Helps you craft more professional me

Summarize Meeting Notes

Bullet key points from meeting notes

Profile

Knowledge

Toolset

Behavior

Channels Preview

Knowledge

Provide the specific knowledge your agent needs to accomplish its goal.

Learn more about best knowledge practices

Edit knowledge settings

Knowledge source

Upload files or connect to content repositories to add knowledge to your agent.

Start by adding knowledge

Click "Choose knowledge" to upload files or connect to content repositories.

Choose knowledge +

1. Select **Upload files**. Click on **Next**.

The screenshot shows the 'Choose knowledge source' dialog. On the left is a sidebar with 'Select source' selected. The main area lists four options: 'Milvus' (Recommended), 'Elasticsearch', 'Custom service', and 'Upload files'. A red arrow labeled '1' points to the 'Upload files' option. At the bottom right, a red arrow labeled '2' points to the 'Next' button.

Choose knowledge source

Select source

Select a knowledge source to give your agent the information it needs to respond accurately.

Learn more

Milvus Recommended

Connect to an existing Milvus instance.

Elasticsearch

Connect to an existing Elasticsearch instance.

Custom service

Connect to an existing Custom service instance. Learn more

Upload files

Upload your own files

Cancel

Back

Next

1. Download the [Employee Benefits.pdf](#) onto your system, then upload the file here. Click on **Next**.

Choose knowledge source

Select source

Add knowledge

Description

Add knowledge

Upload files to give additional context to your agent.

Files must have unique names. The maximum number of files uploaded in one batch is 20, and the total size limit of one batch is 30 MB. The max file size is 25 MB for .docx, .pdf, .pptx and .xlsx and 5 MB for .csv, .html, and .txt files.

Drag and drop files here or click to upload

Employee Benefits.pdf

Cancel

Back

Next

1. Copy the following description into the **Description** section and then click on **Save**:

This knowledge base addresses the company's employee benefits, including parental leaves, pet policy, flexible work arrangements, and student loan repayment.

Choose knowledge source

Select source

Add knowledge

Description

Description

This description will inform the agent on the contents of the knowledge.
[What makes a good description?](#)

Description



This knowledge base addresses the company's employee benefits, including parental leaves, pet policy, flexible work arrangements, and student loan repayment.


Cancel


Back

Save

1. Scroll down to the **Toolset** section. Click on **Add tool +**:

 **HR Agent** 

AI Model : llama-3-405b-instr... 



Profile

Knowledge


Toolset



Behavior

Channels Preview





Knowledge source

Upload files or connect to content repositories to add knowledge to your agent.

[Change source](#) 



 **Files** Connected [Upload files](#) 

File name	Date uploaded
Employee Benefits.pdf	03/08/2025

Items per page: 5  1-1 of 1 items 1  of 1 page  

Knowledge source description


This knowledge base addresses the company's employee benefits, including parental leaves, pet policy, flexible work arrangements, and student loan repayment.

 **Toolset** 

Add tools and other agents to help your agent take action.

Tools

Give your agent access to your organization's tool to help it accomplish tasks.

[Add tool](#) 

3:26 AM

Hello, w
Orchestr

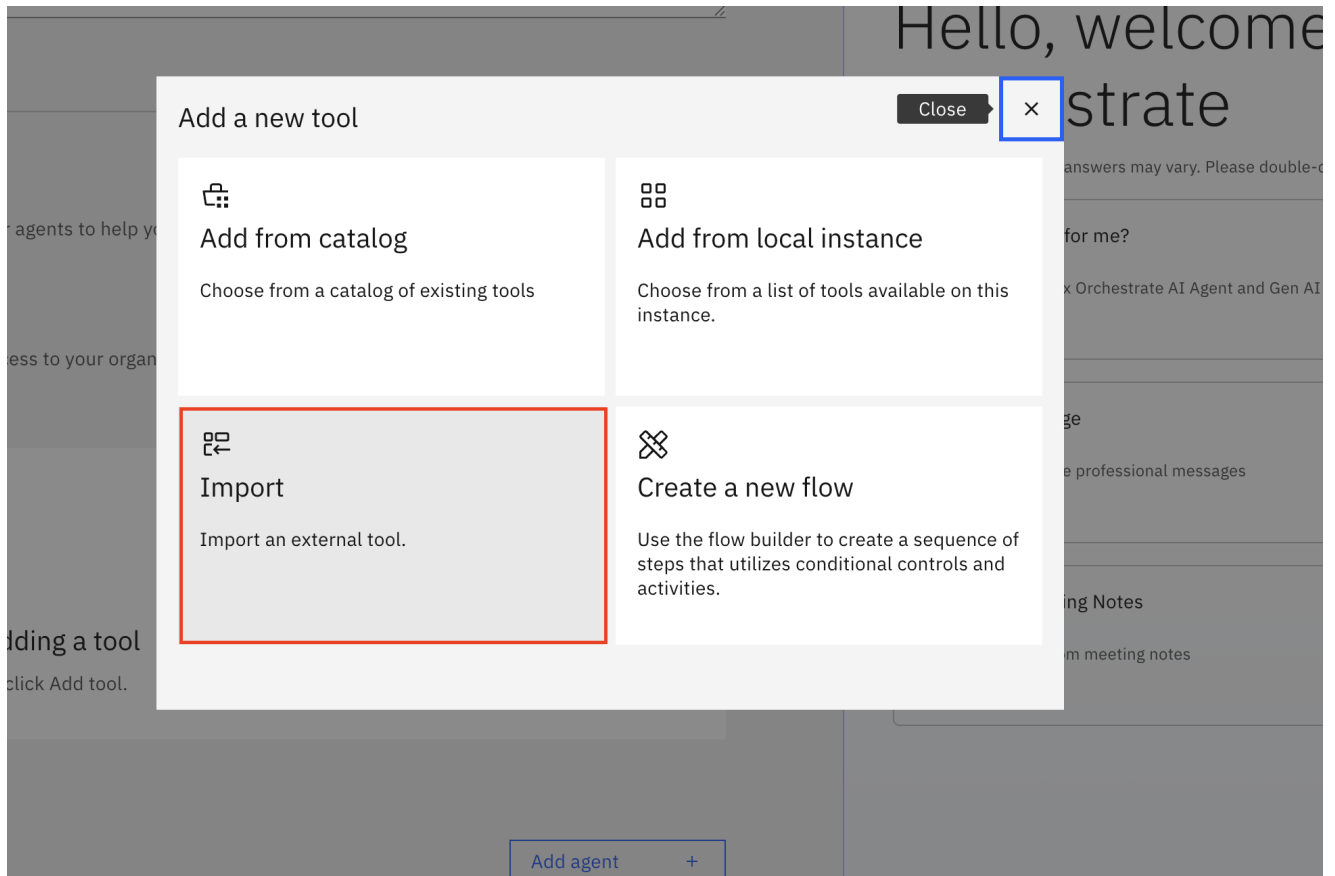
Accuracy of generated answers

What can you do for me?
[Learn about watsonx Orches](#)

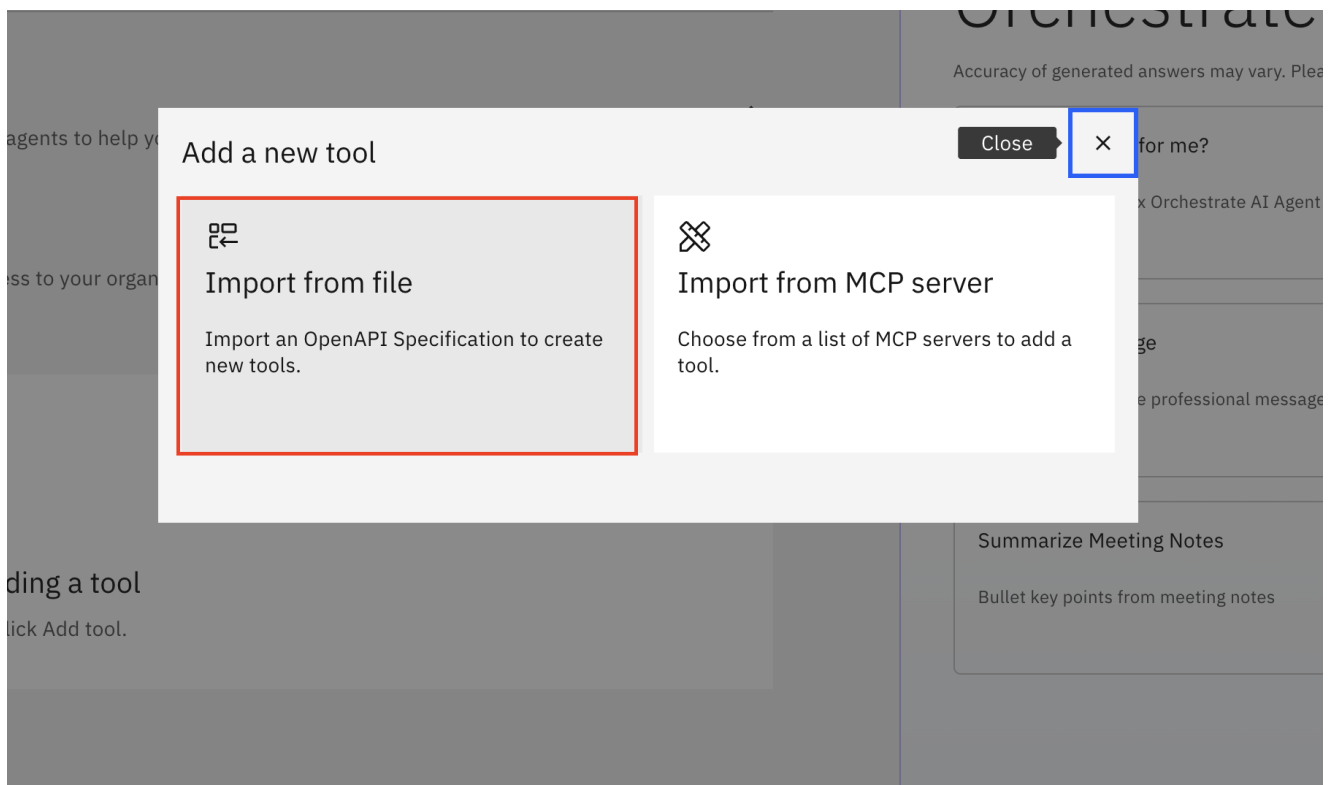
Formalize Message
Helps you craft more profess

Summarize Meeting Note
Bullet key points from meeti

1. Select **Import**:



1. Select **Import from file**:



1. Drag and drop or click to upload the **hr.yaml** file (provided to you by the instructor), then click on **Next**:

Import tool

Upload file

Select operations

Connect

Upload an OpenAPI specification file.

Max file size is 5 MB. Supported file types are .json and .yaml.

Drag and drop an OpenAPI file here or click to upload.

hryaml

×

Validation successful

Cancel

Next

1. Select all the operations and click on **Done**:

Import tool

Upload file

Select operations

Connect

Operations

Select the operations that you want to add as tools.

☒

Name

Method

Description

☒

Get User Profile

GET

Get complete profile data of user. :param name: The user's name :returns: The user's profile data, which includes address, user ID, name, time off balance, and title.

☒

Get Time Off Balance

GET

Get time off balance data. :param name: The user's name :returns: User's time off balance as a single string

☒

Request Time Off

POST

Request time off, apply for leaves. :param name: user's name :param from_date: Start date of time off, represented as a string in date format, e.g. 2025-05-22 :param to_date: End date of time off, represented as a string in date format, e.g. 2025-05-27 :returns: A confirmation message

☒

Update Title

PUT

Update user's title. :param name: User's name :param new_title: User's new title :returns: A confirmation message as a single string

☒

Update Address

PUT

Update user's address. :param name: User's name :param new_address: User's new address :returns: A confirmation message

☒

Create User

POST

Items per page: 10

1–6 of 6 items

1 of 1 page

Cancel

Done

1. Scroll down to the **Behavior** section. Insert the instructions below into the **Instructions** field:

``` Use your knowledge base to answer general questions about employee benefits.

Use the tools to get or update user specific information.

When user asks to show profile data or check time off balance or update title/address or request time off for the very first time, first ask the user for their name, then invoke the tool and then use the same name in the whole session without asking for the name again.

When the user requests time off, convert the dates to YYYY-MM-DD format, e.g. 5/22/2025 should be converted to 2025-05-22 before passing the date to the post\_request\_time\_off tool. ``` 1. Turn on the toggle button for **Chat with documents**. Select **None** in **Citations show in webchat**. Turn on the toggle button for **Show agent**. Click on **Deploy** in the top right corner to deploy your agent:

The screenshot displays the Watsonx Orchestrate interface for configuring and previewing an agent. The left sidebar shows the configuration menu with sections: Profile, Knowledge, Toolset, Behavior (selected), and Channels. The main area is divided into two panels. The top panel, 'Behavior', contains instructions for the agent's knowledge base and a 'Chat with documents' section. The 'Chat with documents' section has a toggle switch (labeled 2) that is turned on, a dropdown menu for 'Citations show in webchat' (labeled 3) set to 'None', and a 'Show agent' toggle switch (labeled 4) at the bottom. The bottom panel, 'Channels', shows options to connect the agent to various channels. The right panel, 'Preview', shows a chat window with a greeting: 'Hello, welcome to watsonx Orchestrate'. The top right corner of the interface has a 'Deploy' button (labeled 5).

## Test HR Agent in Preview

Test your agent in the preview chat on the right side by asking the following questions and validating the responses. They should look similar to what is shown in the screenshots below:

What is the pet policy?

You 08:28 PM

What is the pet policy?



watsonx 08:28 PM | Hide Reasoning ^

v Step 1

According to the employee benefits document, the pet policy is: "Bring your furry friend to work! If you're working from the office, your pet is always welcome to join you, making the office a more fun and relaxed place." ^

Show me my profile data.  
I'd like to update my title.

You 08:29 PM

Show me my profile data



watsonx 08:29 PM

What is your name?

You 08:29 PM

Victoria Baker



watsonx 08:29 PM | Show Reasoning ▾

Your profile data is:

- Address: San Jose, CA
- ID: 11
- Name: Victoria Baker
- Requested time off: 6
- Time off balance: 44.28
- Title: Sr Engineer

You 08:30 PM

I'd like to update my title



watsonx 08:30 PM

What is your new title?

You 08:30 PM

Sr AI Engineer



watsonx 08:30 PM | Show Reasoning ▾

Your title has been updated to Sr AI Engineer.

Update my address

What is my time off balance?

You 08:32 PM

Update my address



watsonx 08:32 PM

What is your new address?

You 08:33 PM

222 Main St, San Francisco, CA 94105



watsonx 08:33 PM | Show Reasoning ▾

Your address has been updated to 222 Main St, San Francisco, CA 94105.

You 08:33 PM

What is my time off balance?



watsonx 08:33 PM | Show Reasoning ▾

Hi Victoria, you have 44.28 days left for time off.

Request time off  
Show my profile data.



You 08:33 PM

Request time off



watsonx 08:33 PM

What is the start date of your time-off request?

You 08:34 PM

5/22/2025



watsonx 08:34 PM

What is the end date of your time-off request?

You 08:34 PM

5/29/2025



watsonx 08:34 PM | Show Reasoning ▾

Your time off request for 7 days has been successfully submitted.

You 08:34 PM

Show my profile data



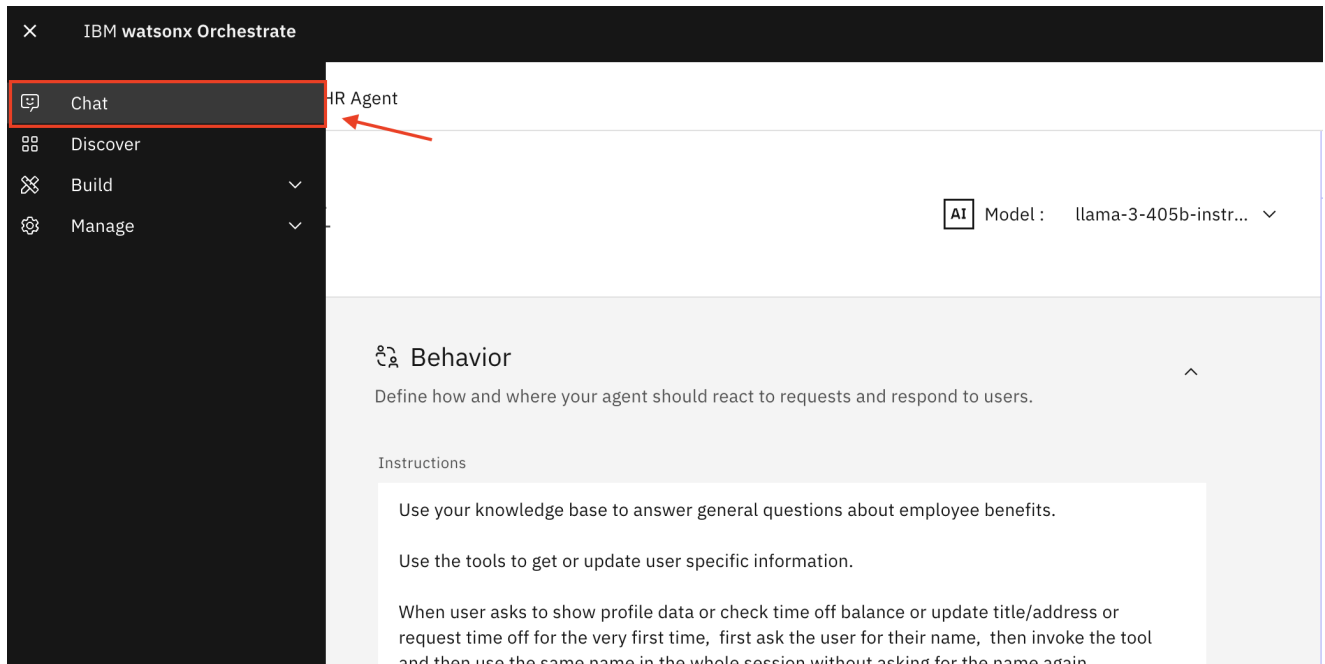
watsonx 08:34 PM | Show Reasoning ▾

Your profile data is:

- Address: 222 Main St, San Francisco, CA 94105
- ID: 11
- Name: Victoria Baker
- Requested time off: 7
- Time off balance: 44.28
- Title: Sr AI Engineer

## Test HR Agent AI Chat

Test the Agent from the AI Chat window. Click on the hamburger menu in the top left corner and then click on **Chat**:



Make sure **HR Agent** is selected. You can now test your agent:

