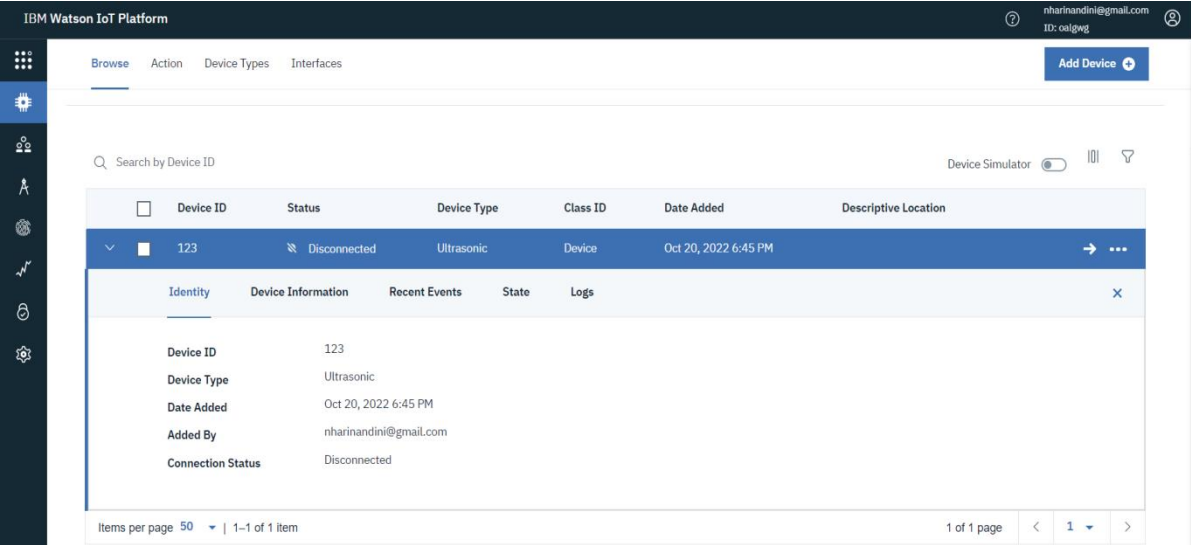


PROJECT DEVELOPMENT PHASE

SPRINT 1 – CREATION AND CONFIGURATION OF

IBM CLOUD SERVICES

STEP – 1 : CREATING IBM WATSON PLATFORM AND IOT DEVICE

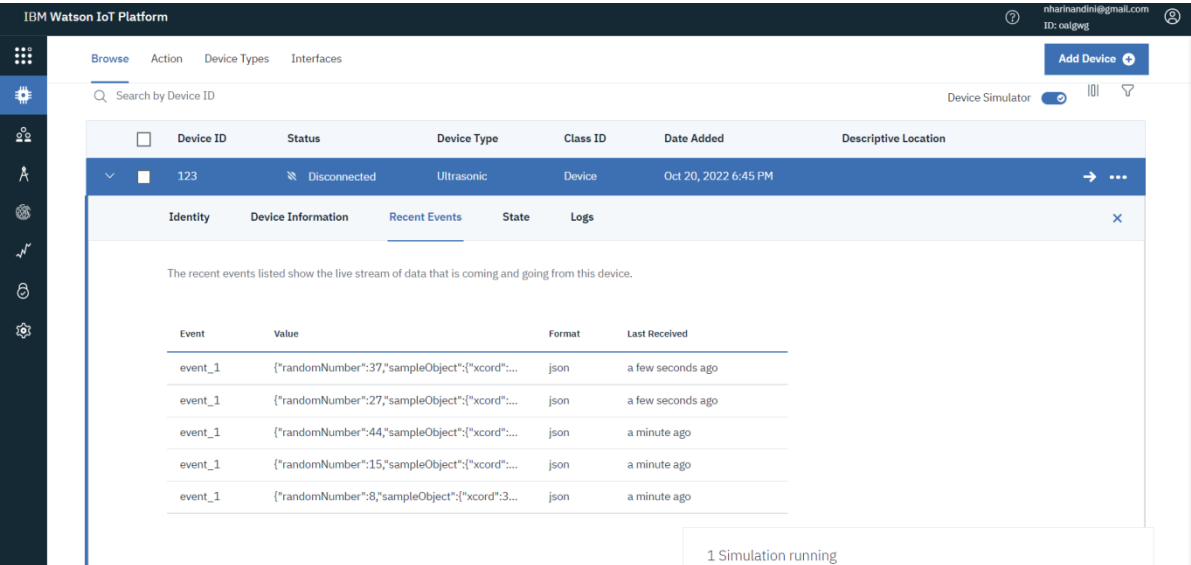


The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present with the text 'Search by Device ID'. The main content area displays a table with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. The first row shows Device ID 123, Status Disconnected, Device Type Ultrasonic, Class ID Device, Date Added Oct 20, 2022 6:45 PM, and Descriptive Location. Below the table, there is a section for 'Device Information' with details: Device ID 123, Device Type Ultrasonic, Date Added Oct 20, 2022 6:45 PM, Added By nharinandini@gmail.com, and Connection Status Disconnected. The bottom of the page shows 'Items per page 50' and '1 of 1 page'.

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
123	Disconnected	Ultrasonic	Device	Oct 20, 2022 6:45 PM	

Device Information

- Device ID: 123
- Device Type: Ultrasonic
- Date Added: Oct 20, 2022 6:45 PM
- Added By: nharinandini@gmail.com
- Connection Status: Disconnected



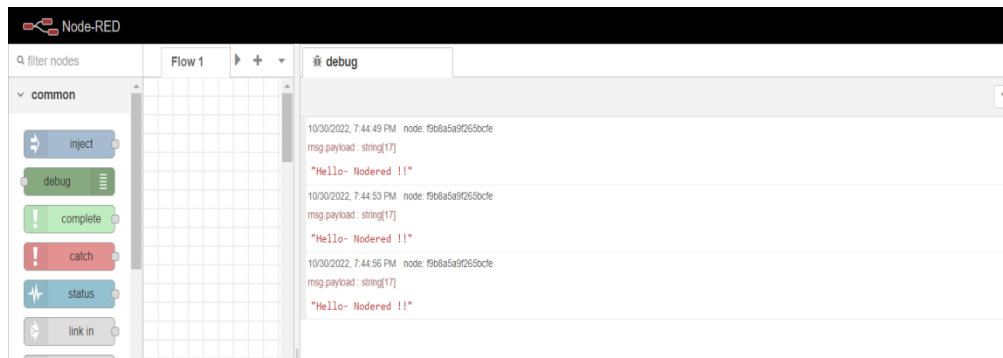
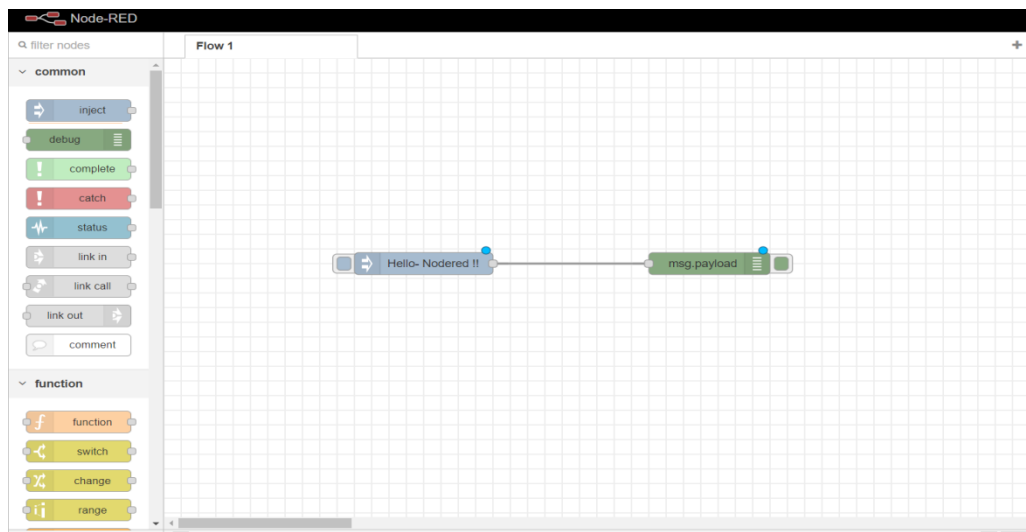
The screenshot shows the IBM Watson IoT Platform interface with the 'Recent Events' tab selected. The top navigation bar and search bar are the same as in the previous screenshot. The main content area displays a table with columns: Event, Value, Format, and Last Received. The table shows five recent events, all with the value 'event_1' and a format of 'json'. The last received times are 'a few seconds ago' and 'a minute ago'. Below the table, there is a message: 'The recent events listed show the live stream of data that is coming and going from this device.' The bottom of the page shows '1 Simulation running'.

Event	Value	Format	Last Received
event_1	{"randomNumber":37,"sampleObject":{"xcord":...	json	a few seconds ago
event_1	{"randomNumber":27,"sampleObject":{"xcord":...	json	a few seconds ago
event_1	{"randomNumber":44,"sampleObject":{"xcord":...	json	a minute ago
event_1	{"randomNumber":15,"sampleObject":{"xcord":...	json	a minute ago
event_1	{"randomNumber":8,"sampleObject":{"xcord":3...	json	a minute ago

The recent events listed show the live stream of data that is coming and going from this device.

1 Simulation running

STEP – 2 : CREATING NODE – RED SERVICE






The table displays a list of resources in the IBM Cloud environment. The resources are categorized by group, location, product, status, and tags. The resources are listed in a table with columns for Name, Group, Location, Product, Status, and Tags. The resources are sorted by Name.

Name	Group	Location	Product	Status	Tags
Node RED JPUTP 2022-10-29	Default	Global	Cloud Application	—	—
Node RED TMJXE 2022-10-20	Default	Global	Cloud Application	—	—

STEP – 3 : CREATING A DATABASE IN CLOUDANT DB

The screenshot shows the Cloudant Databases dashboard. On the left is a sidebar with navigation icons. The main header area includes a 'Databases' title, a 'Database name' dropdown, a 'Create Database' button, and icons for JSON, a book, and a bell. Below the header, there's a section titled 'Your Databases' containing a table with the following data:

Name	Size	# of Docs	Partitioned	Actions
trial	21 bytes	1	No	  

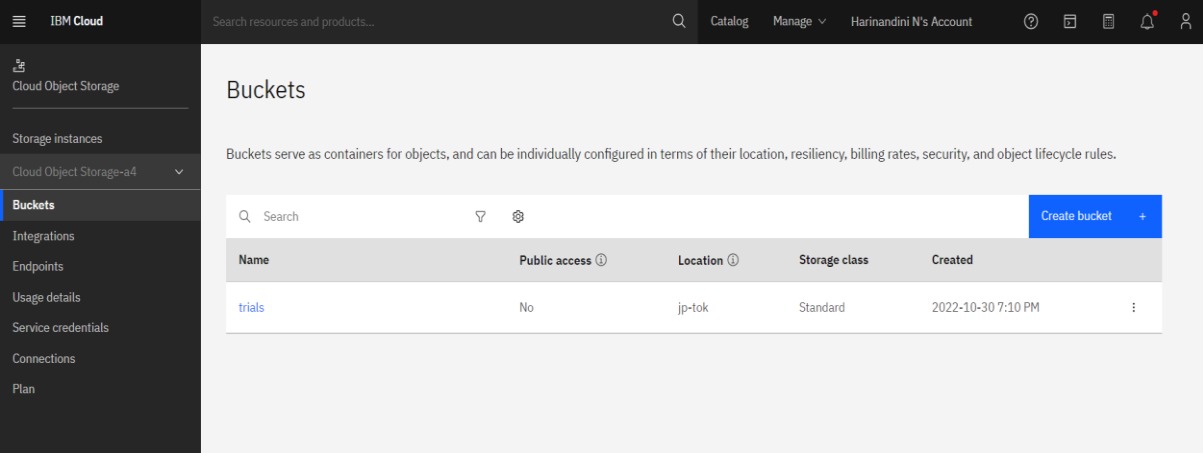
This screenshot shows the document view for the 'trial' database. The breadcrumb navigation at the top reads '< trial'. On the right, there's a 'Document ID' dropdown, an 'Options' gear icon, a JSON icon, a book icon, and a bell icon. A left sidebar contains links for 'All Documents', 'Query', 'Permissions', 'Changes', and 'Design Documents'. The main area has tabs for 'Table', 'Metadata', and 'JSON', with a 'Create Document' button on the right. A table displays document data:

	id	key	value
<input type="checkbox"/>	f3dd501328da85ca16e6868e6bb62b66	f3dd501328da85ca16e6868e6bb62b66	{ "rev": "1-b2d28daf175d6d10672ad0b38670..." }

This screenshot shows the document editor for the document with ID 'f3dd501328da85ca16e6868e6bb62b66'. The breadcrumb navigation is 'trial > f3dd501328da85ca16e6868e6bb62b66'. At the top, there are buttons for 'Save Changes' (with a circular arrow icon), 'Cancel', 'Upload Attachment', 'Clone Document', and 'Delete'. The main area is a text editor with a line number margin on the left (1-5) and a JSON document structure:

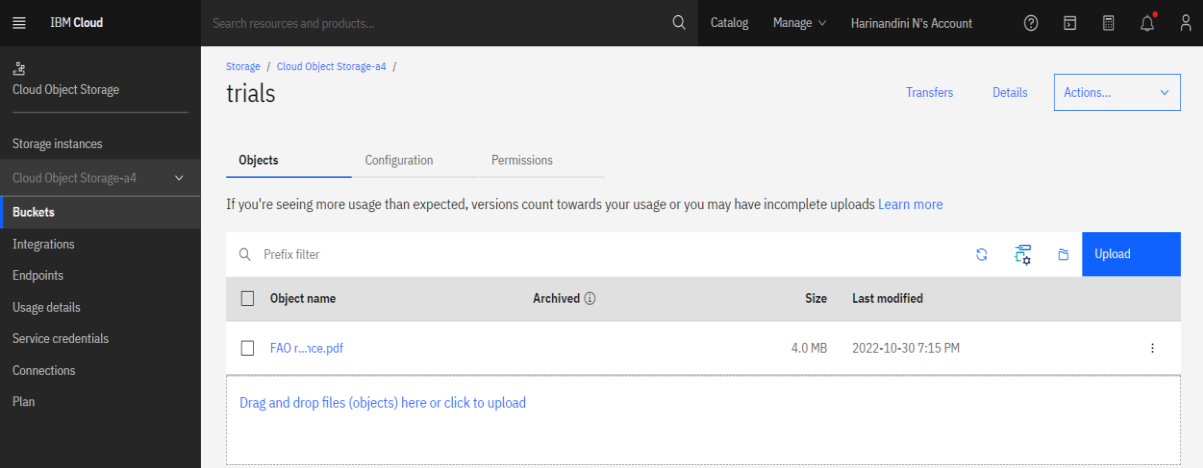
```
1 {
2   "_id": "f3dd501328da85ca16e6868e6bb62b66",
3   "_rev": "1-b2d28daf175d6d10672ad0b38670a64c",
4   "new": "Harinadini"
5 }
```

STEP – 4 : CREATING A CLOUD OBJECT STORAGE SERVICE



The screenshot shows the IBM Cloud console interface. On the left, a sidebar menu lists various services, with 'Buckets' highlighted under 'Cloud Object Storage'. The main content area is titled 'Buckets' and includes a brief description: 'Buckets serve as containers for objects, and can be individually configured in terms of their location, resiliency, billing rates, security, and object lifecycle rules.' Below this, there is a search bar and a 'Create bucket' button. A table displays the details of a bucket named 'trials'.

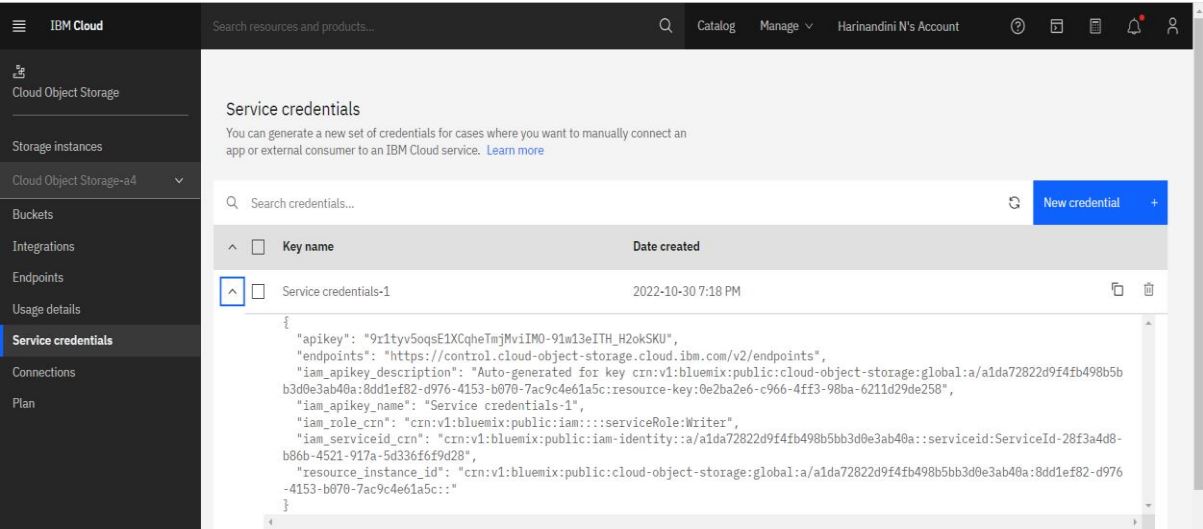
Name	Public access ①	Location ①	Storage class	Created
trials	No	jp-tok	Standard	2022-10-30 7:10 PM



This screenshot shows the 'trials' bucket page in the IBM Cloud console. The left sidebar remains the same. The main area has tabs for 'Objects', 'Configuration', and 'Permissions', with 'Objects' selected. A message states: 'If you're seeing more usage than expected, versions count towards your usage or you may have incomplete uploads [Learn more](#)'. Below this is a search bar with the text 'Prefix filter' and an 'Upload' button. A table lists the objects within the bucket.

Object name	Archived ①	Size	Last modified
FAO r...ce.pdf		4.0 MB	2022-10-30 7:15 PM

Below the table, there is a dashed box with the text: 'Drag and drop files (objects) here or click to upload'.



The screenshot displays the 'Service credentials' page in the IBM Cloud console. The left sidebar is consistent. The main area is titled 'Service credentials' and includes a note: 'You can generate a new set of credentials for cases where you want to manually connect an app or external consumer to an IBM Cloud service. [Learn more](#)'. Below this is a search bar and a 'New credential' button. A table shows the details of a credential named 'Service credentials-1'.

Key name	Date created
Service credentials-1	2022-10-30 7:18 PM

Below the table, a code block displays the JSON credentials:

```
{
  "apikey": "9r1tyv5oqsE1XCqheTmjMviIM0-91w13eITH_H2okSKU",
  "endpoints": "https://control.cloud-object-storage.cloud.ibm.com/v2/endpoints",
  "iam_apikey_description": "Auto-generated for key crn:v1:bluemix:public:cloud-object-storage:global:a/alda72822d9f4fb498b5b3d0e3ab40a:8dd1ef82-d976-4153-b070-7ac9c4e61a5c::resource-key:0e2ba2e6-c966-4ff3-98ba-6211d29de258",
  "iam_apikey_name": "Service credentials-1",
  "iam_role_crn": "crn:v1:bluemix:public:iam:::serviceRole:Writer",
  "iam_serviceid_crn": "crn:v1:bluemix:public:iam-identity::a/alda72822d9f4fb498b5b3d0e3ab40a::serviceid:ServiceId-28f3a4d8-b86b-4521-917a-5d336f6f9d28",
  "resource_instance_id": "crn:v1:bluemix:public:cloud-object-storage:global:a/alda72822d9f4fb498b5b3d0e3ab40a:8dd1ef82-d976-4153-b070-7ac9c4e61a5c::"
}
```