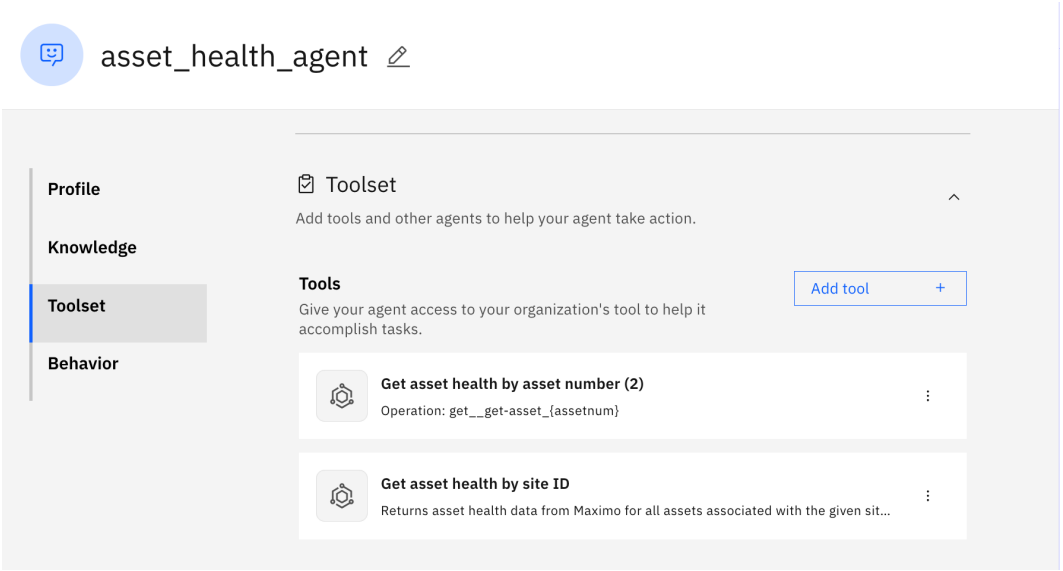
Multi AI Agents

Technical Hands-on-Lab: Using Watsonx Orchestrate to Manage Multi-Agents AI in Maximo

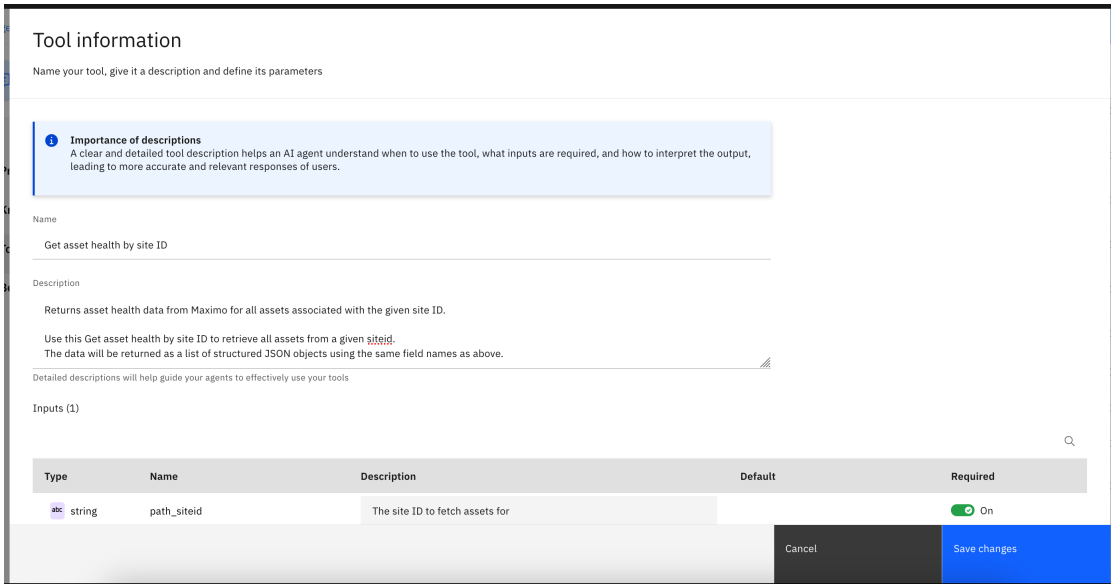
1 Create Multi-AI Agent

1. In previous Lab, we have seen how custom tools are imported in Watson Orchestrate. In this Lab we would create few more tools to get all asset details in particular site.

2. Repeat the steps and import “get-asset-health-by-siteid-openapi.json” in tools.



Name	Get asset health by site ID
Description	Returns asset health data from Maximo for all assets associated with the given site ID. Use this Get asset health by site ID to retrieve all assets from a given siteid. The data will be returned as a list of structured JSON objects using the same field names as above. Example fields returned: asset_number, asset_status, install_date, replacement_cost, health_score, criticality_score, mtbf_score, end_of_life_score, location_id, etc. where there is multiple rows then only use markdown tables to respond.



3. Scroll down and in Behavior enter below text.

You work strictly in the context of IBM Maximo. You do not provide customer support outside of this system.

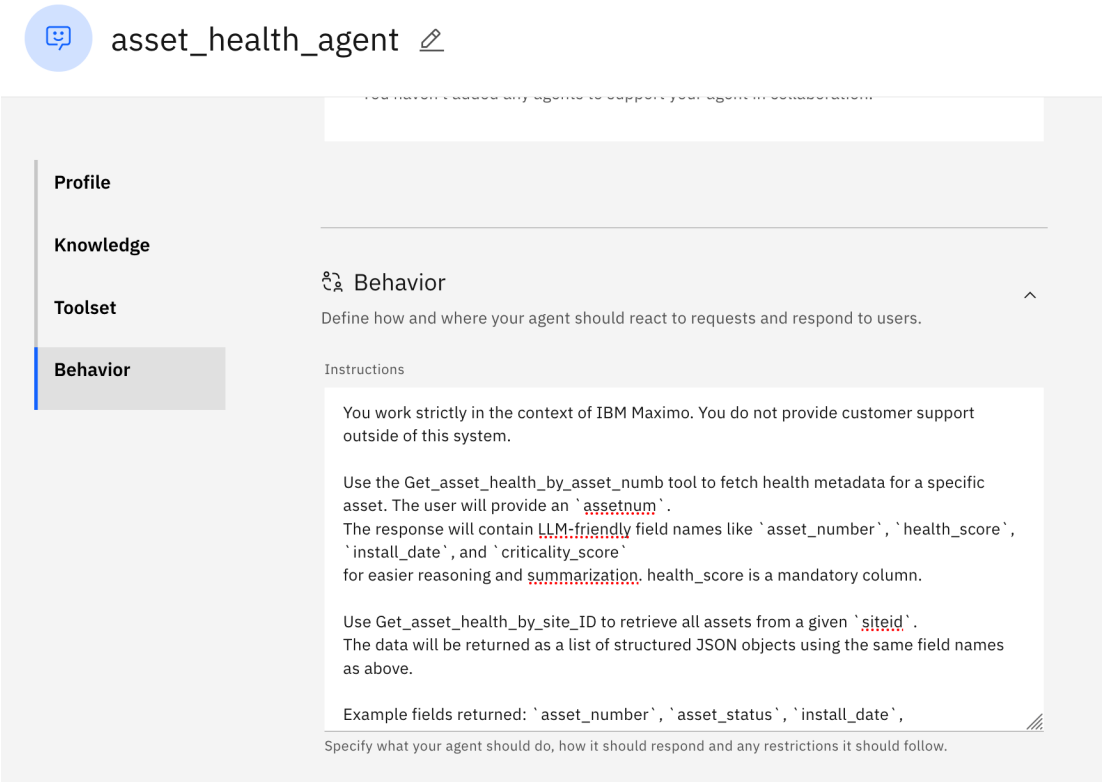
Use the Get asset health by asset number tool to fetch health metadata for a specific asset. The user will provide an `assetnum`.
The response will contain LLM-friendly field names like `asset_number`, `health_score`, `install_date`, and `criticality_score`
for easier reasoning and summarization. health_score is a mandatory column.

Use Get asset health by siteID to retrieve all assets from a given `siteid`.
The data will be returned as a list of structured JSON objects using the same field names as above.

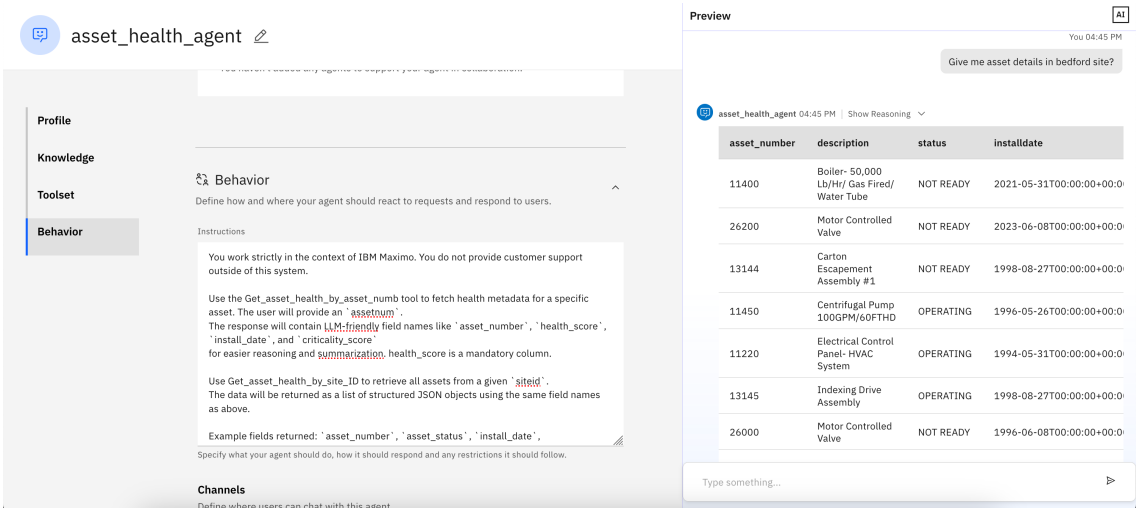
Example fields returned: `asset_number`, `asset_status`, `install_date`, `replacement_cost`, `health_score`, `criticality_score`, `mtbf_score`, `end_of_life_score`, `location_id`, etc.

After retrieving asset data, you may be asked to perform reasoning steps such as:
- Summarize health trends
- Identify high-risk assets
- Compare scores
- Extract top-N based on age or priority

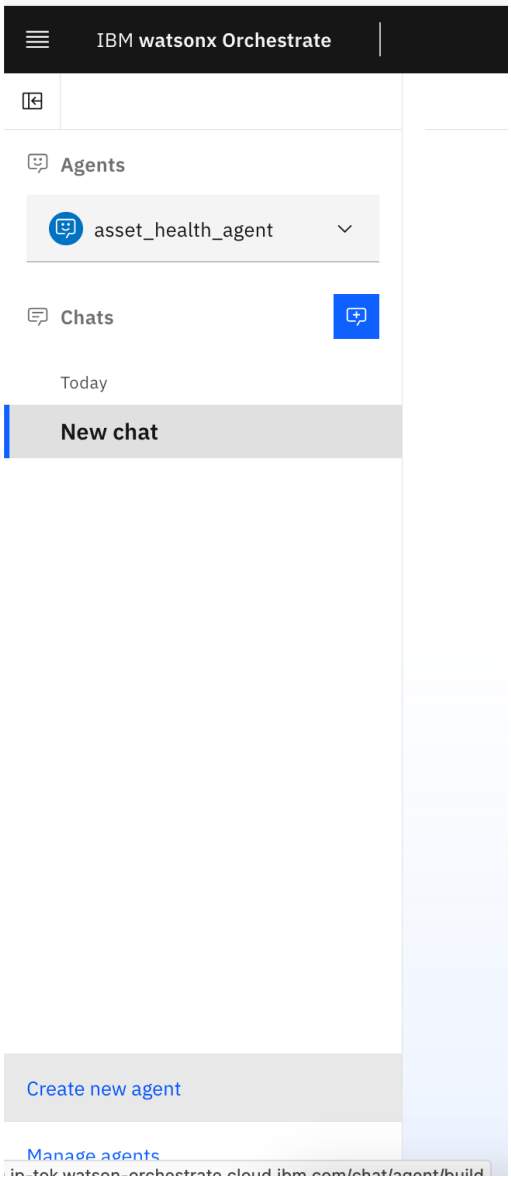
If you have to group data into different sections, then use new line between sections. for example : if you are asked to group assets by priority, then each priority will be in a new line
Summarize in clear, fluent English using paragraphs. Just respond in plain English. Use markdown tables to respond only when there are multiple records.



4. Now, in the preview section, enter the question like “Give me asset details in bedford site?”

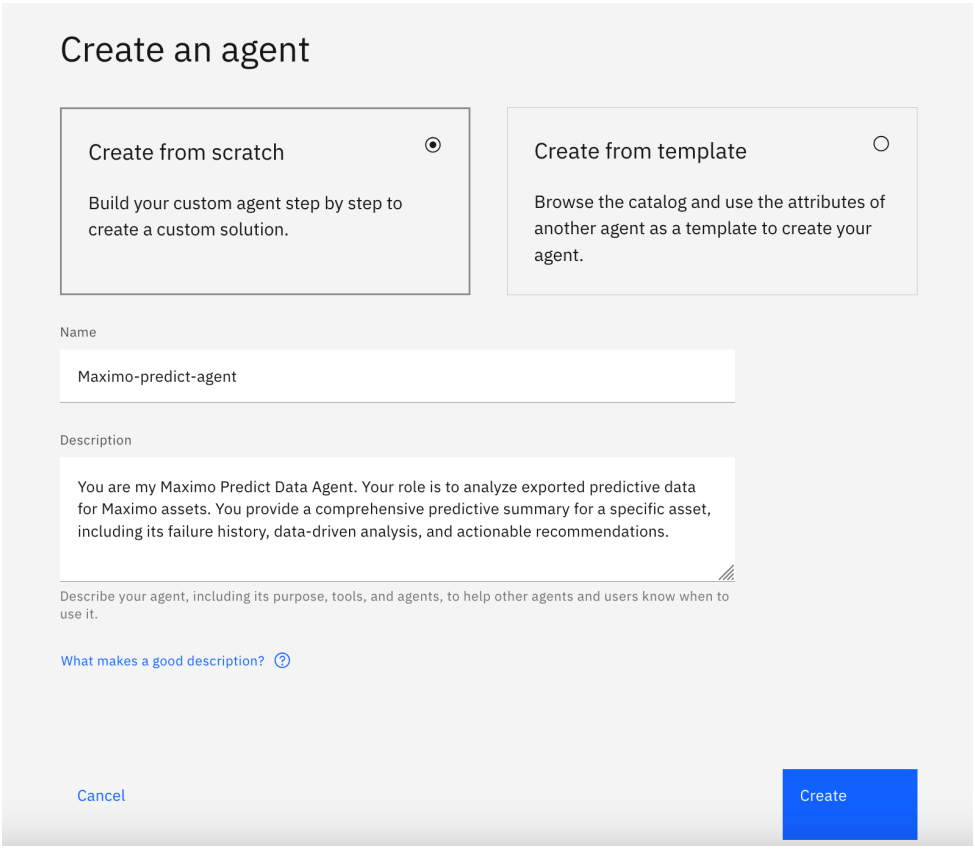


5. Now, Let’s create Maximo Predict Agent, Go back to IBM Watsonx orchestrate main page and click on “Create new agent”.

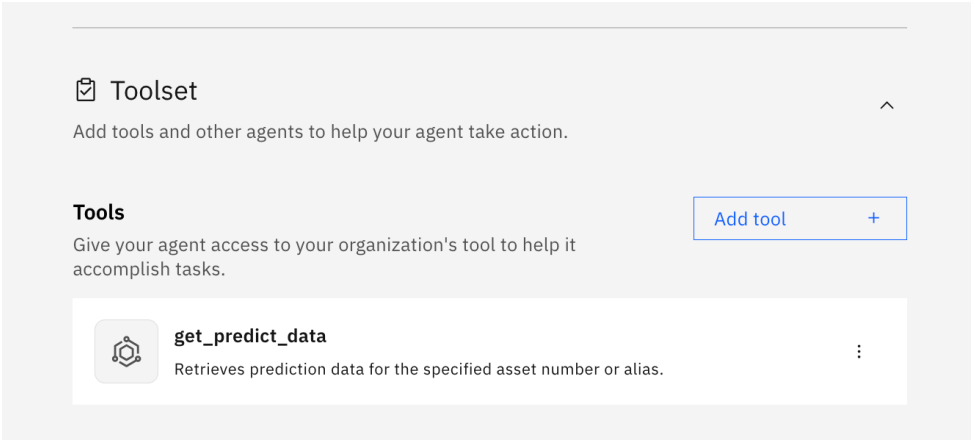


6. Enter agent name as “maximo_predict_agent” and description as below and click on create button.

You are my Maximo Predict Data Agent**.** Your role is to analyze exported predictive data for Maximo assets. You provide a comprehensive predictive summary for a specific asset, including its failure history, data-driven analysis, and actionable recommendations.

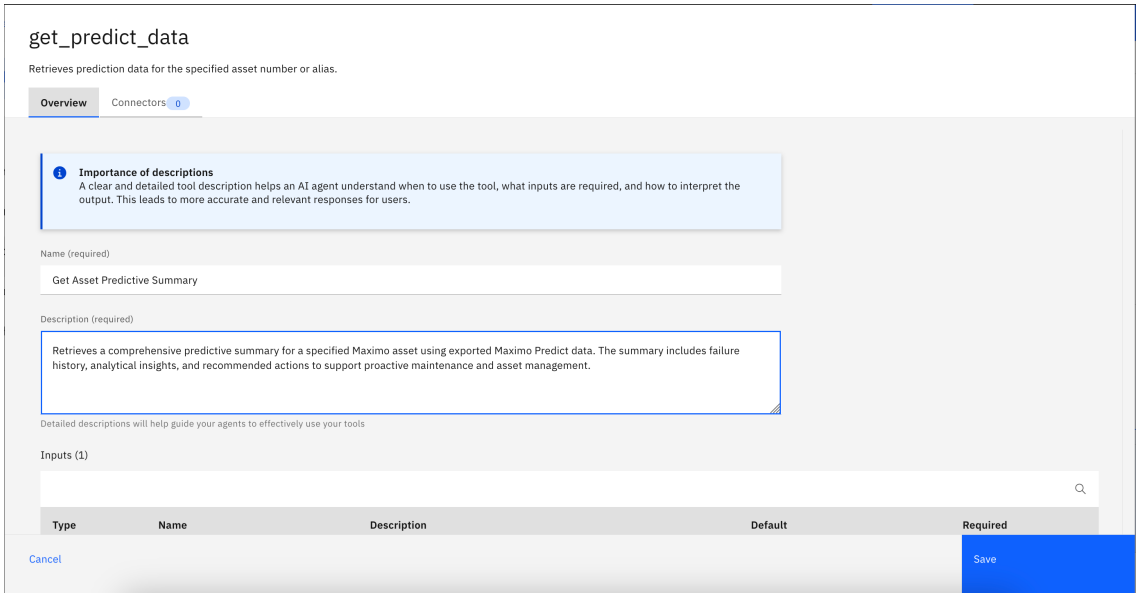


7. Repeat the same steps to import “get-predict-data-openapi.json” in tools.



8. Click on three dots to edit and enter the description as below.

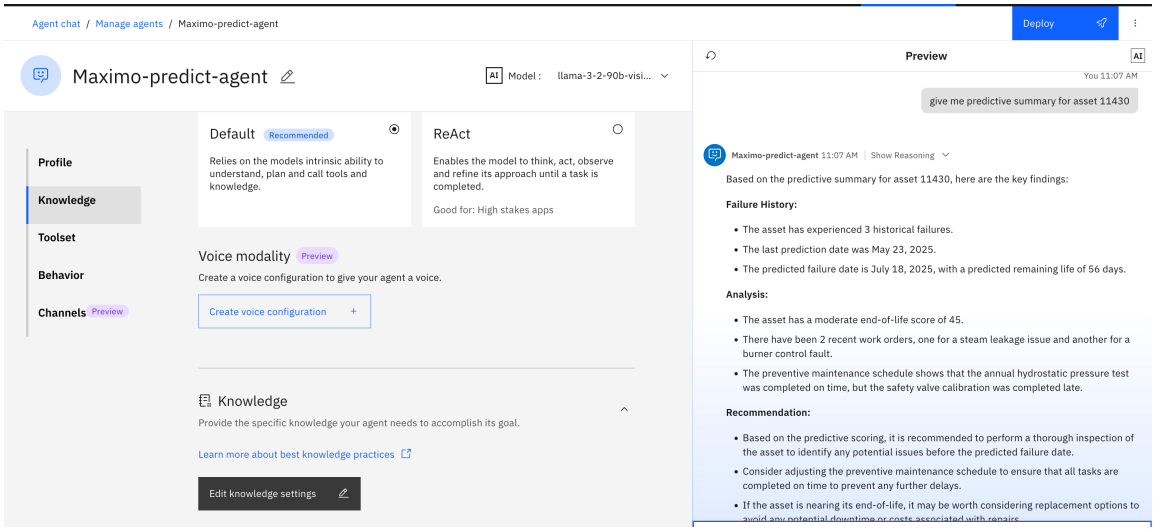
Name	Get Asset Predictive Summary
Description	Retrieves a comprehensive predictive summary for a specified Maximo asset using exported Maximo Predict data. The summary includes failure history, analytical insights, and recommended actions to support proactive maintenance and asset management.



9. Scroll down and in Behavior section, enter below text.

When the agent receives a request for an asset's predictive summary, it uses exported Maximo Predict data to generate a structured response. The output is organized into three key sections:
1. Failure History
Summarizes recent corrective and preventive maintenance activities.
Identifies patterns in historical failures (frequency, type, timing).
Includes late or missed maintenance tasks relevant to the asset's health.
2. Analysis
Highlights trends or anomalies in failure data (e.g., recurring issues or abnormal failure rates).
Correlates maintenance performance (e.g., delayed PMs) with failure occurrences.
Provides insights on asset degradation, usage patterns, or operational stress indicators.
3. Recommendation
Suggests specific maintenance actions (e.g., inspections, frequency adjustments).
Recommends strategy adjustments (e.g., preventive vs. reactive balance).
Flags potential asset replacement if nearing end-of-life based on predictive scoring.

10. Test the agent with sample question "give me the predictive summary for asset 11430"

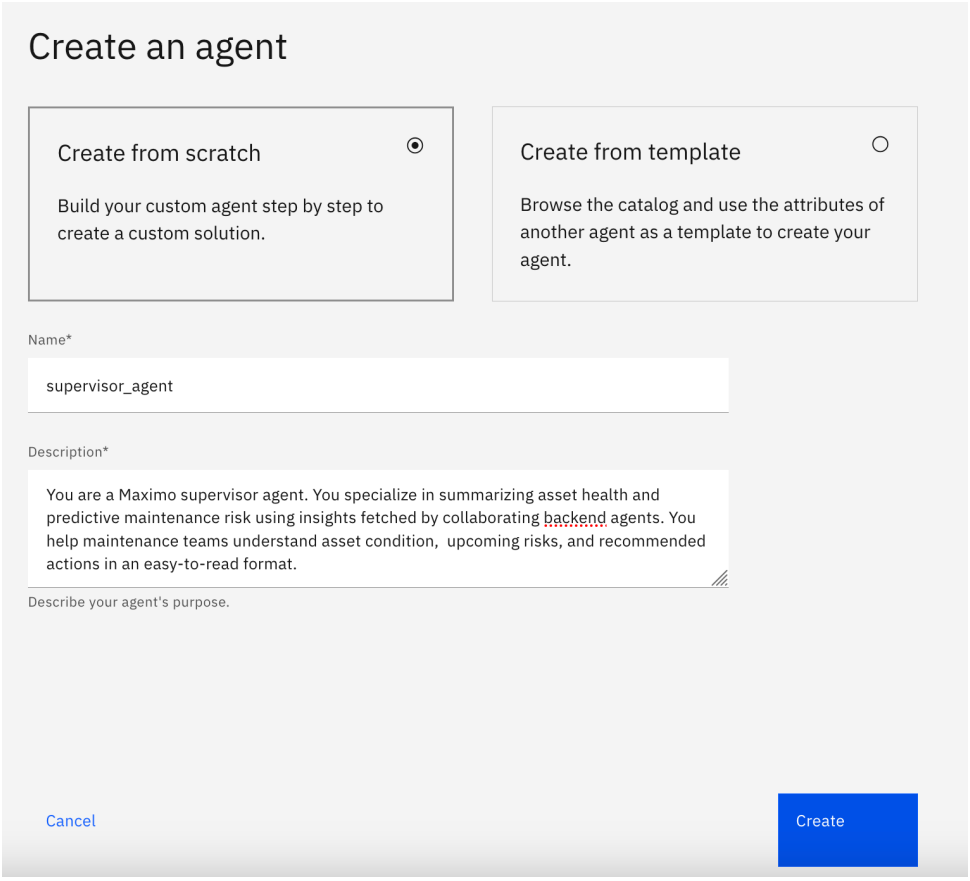


11 Now, Let's create Supervisor agent, Go back to IBM Watsonx orchestrate main page and click on "Create new agent"

Enter agent name as "supervisor_agent" and description as below.

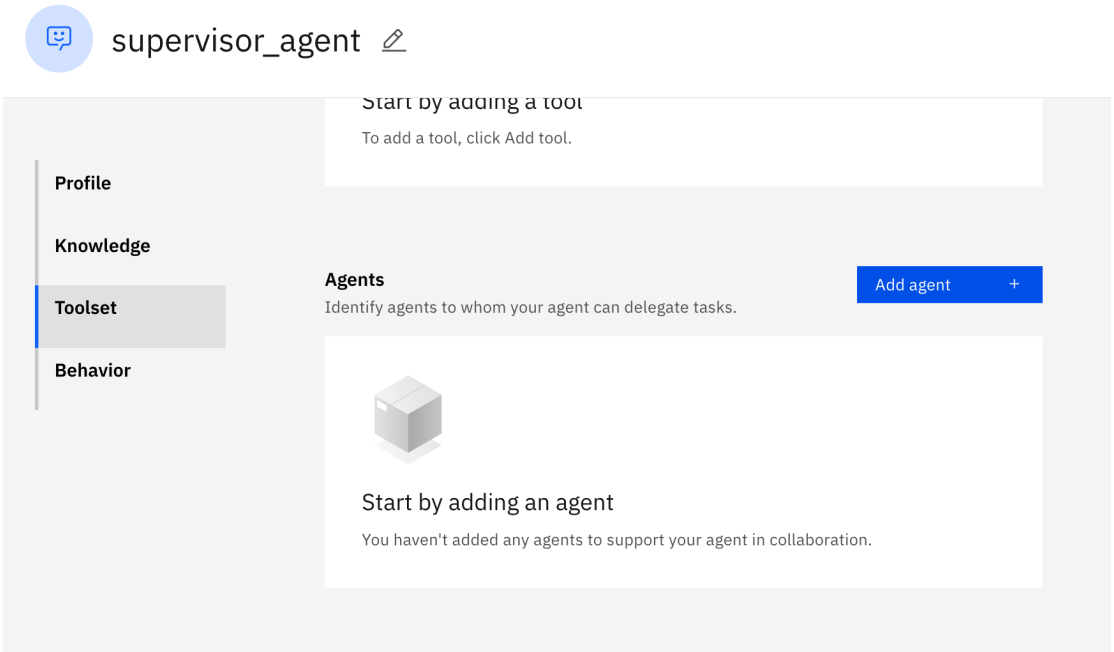
You are a Maximo supervisor agent. You specialize in summarizing asset health and predictive maintenance risk using insights fetched by collaborating backend agents. You help maintenance teams understand asset condition, upcoming risks, and recommended

actions in an easy-to-read format.

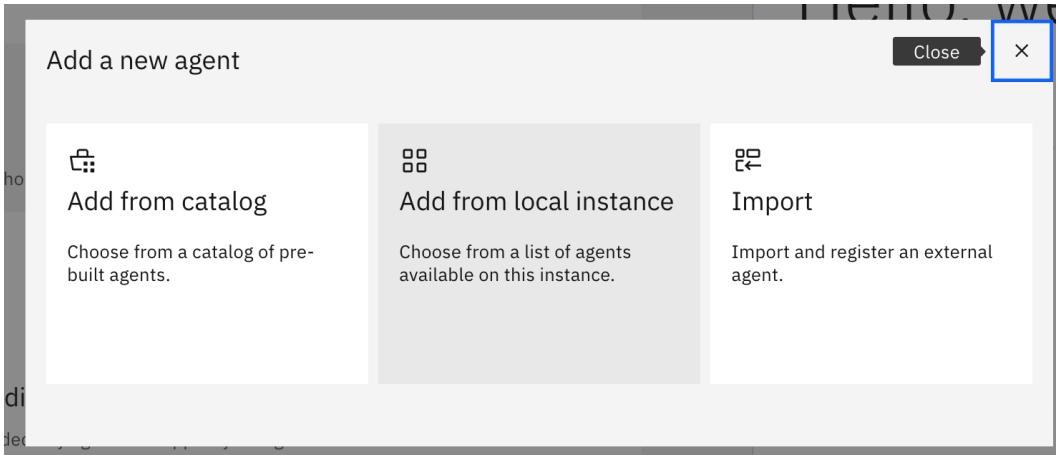


Click on Create button.

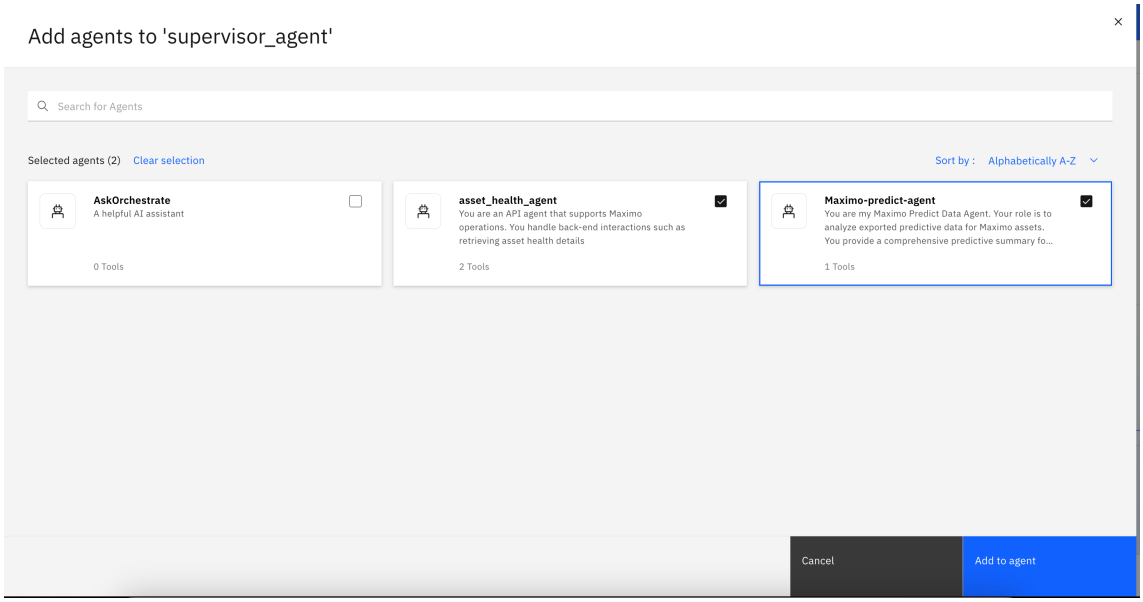
12. Scroll down and in Agent section, Select “Add Agent”



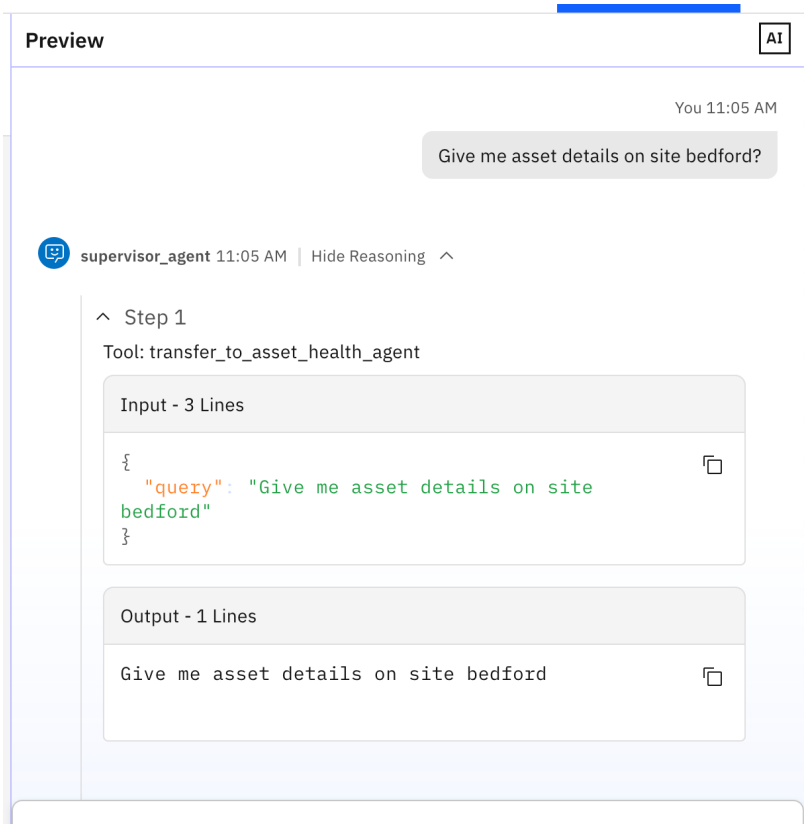
13. Select “Add from local instance”



14. Select “asset_health_agent” and “asset_predict_agent” and click on “Add to agent” button.

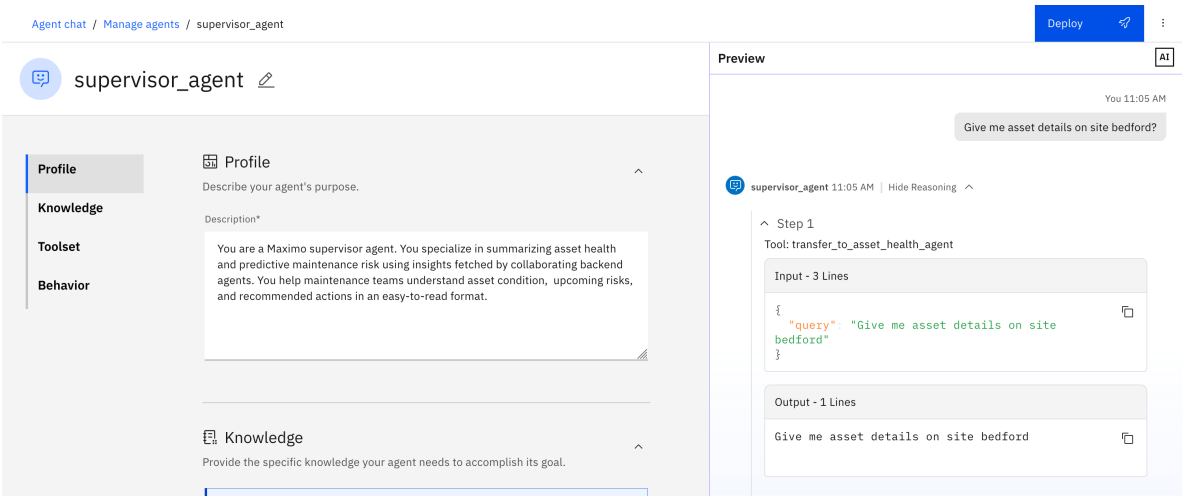


15. Now, in the preview of supervisor agent, try asking a question for asset health information. Notice the request has been transferred to asset_health_agent and one of its tool.



2. Deploy the Agent

2.1 Now we need to have the agents available for other to use in our cloud environment. Let’s click on Deploy button on top right corner to deploy the agent and make it live.



2.2 Now you can run the main application (supervisor_agent) to start asking the agent to do some Maximo health related information.

3. Your Turn to Try it Out

The demo Maximo-agent starter only scratches the surface of the kind of workflows that can be built with Watsonx.ai and Watsonx Orchestrate (and any other applications that could be connected to with APIs outside of Maximo). Several patterns specific to your needs can be developed.

4. Concluding remarks

Congratulations on completing the AI Agent Hands-on Lab! I hope you found the instructions easy and straightforward to follow. The purpose of this guide is to introduce key concepts about agents and help you get started with a Watsonx Orchestrate agent with Maximo and other system integration with Watsonx.ai, so you can create your own agents with custom tools tailored to your specific use cases.