

CHATBOT DEPLOYMENT WITH IBM CLOUD WATSON ASSISTANT

DEVELOPMENT PART 1:

In IBM Watson Assistant, which is a cloud-based conversational AI platform, entities, intents, and dialogs are key components used to build and train chatbots or virtual assistants. Here's a brief explanation of each:

Entities:

- In Watson Assistant, an entity represents a specific piece of information within user input. It is used to extract relevant data from user messages. Entities can be things like dates, numbers, product names, or any other data you want to capture. You define entities to help the assistant understand and process user queries more effectively.
- For example, if you're building a chatbot for a restaurant, you might define an entity named "cuisine" to extract the type of cuisine the user is interested in (e.g., Italian, Chinese, Mexican).

Intents:

- An intent is the purpose or goal expressed in a user's message. It represents what the user is trying to achieve or communicate. Intents are essential for routing user requests to the appropriate responses or actions. You define intents to help the assistant recognize and categorize user input accurately.
- For instance, in a virtual assistant for a bank, you might define intents like "Check Account Balance," "Transfer Funds," or "Report Lost Card" to identify the user's intentions.

Dialogs:

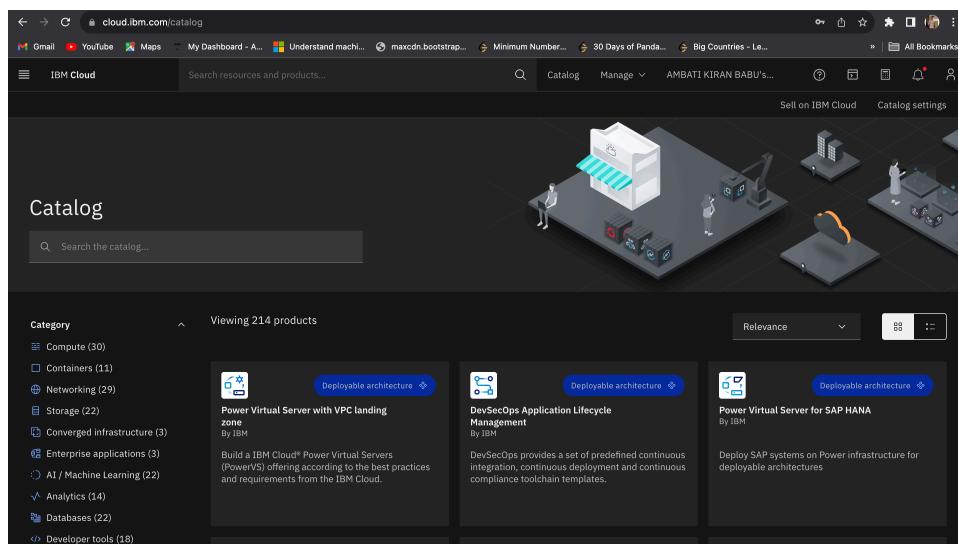
- Dialogs in Watson Assistant are used to structure the conversation flow between the user and the chatbot. You create dialog nodes to define how the assistant should respond to

user input based on detected intents and entities. Dialogs help in creating dynamic and context-aware interactions.

- Within a dialog node, you can define responses, conditions, and actions to take. You can also incorporate variables to store and retrieve information throughout the conversation, enabling personalized interactions.
- The typical workflow in Watson Assistant involves defining entities and intents, building dialog nodes to handle different conversation paths, and training the assistant using historical data or sample conversations. This training helps the assistant understand user input better, recognize intents and entities accurately, and respond appropriately.
- Entities, intents, and dialogs work together to enable natural and context-aware conversations between users and your chatbot or virtual assistant built with IBM Watson Assistant. By correctly defining and configuring these components, you can create effective and intelligent conversational interfaces.
- Now we are going to create the chatbot for that we will do the primary steps now.

STEP1:

- Login To The IBM account and click on the Catalog and then search for Watson Assistant and give enter.



- You will get the Watson Assistant There By default you will have this

Watson Assistant

Watson Assistant lets you build conversational interfaces into any application, device, or channel.

Create **About**

Type: Service
Provider: IBM
Last updated: 10/04/2023
Category: AI / Machine Learning
Compliance: EU Supported, HIPAA Enabled, IAM-enabled
Location: Sydney, Frankfurt, London, Tokyo, Washington DC, Dallas

Select a location: Sydney (au-syd)

Select a pricing plan:
Displayed prices do not include tax. Monthly prices shown are for country or location: United States

Plan	Features and capabilities	Pricing
Lite	Everything you need to get started, free for as long as you need it Up to 1,000 unique monthly active users (MAUs) chatting with your assistant Up to 10,000 messages per month --- Features --- - World-class conversational AI with Watson - Make your website assistant your own with Webchat - deploy Webchat in minutes, or use our fully extensible architecture - Bootstrap your assistant by using some of our prebuilt content	Free

I have read and agree to the following license agreements:
[Terms](#)

Create

Step 2:

- Change the default location and give the location as London(eu-gb) and select the plan as Lite

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Provider: IBM
Last updated: 10/04/2023
Category: AI / Machine Learning
Compliance: EU Supported, HIPAA Enabled, IAM-enabled
Location: Sydney, Frankfurt, London, Tokyo, Washington DC, Dallas

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Plan	Features and capabilities	Pricing
Lite	Everything you need to get started, free for as long as you need it Up to 1,000 unique monthly active users (MAUs) chatting with your assistant Up to 10,000 messages per month --- Features --- - World-class conversational AI with Watson - Make your website assistant your own with Webchat - deploy Webchat in minutes, or use our fully extensible architecture - Bootstrap your assistant by using some of our prebuilt content	Free

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Create

- Give tick mark for I Have read and agree to the following license agreement
- Now click on create it will create an instance for you

The screenshot shows the IBM Cloud Catalog interface. On the left, there's a sidebar with service details: Type: Service, Provider: IBM, Last updated: 10/04/2023, Category: AI / Machine Learning, Compliance: EU Supported, HIPAA Enabled, IAM-enabled, and Location: Sydney, Frankfurt, London, Tokyo, Washington DC, Dallas. The main area shows the 'Watson Assistant' service with a summary table. The 'Plan' column shows 'Lite' with a 'Free' price. The 'Features and capabilities' section lists: 'Everything you need to get started, free for as long as you need it', 'Up to 1,000 unique monthly active users (MAUs) chatting with your assistant', 'Up to 10,000 messages per month', and 'Webchat integration'. The 'Pricing' section shows 'Free'. A checkbox for accepting license agreements is checked, and a large blue 'Create' button is at the bottom.

Step 3:

- After creating an instance for Watson Assistant you need to launch the Watson Assistant by clicking the launch the assistant

The screenshot shows the Watson Assistant instance management page. It displays the instance name 'Watson Assistant-3t' and its status as 'Active'. There are tabs for 'Manage', 'Service credentials', 'Plan', and 'Connections'. Under 'Manage', there's a 'Start by launching the tool' section with a 'Launch Watson Assistant' button (highlighted in blue), a 'Getting started tutorial' link, and an 'API reference' link. The 'Plan' section shows 'Lite' and a 'Upgrade' button. The 'Connections' section contains a 'Credentials' table with columns for 'API key' and 'URL', both of which have been redacted. A 'Download' button and a 'Show credentials' link are also present.

Step 4:

- It will give the access to create the assistant give the name for the Assistant and give the description for that assistant it's completely optional click on create and save it.
- Here I have been created WhatsApp BOT as my chat bot assistant name .

The screenshot shows the 'Create your first assistant' page. At the top, there's a navigation bar with links like 'Gmail', 'YouTube', 'Maps', 'My Dashboard - A...', 'Understand machine...', 'maxcdn.bootstrap...', 'Minimum Number...', '30 Days of Panda...', 'Big Countries - Le...', 'All Bookmarks', 'Learning resources', and a help icon. Below the navigation is a header with 'IBM watsonx Assistant Lite' and 'Upgrade' buttons. The main content area has tabs for 'Create', 'Personalize', 'Customize', and 'Preview'. A sub-header says 'Create your first assistant' with a 'Next' button. The form fields include 'Assistant name' (set to 'WhatsApp Bot'), 'Description (optional)' (with a placeholder 'Add a description for this assistant' and a character count of 0/128), and 'Assistant language' (set to 'English (US)'). There's also a note: 'Your assistant name will be kept internally and not visible to your customers'.

- Now scroll down and then activate the dialog

The screenshot shows the 'Assistant settings' page. At the top, it lists the assistant's name: 'WhatsApp Bot'. Below that is a 'View details' button. The main content area is divided into sections: 'Download/Upload' (with a 'Download/Upload files' button and a 'Enable multilingual download' link), 'Dialog' (with a 'Deactivate dialog' button), and 'Delete this assistant' (with a 'Delete assistant' button). A note at the bottom of the 'Delete' section states: 'This action can't be undone. Any integrations that are configured for the assistant will also be deleted.'

Step 5:

- After activating the Dialog, you will get the Intents, Entities, Dialog, and Content catalog like shown below

The screenshot shows the IBM Watson Assistant Lite interface. The left sidebar has a tree view with 'Intents' selected. Under 'Intents', there are 'Entities' (with 'My Entities' and 'System Entities' options), 'Dialog' (with 'Webhooks'), 'Options' (with 'Disambiguation', 'Autocorrection', 'Algorithm Version', and 'Upload / Download'), and 'Content Catalog'. A central panel titled 'What is an intent?' defines it as a collection of user statements with the same meaning. It includes a link to 'Browse content catalog' and buttons for 'Create intent' and 'Upload intents'.

Step 6:

- Create the Entities first and some variables for the entities you have been created.
- Here I have been created the Entity with the name Entertainment and added variables as channels and star with some variable value.

The screenshot shows the creation of an entity named '@wishing'. The 'Entity name' field contains '@wishing'. Below it, a note says 'Name your entity to match the category of values that it will detect.' A 'Value' input field contains 'Type a value'. To its right are 'Synonyms' and 'Annotations' sections. A 'Dictionary (4)' tab is selected, showing four entries: 'Good Afternoon', 'Good Evening', 'Good Morning', and 'Hello !'. Each entry has a checkbox labeled 'Values (4) ↑' and a 'Type' column. The 'Good Afternoon' entry has 'Synonyms' listed as 'Happy Afternoon, Afternoon'. The 'Good Evening' entry has 'Synonyms' listed as 'Happy Evening, Evening'. The 'Good Morning' entry has 'Synonyms' listed as 'Morning, Happy Morning'. The 'Hello !' entry has 'Synonyms' listed as 'Hi, Good to see you, Hello there :,), Hi there !'. A 'Fuzzy matching' toggle switch is set to 'On'.

Step 7:

- Open the Intents and then create the Intents for Messages, Services, AboutMe give some example queries for them

The screenshot shows the IBM Watson Assistant interface. The URL is <https://eu-gb.assistant.watson.cloud.ibm.com/crn%3Av1%3Abluemix%3Apublic%3Aconversation%3Aeu-gb%3Aa%2F09f56dfc8f8a479ca93e232e0b847541%3Ac2c6a0...>. The page title is "IBM Watson Assistant Lite". The main heading is "#Messages". Below it, there's a text input field for "Intent name" containing "# Messages". A placeholder text "Name your intent to match a customer's question or goal" is visible. There's also a "Description (optional)" field with the placeholder "Add a description to this intent". Under "User example", there's a text input field with the placeholder "Type a user example here" and a note "Add unique examples of what the user might say. (Pro tip: Add at least 5 unique examples to help Watson understand)". A "Add example" button is present. The status bar at the bottom says "No examples yet." and "Train your virtual assistant with this intent by adding unique examples of what your users would say."

The screenshot shows the IBM Watson Assistant interface. The URL is <https://eu-gb.assistant.watson.cloud.ibm.com/crn%3Av1%3Abluemix%3Apublic%3Aconversation%3Aeu-gb%3Aa%2F09f56dfc8f8a479ca93e232e0b847541%3Ac2c6a0...>. The page title is "IBM Watson Assistant Lite". The main heading is "#Services". Below it, there's a text input field for "Intent name" containing "# Services". A placeholder text "Name your intent to match a customer's question or goal" is visible. There's also a "Description (optional)" field with the placeholder "Add a description to this intent". Under "User example", there's a text input field with the placeholder "Type a user example here" and a note "Add unique examples of what the user might say. (Pro tip: Add at least 5 unique examples to help Watson understand)". A "Add example" button is present. The status bar at the bottom shows a list of user examples: "User examples (6) ↑", "How can I create new account ?" (added a few seconds ago), "How can I reset my password ?" (added a few seconds ago), and "How do I contact customer service ?" (added a few seconds ago). There's also a "Annotate entities" toggle switch and a "What's this?" link.

The screenshot shows the IBM Watson Assistant Lite interface. On the left, there's a sidebar with options like Entities, Dialog, Options, and Content Catalog. The 'Dialog' section is selected. In the main area, there's a table titled 'Intents' with columns for Intent ID, Description, Modified, and Examples. Two intents are listed: '#AboutMe' and '#Services'. To the right, there's a 'Try it out' window showing a conversation between a user and a bot. The user says 'hi', the bot responds with '#AboutMe'. The user then says '@wishing:Hello!', and the bot replies with 'Hello, I am a Friendly WhatsApp bot . How can I help you ?'. The user asks 'what do u do ?' and the bot replies with '#AboutMe'. Finally, the user asks 'How do I login ?' and the bot replies with '#Services'. A note at the bottom of the 'Try it out' window says 'Use the up key for most recent'.

Step 8:

- Next open the Dialog and then add nodes for all the Intents you have created where we need to give the responses for the selected queries.
- Whereby default we will have Anything else node.

The screenshot shows the 'Dialog' configuration screen in the IBM Watson Assistant Lite interface. On the left, there's a sidebar with Entity, System Entities, and Dialog selected. The main area shows a tree view of dialog nodes. One node is expanded, showing '#AboutMe' and 'anything_else' under 'If assistant recognizes'. Under 'Assistant responds', there's a text input field with the placeholder 'Text' and a response message: 'I could help you with WhatsApp features and chat like your friend ?'. Below that is an 'Enter response variation' field and a note about response variations. At the bottom, there's a 'Learn more' link and a 'Add response type' button.

Step 9:

- Check the chat bot by clicking the try it before connecting the Facebook Messenger.

eu-gb.assistant.watson.cloud.ibm.com/crn%3Av1%3Abliuemix%3Apublic%3Aconversation%3Aeu-gb%3Aa%2F09f56dfc8f8a479ca93e232e0b847541%3Ac2c6a... star Bookmark

Gmail YouTube Maps My Dashboard - A... Understand machine... maxcdn.bootstrap... Minimum Number... 30 Days of Pand... Big Countries - Le... All Bookmarks

IBM Watsonx Assistant Lite Upgrade WhatsApp Bot Learning resources ? Logout

Dialog

Intents

Add node Add child node Add folder

Entities My Entities System Entities Dialog Options Webhooks Disambiguation Autocorrection Algorithm Version Upload / Download Content Catalog

#AboutMe #AboutMe
1 Responses / 0 Context Set / Does not return

anything_else anything_else
1 Responses / 0 Context Set / Does not return

Services #Services
1 Responses / 0 Context Set / Does not return

Try it out Clear Manage context (1)

Services

If assistant recognizes

#Services +

Assistant responds

Text
I could help you with WhatsApp!

Enter response variation

Response variations are set to sequence Learn more

I didn't understand. You can try rephrasing

Add response type + Use the up key for most recent

```
graph TD; subgraph Dialog [Dialog]; direction TB; subgraph Node1 ["#AboutMe"]; #AboutMe1["#AboutMe  
#AboutMe"]; end; subgraph Node2 ["anything_else"]; anythingElse1["anything_else  
anything_else"]; end; subgraph Node3 ["Services"]; Services1["Services  
#Services"]; end; end;
```

hi

#AboutMe

@wishing:Hello

Hello, I am a Friendly WhatsApp bot . How can I help you ?

what do u do ?

#AboutMe

Hello, I am a Friendly WhatsApp bot . How can I help you ?

How do I login ?

#Services

I didn't understand. You can try rephrasing