

# Lab-1: Setup Environment

## Introduction

This lab will set up the Watson Studio environment for subsequent labs and introduce you to the Project features of Watson Studio. Watson Studio is an integrated platform of tools, services, data, and meta-data to help companies and agencies accelerate their shift to be data driven organizations. The platform enables data professionals such as data scientists, data engineers, business analysts, and application developers collaboratively work with data to build, train, deploy machine learning and deep learning models at scale to infuse AI into business to drive innovation. Watson Studio is designed to support the development and deployment of data and analytics assets for the enterprise.


## Objectives

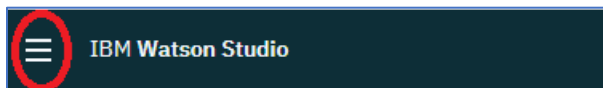
The goal of this lab is to familiarize the user with the Project features of Watson Studio, and to set up the environment for subsequent labs. Projects are a core component of Watson Studio. Projects enable you to organize your analytic and data assets in one place. Projects are also the home base for collaboration. Colleagues can be added as collaborators on a project with administrator, editor, or viewer access.

After completing this lab, you will be familiar with these features of Watson Studio.

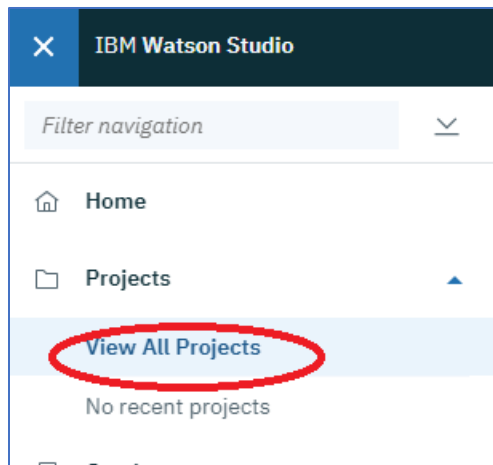
1. Create a project
2. Create an object storage instance and associate it with the project
3. Associate an existing Watson Machine Learning service instance with the project
4. Add a collaborator to the project

## Create a Project

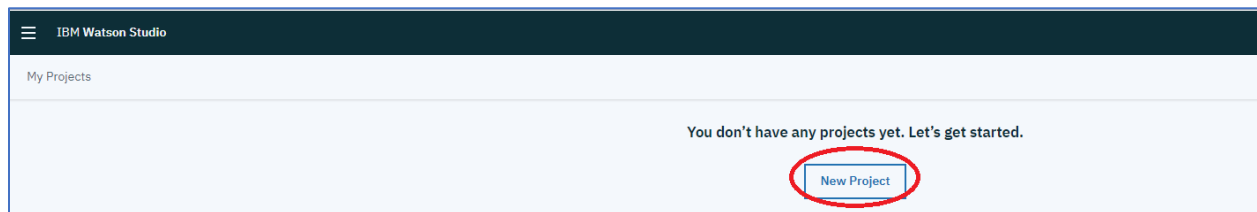
1. Log into your Watson Studio account at [datascience.ibm.com](https://datascience.ibm.com), then click on the hamburger icon .



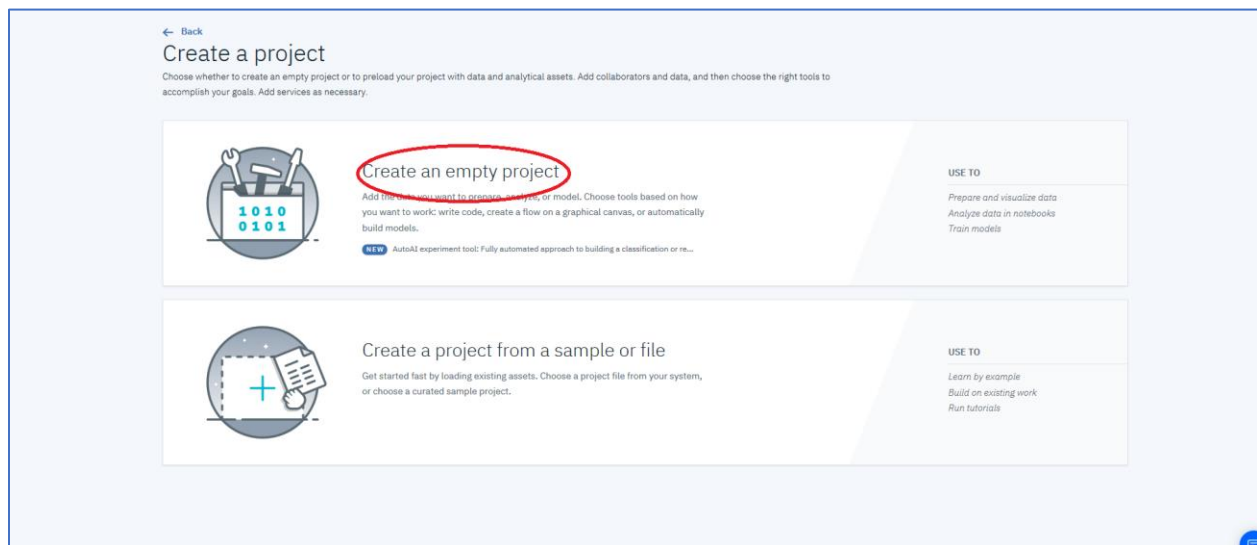
2. Click on **View All Projects**



3. Click on **New Project**.



4. Click on **Create an empty project**.



5. Enter “Watson Studio Labs” for the **Name**, optionally enter a **Description**, make sure to uncheck **Restrict who can be a collaborator** (if it's checked), and in **Define Storage** click on **Add** to add an object storage instance.

## New project

### Define project details

Name

Watson Studio Labs

Description

Project description

Choose project options

☒ Restrict who can be a collaborator

Project will include integration with [Cloud Object Storage](#) for storing project assets.

### Define storage

1 Select storage service

Add

Add an object storage instance and then return to this page and click Refresh.

2 Refresh

Cancel

Create

## 6. Click on **Lite**, and then click on **Create**

### Cloud Object Storage

IBM Cloud Object Storage is a highly scalable cloud storage service, designed for high durability, resiliency and security. Store, manage and access your data via our self-service portal and RESTful APIs. Connect applications directly to Cloud Object Storage use other IBM Cloud Services with your data.

### Features

#### Storage for the IBM Cloud

IBM Cloud Object Storage provides unstructured data storage for cloud applications. Libraries and SDKs support a common set of S3 API functions for connecting new applications to scalable cloud storage and integrating your data into other services on the IBM Watson and Cloud Platform available with Regional and Cross Region resiliency options worldwide.

#### Built-in Aspera high-speed transfer

With IBM Cloud Object Storage Aspera high-speed data transfer, you can improve data transfer performance by quickly transferring data over long distances, and under various network conditions. It is natively integrated into Cloud Object Storage and there is no additional cost for uploading data.

#### Storage Classes and Archive Policy

Choose storage classes based on your usage patterns for active, less-active, and cold workloads with Standard, Vault, and Cold Vault respectively. Use Flex class for dynamic data access with usage patterns that are hard to predict. For rarely used data that requires long-term retention, comply with an Archive policy with our existing storage-class tiers allowing you to reduce costs even further with our lowest priced Archive storage.

#### Access and Key Management

IBM Identity and Access Management (IAM) policies allow for granular access control at the bucket level using role-based policies. Key Protect support allows customers to have their own managed encryption keys for higher level data security.

### Pricing Plans

Monthly Process shown above reflect the: United States

PLAN	FEATURES	PRICING
<input checked="" type="radio"/> Lite	<b>1 COS Service Instance</b> Storage up to 25 GB/mo. Up to 20,000 GET requests/mo. Up to 2,000 PUT requests/mo. Up to Data Retrieval 10 GB/mo. Up to 50B Public Outbound Applies to aggregate total across all storage bucket classes	Free
<input type="radio"/> Standard	There is no minimum fee, so you pay only for what you use.	Expand each section to view details

Cancel

Create

## 7. Click **Confirm**.

×

Confirm Creation

Plan

Lite

Resource group

Default

Service name

cloud-object-storage-uu

Cancel

Confirm

8. Click **Refresh**.

New project

Define project details

Name

Watson Studio Labs

Description

Project description

Choose project options

☐ Restrict who can be a collaborator ⓘ

Project will include integration with Cloud Object Storage for storing project assets.

Define storage

① Select storage service

Add

Add an object storage instance and then return to this page and click Refresh.

② Refresh

9. Click **Create**.

New project

**Define project details**

**Name**

Watson Studio Labs

**Description**

Project description

**Choose project options**

☐ Restrict who can be a collaborator ⓘ

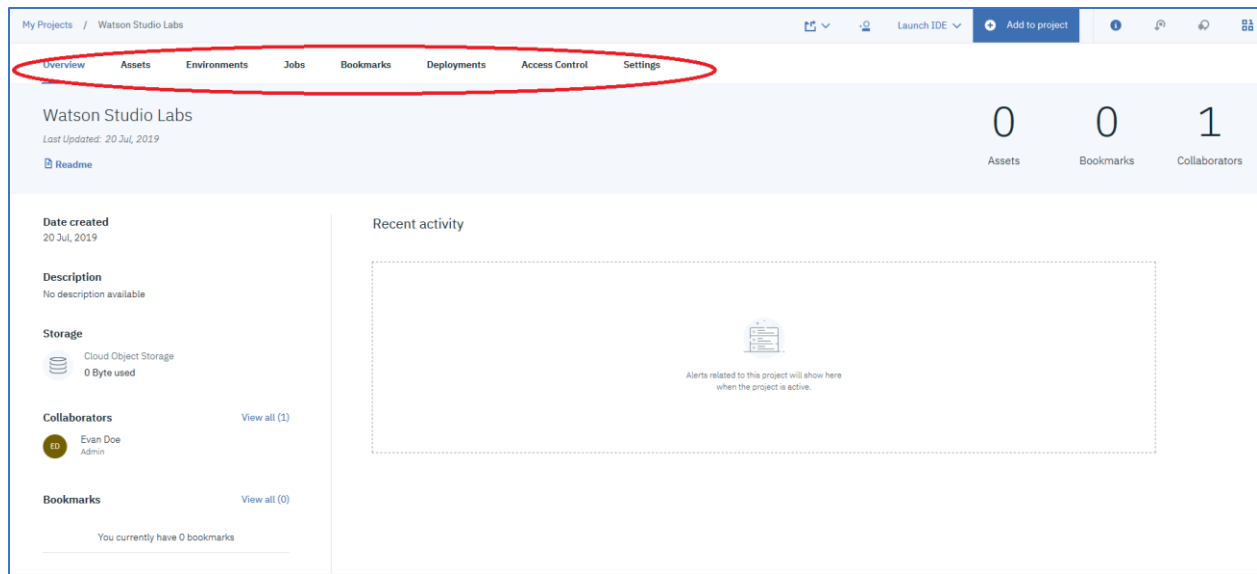
Project will include integration with Cloud Object Storage for storing project assets.

**Storage**

cloud-object-storage-ra

Cancel Create

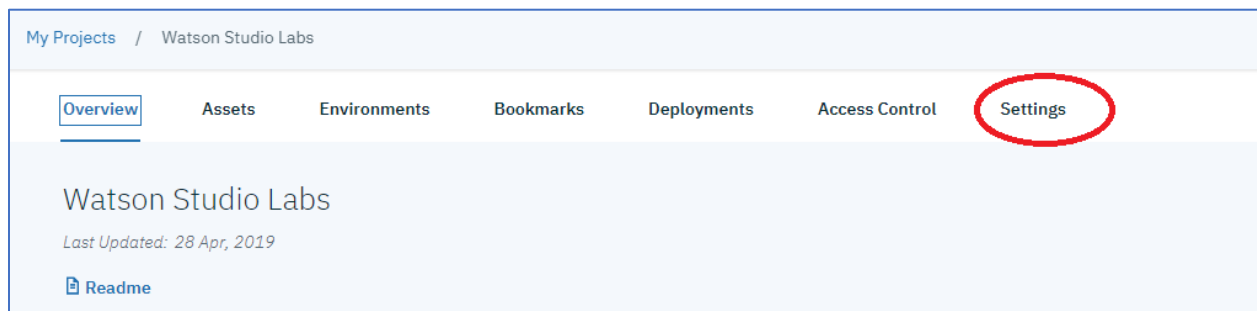
- 10.** The Project **Overview** page is shown. This page provides summarized information about the project. In addition to the Overview page, are six other pages described below.
- a. Assets Page** – Analytics and Data assets can be added to the project from this page.
  - b. Environments Page** - Provides information on the current notebook environments that are defined, lists the active notebook environments currently running, and enables users to create custom notebook environments.
  - c. Jobs Page** – Provides the interface to the job subsystem. This replaces the separate UIs to set up and run jobs for Notebooks and the Data Refinery. This is a new feature in Watson Studio.
  - d. Bookmarks Page** - Lists artifacts from the Community that are bookmarked in this project.
  - e. Deployments Page** – Lists the deployed models
  - f. Access Control** – Lists the project collaborators and enables users to add/remove collaborators.
  - g. Settings** – Enables users to view and set project attributes.



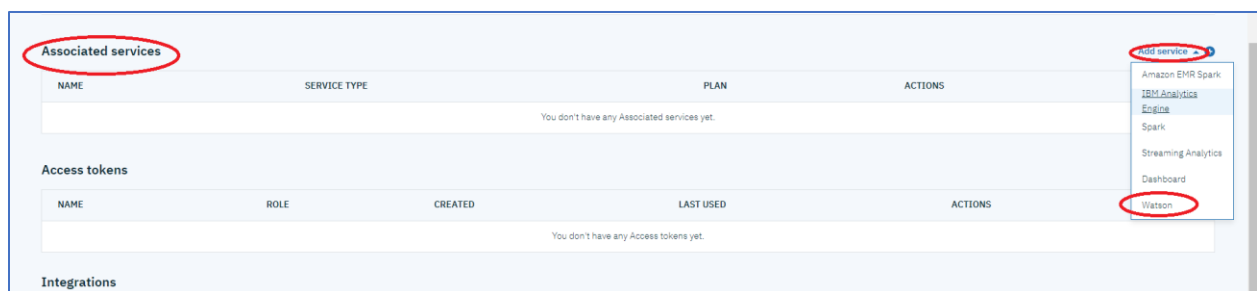
## Associate a Watson Machine Learning Service to the Project

To save and deploy machine learning models, a Watson Machine Learning service must be created (if one doesn't exist) and added to our project.

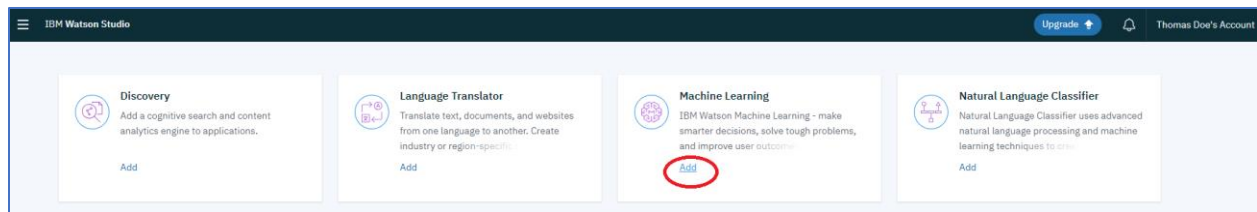
1. Click on **Settings** to navigate to the Project **Settings** page.



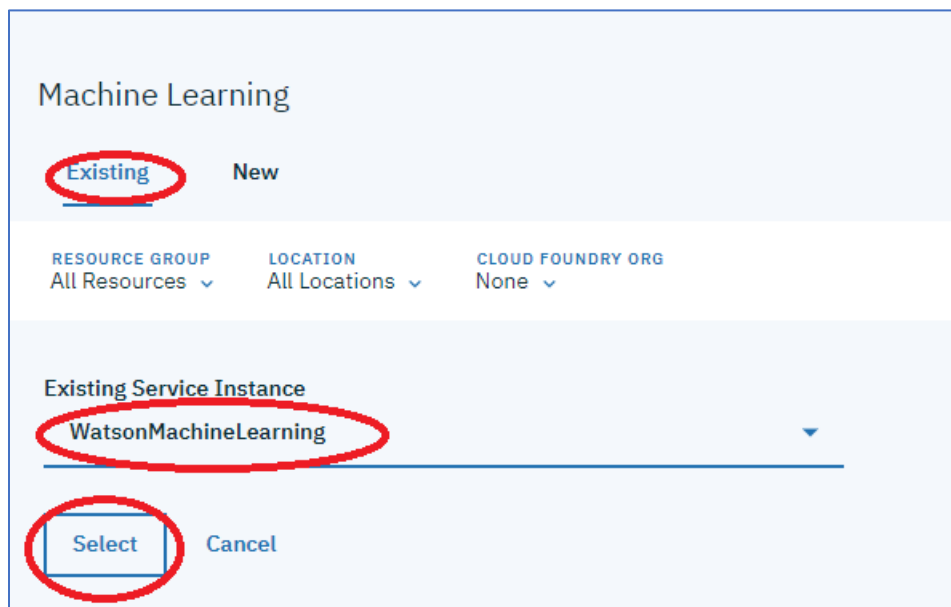
2. Scroll down to **Associated Services**, click on **Add service**, click on **Watson**.



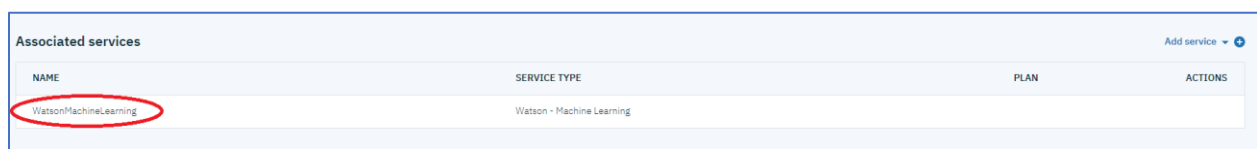
3. Click on **Add** in the **Machine Learning** tile.



4. Newer Watson Studio accounts come with the WatsonMachineLearning instance already created. Select **Existing**, select **WatsonMachineLearning** for the **Existing Service Instance**, and click on **Select**. If you don't have an existing service, click on New and follow the instructions to create a Watson Machine Learning service.



5. The **WatsonMachineLearning** service is associated with the project.

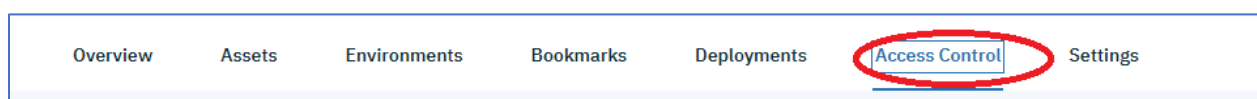


## Add a Project Collaborator

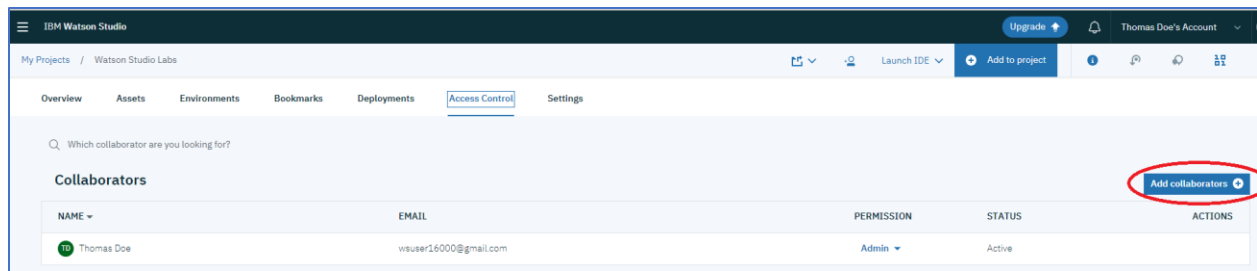
Colleagues can gain access to a project's data and analytic assets by being made a collaborator. Permissions are based on the assigned role. The roles are administrator, editor, and viewer.

We will add a collaborator with a role of **Editor**.

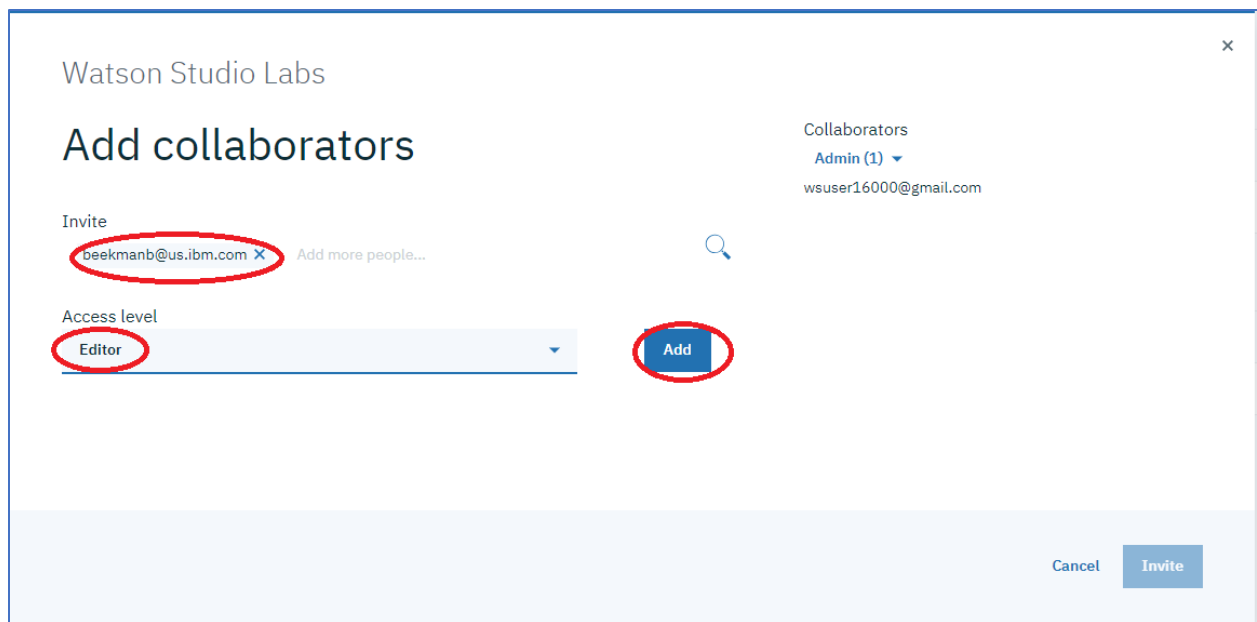
1. Click on the **Access Control** tab.



2. Click on **Add collaborators**.

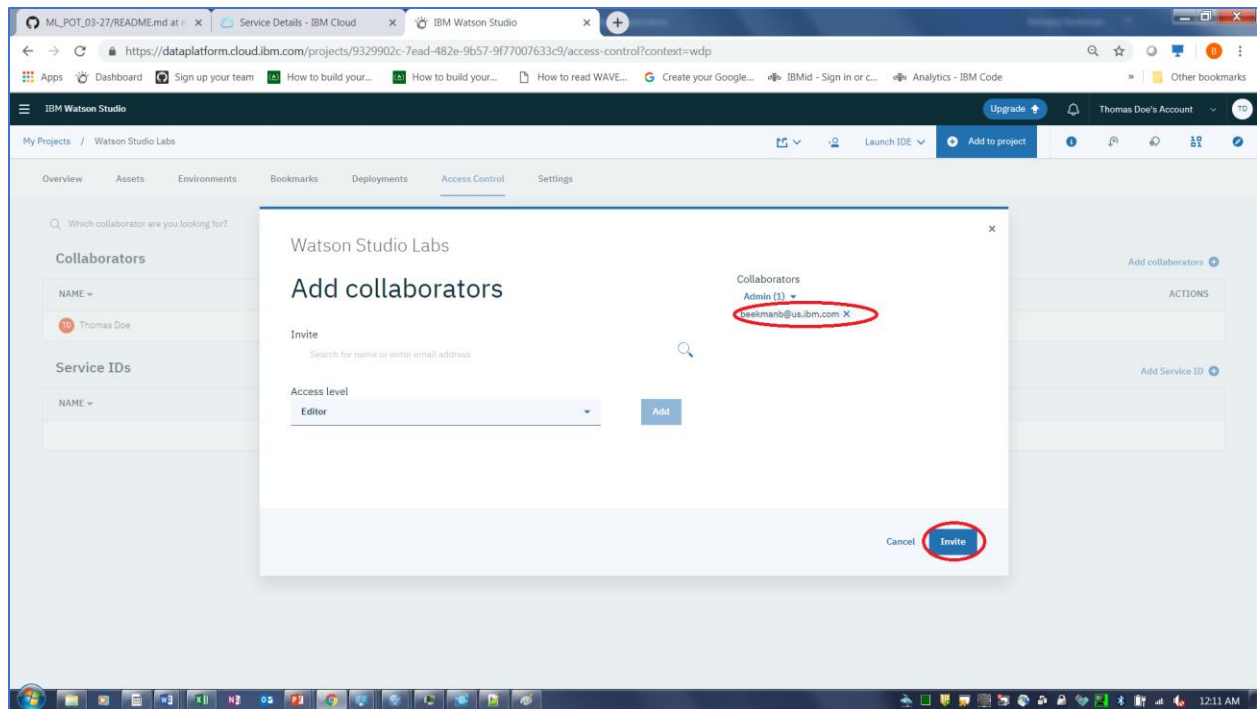


3. For **Invite**, enter [beekmanb@us.ibm.com](mailto:beekmanb@us.ibm.com), press the <Enter> key, select Editor from the **Access Level** dropdown, and click on **Add**.

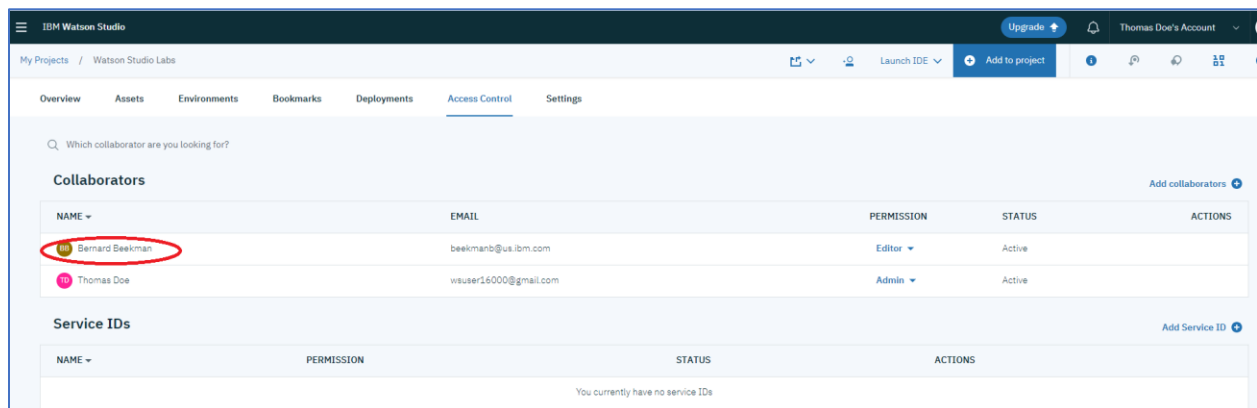


4. The collaborator is added to the list of Collaborators on the right-hand side. Click on **Invite**.





5. The collaborator is added.



## You have completed Lab-1!

- ✓ Created a project
- ✓ Created an object storage instance and associated it with the project
- ✓ Associated an existing Watson Machine Learning service instance with the project, or created a new service instance and associated it with the project.
- ✓ Added a collaborator to the project

