

Environment Setup Instructions

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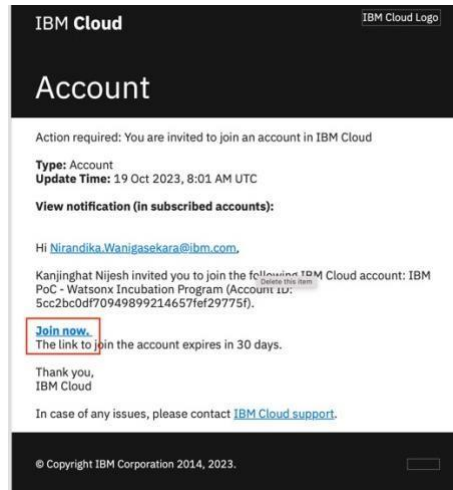
2 Introduction

Complete the steps in this guide to ensure your desktop environment has all the required tools/libraries installed and ensure you have the necessary IBM Cloud access.

3 Steps to Complete

3.1 Accept the IBM Cloud Invitation

Accept the invitation from the IBM Cloud. Example below:



3.2 Obtain your IBM Cloud API key

You will need your IBM Cloud API key for this lab. If you have an existing API key please use it or follow [these instructions](#) to generate a new one in the [IBM cloud](#). You will need this API key for next steps.

3.3 Connect to your watsonx.ai instance.

Ensure that you can log into to [watsonx.ai](#).

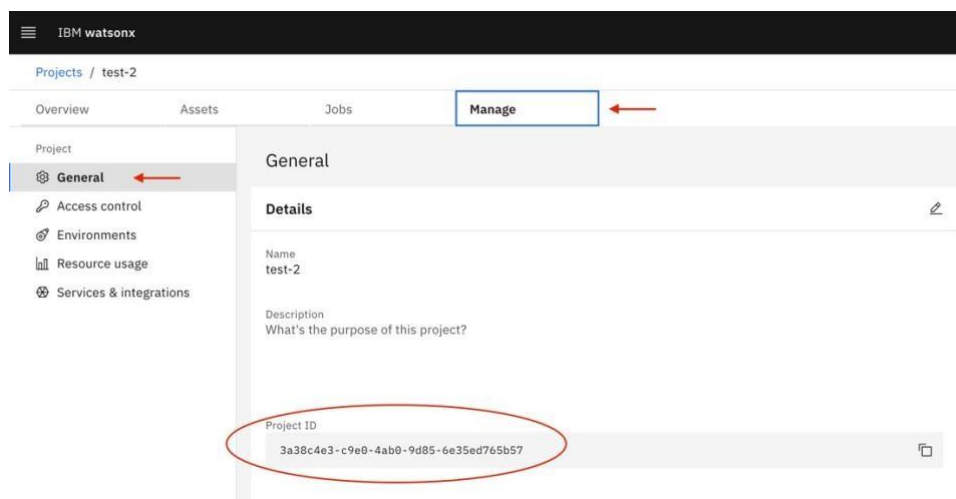
3.4 Locate the Watsonx.ai Project Id.

Ensure you are logged into to [watsonx.ai](#).

Select the project under your organization name.

Select the "Manage" tab from your Project's main page.

You will see your Project ID under the "General" tab as shown below.



3.5 Associate your project with a WML instance (optional)

A watsonx.ai project must always be associated with an instance of Watson Machine Learning (WML) before you can use the Prompt Lab or interact with the WML Python SDK.

As you are in an instructor-led workshop and the project was created for you, then no further action is required (i.e., an instance of WML should already be associated with the project)

If the WML instance is not associated for some reason complete the following steps :

1. Within your newly created watsonx.ai project, click the Manage tab
2. Select Services & integrations from the side navigation menu
3. Select the IBM Services tab
4. Select Associate service +
5. Choose a WML instance and select Associate

The first screenshot shows the 'Services & integrations' page in the IBM watsonx.ai interface. The left sidebar has 'Services & integrations' selected, marked with a red arrow and 'Step 2'. The main area has 'IBM services' selected, marked with a red arrow and 'Step 3'. A red arrow and 'Step 4' points to the 'Associate service +' button. The main area displays 'No services' with a message: 'Click Associate service or ask a project Admin to associate one.'

The second screenshot shows the 'Associate service' dialog. It prompts the user to 'Choose an existing or add a new service to associate with your project.' Below this, there are filters for 'Resource Groups' and 'Locations'. A search bar 'Find services' is present. A table lists available services:

Name	Type	Plan	Location	Status	Group
<input type="checkbox"/> itzcos-5500059vkt-1kq4r3o8	Cloud Object Storage	Standard	Global	Not associated	watsonx-1kq4r3o8
<input type="checkbox"/> itzws-5500059vkt-1kq4r3o8	Watson Studio	Professional	Dallas	Not associated	watsonx-1kq4r3o8
<input checked="" type="checkbox"/> itzml-5500059vkt-1kq4r3o8	Watson Machine Learning	v2 Standard	Dallas	Not associated	watsonx-1kq4r3o8

A red arrow and 'Step 5' points to the checked checkbox for the Watson Machine Learning instance. At the bottom right, there are 'Cancel' and 'Associate' buttons.

3.6 Clone the workshop Git repo

If you're a Github pro then you can directly clone this [watsonx.ai workshop repo](#).

Otherwise, we recommend downloading and installing the [Github Desktop](#) and then [cloning this watsonx.ai workshop repo](#). Here are instructions on [how to clone a repository using Github Desktop](#).

3.7 Install/Update (optional – only for Mac Users)

Xcode is a collection of developer tools that we will need in this. Access the App Store and search for "xcode." Click the "Get" button or the Cloud icon to install the latest version.



3.8 Install Visual Studio Code (VS Code)

We recommend installing VS Code for this workshop so we are on a common platform for this workshop.

3.9 Update credentials in .env file

Python provides support for .env files through a library called dotenv that we will use in this workshop to pass the credentials.

Create a new file in lab 0, and name the file ".env". If you have created the file, but are having trouble viewing it, [learn how to view hidden files on a Mac](#) or [how to view hidden files on Windows](#).

Open the .env file, add the following content:

```
API_KEY=<your-ibm-cloud-api-key>
IBM_CLOUD_URL=https://us-south.ml.cloud.ibm.com
PROJECT_ID=<your-project-id>
```

Use the IBM_CLOUD_URL given above. The API_KEY and PROJECT_ID need to be filled in by you.

1. Add your IBM Cloud API key from Step 1.2.2 in API_KEY
2. Add your project ID from Step 1.2.4 in PROJECT_ID

Save your changes and close the file.

3.10 Create a virtual python environment and install all required libraries.

Install all the python libraries using this [requirements_venv.txt](#).

You can use your favourite python package manager and create a virtual environment called genai and install all the python using this [requirements_venv.txt](#). For windows users, it is recommended to use conda.

```
conda create --name genai python=3.11 conda activate  
genai python -m pip install -r  
requirements_venv.txt
```

Optionally, if you want to use a virtual environment using `venv`, follow the steps below.

1. Upgrade to Python v3.11 to avoid any conflicts: Minimum python version needed for our workshop is 3.11. Upgrade your python version to Python 3.11
2. Create your Python virtual environment:
 - a. Create a folder <my-folder>
 - b. Open a terminal/console window and enter the commands below to create a Python environment called `genai`.

```
cd <directory to store your Python environment>  
python -m venv genai
```

- c. Download [requirements_venv.txt](#)
- d. Move the [requirements_venv.txt](#) file to the folder <my-folder>
- e. Activate your Python virtual environment with these commands:
Mac-

```
source genai/bin/activate python -m pip  
install -r requirements_venv.txt
```

Windows-

```
.\genai\bin\activate  
python -m pip install -r requirements_venv.txt
```

- f. Validate that the start of the prompt line in your terminal/console window changed to genai.

```
((base)) anthonystevens@anthonys-mbp Python.venv % python -m venv genai  
((base)) anthonystevens@anthonys-mbp Python.venv % source genai/bin/activate  
(genai) (base) anthonystevens@anthonys-mbp Python.venv % █
```

3.11 Ensure you have access to all the IBM Cloud services.

Login in to ibm cloud account IBM Cloud: Ensure you can see the following services for

1. Watson Assistant
2. Watson Discovery
3. Watson Studio
4. Watson Machine Learning

IBM Cloud

cloud.ibm.com/resources

Search resources and products...

CatalogManage2719271 - IBM PoC - Watson In...

Create resource

Resource list

Name	Group	Location	Product	Status	Tags
Filter by name or IP address... Filter by group or org... Filter... Filter... Filter...					
Compute (0)					
Containers (0)					
Networking (0)					
Storage (1+)					
Converged infrastructure (0)					
Enterprise applications (0)					
AI / Machine Learning (4)					
WA-demo	Default	Dallas	Watson Assistant	Active	-
Watson Discovery-x2	Default	Dallas	Watson Discovery	Active	-
Watson Studio-ry	Default	Dallas	Watson Studio	Active	Update
wmi-watsonx-incubation	Default	Dallas	Watson Machine Learning	Active	Update
Analytics (0)					
Blockchain (0)					
Databases (0)					
Developer tools (0)					
Logging and monitoring (0)					
Migration (0)					
Integration (0+)					
Internet of Things (0)					
Security (0)					