

PROJECT DEVELOPMENT PHASE

SPRINT 1 – CREATION AND CONFIGURATION OF

IBM CLOUD SERVICES

STEP – 1 : CREATING IBM WATSON PLATFORM AND IOT

DEVICE

The screenshot displays the IBM Watson IoT Platform dashboard. The top navigation bar includes tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present with the text 'Search by Device ID'. A table lists devices, with the first device selected, showing details in a modal window.

Device ID	Status	Device Type	Class ID	Date Added
12345	Disconnected	NodeMCU	Device	Nov 9, 2022 12:36 AM

Identity	Device Information	Recent Events	State	Logs
Device ID	12345			
Device Type	NodeMCU			
Date Added	Nov 9, 2022 12:36 AM			
Added By	113119ug07072@smartinternz.com			
Connection Status	Disconnected			

STEP –

The screenshot shows a web interface for managing devices. At the top, there are tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar labeled 'Search by Device ID' is present. A 'Device Simulator' toggle is set to 'on'. Below the search bar is a table with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. The table contains one entry: Device ID 123, Status 'Disconnected', Device Type 'Ultrasonic', Class ID 'Device', and Date Added 'Oct 20, 2022 6:45 PM'. Below the table, there is a section for 'Recent Events' with a sub-header 'Identity Device Information Recent Events State Logs'. The 'Recent Events' section shows a live stream of data with a table of events. The table has columns: Event, Value, Format, and Last Received. The events are listed as follows:

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

At the bottom right, a status indicator shows '1 Simulation running'.

2 : CREATING NODE – RED SERVICE

The screenshot shows the Node-RED interface. On the left, there is a sidebar with 'common' and 'function' node categories. The 'common' category includes nodes like 'inject', 'debug', 'complete', 'catch', 'status', 'link in', 'link call', 'link out', and 'comment'. The 'function' category includes 'function', 'switch', 'change', and 'range'. The main workspace shows a flow with two nodes: 'Hello- Nodered !!' and 'msg.payload'. The flow is labeled 'Flow 1'.

The screenshot shows the Node-RED interface with the debug console open. The console displays the following output:

```
10/30/2022, 7:44:49 PM node: f5b6a5a9265bdcf
msg.payload: string[17]
"Hello- Nodered !!"
10/30/2022, 7:44:53 PM node: f5b6a5a9265bdcf
msg.payload: string[17]
"Hello- Nodered !!"
10/30/2022, 7:44:56 PM node: f5b6a5a9265bdcf
msg.payload: string[17]
"Hello- Nodered !!"
```

STEP –

Resource list

Name	Group	Location	Product	Status	Tags
<input style="width: 95%;" type="text" value="Filter by name or IP address..."/>	<input style="width: 95%;" type="text" value="Filter by group or org..."/>	<input style="width: 95%;" type="text" value="Filter..."/>	<input style="width: 95%;" type="text" value="Filter..."/>	<input style="width: 95%;" type="text" value="Filter..."/>	<input style="width: 95%;" type="text" value="Filter..."/>
> Compute (0)					
> Containers (0)					
> Networking (0)					
> Storage (1+)					
> AI / Machine Learning (0)					
> Analytics (0)					
> Blockchain (0)					
> Databases (1+)					
> Developer tools (2)					
Node RED JPUTP 2022-10-29	Default	Global	Cloud Application	—	—
Node RED TMJXE 2022-10-20	Default	Global	Cloud Application	—	—
> Logging and monitoring (0)					

[Create resource +](#)

3 : CREATING A DATABASE IN CLOUDANT DB

Databases

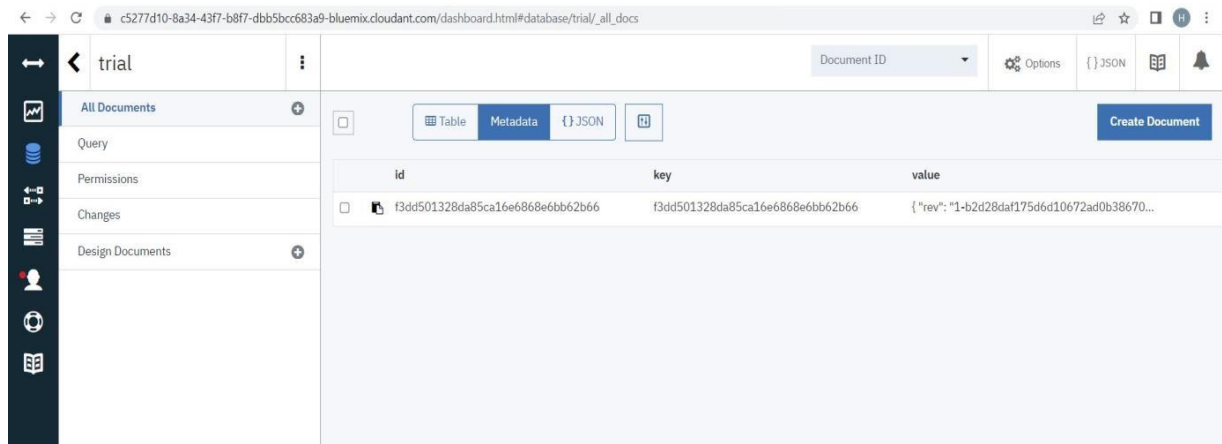
Database name ▼

Create Database {} JSON

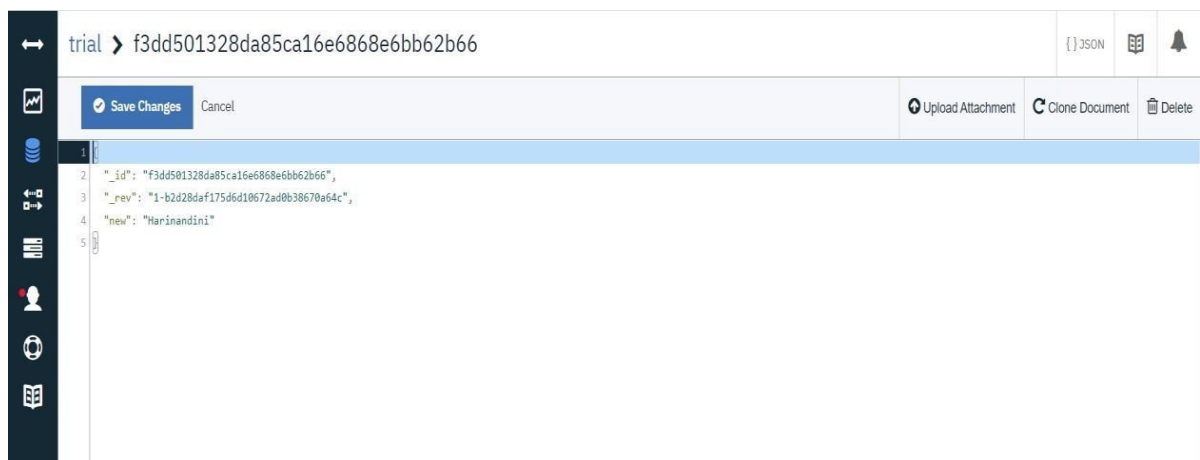
Your Databases

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

STEP –



4 : CREATING A CLOUD OBJECT STORAGE SERVICE



STEP –

Cloud Object Storage

Storage instances

Cloud Object Storage-a4

Buckets

Integrations

Endpoints

Usage details

Service credentials

Connections

Plan

Buckets

Buckets serve as containers for objects, and can be individually configured in terms of their location, resiliency, billing rates, security, and object lifecycle rules.

Search

Filter

Settings

Create bucket +

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

Cloud Object Storage

Storage instances

Cloud Object Storage-a4

Buckets

Integrations

Endpoints

Usage details

Service credentials

Connections

Plan

Storage / Cloud Object Storage-a4 /

trials

Transfers

Details

Actions... ▾

Objects

Configuration

Permissions

If you're seeing more usage than expected, versions count towards your usage or you may have incomplete uploads [Learn more](#)

Prefix filter

Refresh

Download

Folder

Upload

<input type="checkbox"/>	Object name	Archived ⓘ	Size	Last modified	
<input type="checkbox"/>	FAO r...nce.pdf		4.0 MB	2022-10-30 7:15 PM	

Drag and drop files (objects) here or click to upload

Cloud Object Storage

Storage instances

Cloud Object Storage-a4

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Integrations

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Service credentials

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Plan

Service credentials

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](#)

Search credentials...

Refresh

New credential +

<input type="checkbox"/>	Key name	Date created	
<input checked="" type="checkbox"/>	Service credentials-1	2022-10-30 7:18 PM	

```
{  "apikey": "9r1tyv5ogsE1XCqheTmjMviIM0-91w13eITH_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/a1da72822d9f4fb498b5b3d0e3ab40a: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/a1da72822d9f4fb498b5b3d0e3ab40a::serviceid:ServiceId-28f3a4d8-b86b-4521-917a-5d336f6f9d28",  "resource_instance_id": "crn:v1:bluemix:public:cloud-object-storage:global:a/a1da72822d9f4fb498b5b3d0e3ab40a:8dd1ef82-d976-4153-b070-7ac9c4e61a5c::"}
```