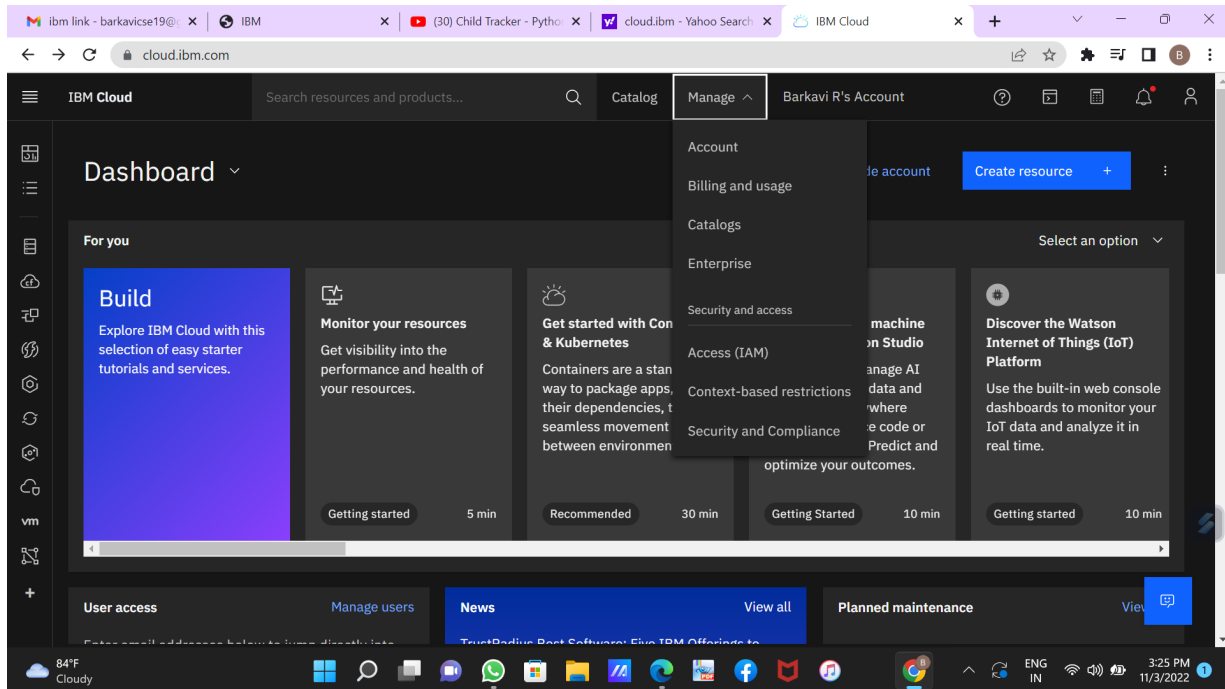


CREATE AND CONFIGURE IBM CLOUD SERVICES

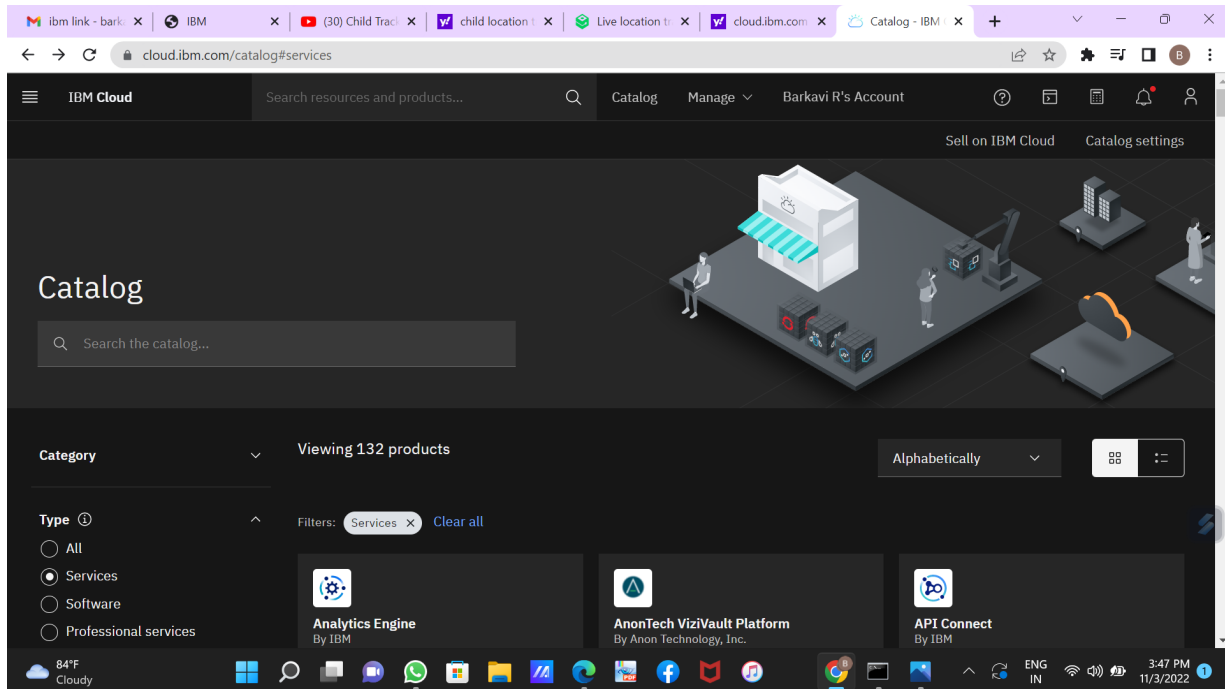
CREATE IBM WATSON IOT PLATFORM AND DEVICE

Team ID	PNT2022TMID41335
Project Name	IoT based Safety Gadget for Child Safety, monitoring and notification

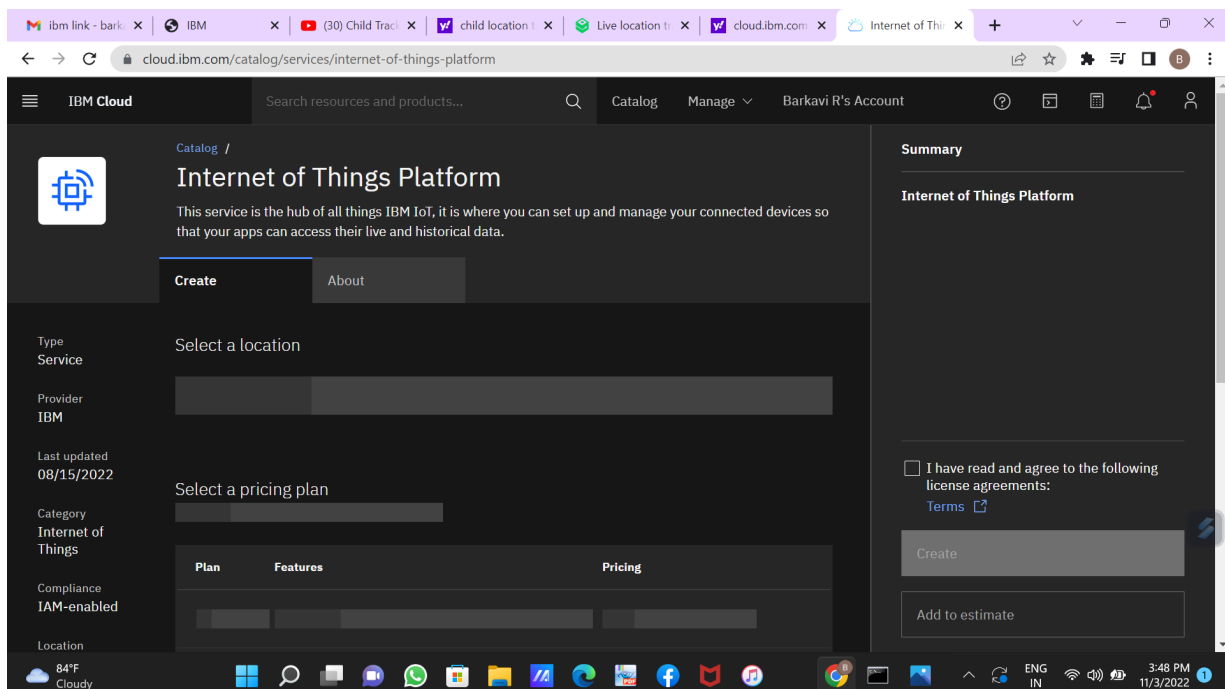
STEP 1:



STEP 2:



STEP 3:



STEP 4:

The screenshot shows the IBM Cloud console interface. The top navigation bar includes the IBM Cloud logo, a search bar, and user account information for 'Barkavi R's Account'. The main content area displays the 'Internet of Things Platform-oy' resource, which is marked as 'Active'. A sidebar on the left contains navigation links for 'Manage', 'Plan', and 'Connections'. The central panel features a large graphic of a device with connected lines, followed by the heading 'Let's get started with IBM Watson IoT Platform'. Below this, a description states: 'Securely connect, control, and manage devices. Quickly build IoT applications that analyze data from the physical world.' There are two buttons: 'Launch' and 'Docs'. A progress bar at the bottom indicates the user's journey through the platform, with a 'Ready for the next level?' prompt. The Windows taskbar at the bottom shows the date as 11/3/2022 and the time as 3:51 PM.

STEP 5:

The screenshot displays the IBM Watson IoT Platform dashboard. The top navigation bar includes the 'Sign in' button. The main content area features a large graphic with the word 'Cars' in the center. To the left of 'Cars' is the text 'Collect data from' and to the right is 'and make value from it'. The graphic includes icons for a car, a cloud, and a factory. A 'Connecting...' status bar is visible at the bottom of the dashboard. The Windows taskbar at the bottom shows the date as 11/3/2022 and the time as 6:19 PM.

STEP 6:

The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains icons for various platform features. The main content area is titled 'Browse Devices' and includes a 'Diagnose' button. Below this, a table lists devices with columns for 'Device ID', 'Status', 'Device Type', 'Class ID', and 'Date Added'. The table is currently empty. The bottom of the screen shows a Windows taskbar with various application icons and a system tray displaying the date and time.

IBM Watson IoT Platform

barkavice19@gmail.com
ID: hw3zh6

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added
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STEP 7:

This screenshot is similar to the one in Step 6, but the left sidebar is expanded, showing a list of navigation options: 'Boards', 'Devices', 'Members', 'Apps', 'Access Management', 'Usage', 'Security', and 'Settings'. The 'Devices' option is highlighted. The main content area remains the same, showing the 'Browse Devices' page with the 'Diagnose' button and the empty table.

IBM Watson IoT Platform

barkavice19@gmail.com
ID: hw3zh6

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added
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STEP 8:

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. The 'Browse' tab is active. Below the navigation bar, there is a search bar labeled 'Search by Device ID' and a 'Device Simulator' toggle switch. A table with the following columns is displayed: 'Device ID', 'Status', 'Device Type', 'Class ID', and 'Date Added'. The table is currently empty, and a message in the center states 'You don't have any devices.' with a 'Create a device.' button below it. The bottom of the screen shows a Windows taskbar with various application icons and a system tray displaying the temperature (75°F), weather (Cloudy), and time (6:45 PM, 11/3/2022).

STEP 9:

The screenshot shows the 'Add Device' wizard in the IBM Watson IoT Platform. The wizard consists of four steps: 'Identity', 'Device Information', 'Security', and 'Summary'. The 'Identity' step is currently selected. Below the step indicators, there is a prompt: 'Select a device type for the device that you are adding and give the device a unique ID.' Two input fields are provided: 'Device Type' with a dropdown menu labeled 'Select or create a device type...' and 'Device ID' with a text input field labeled 'Enter Device ID'. At the bottom right of the wizard, there are 'Cancel' and 'Next' buttons. The bottom of the screen shows a Windows taskbar with various application icons and a system tray displaying the temperature (75°F), weather (Cloudy), and time (6:47 PM, 11/3/2022).

STEP 10:

The screenshot shows the 'Add Device' page in the IBM Watson IoT Platform. The breadcrumb trail is 'Browse > Action > Device Types > Interfaces'. The page has a progress bar with four steps: 'Identity' (checked), 'Device Information' (active), 'Security', and 'Summary'. Below the progress bar, a message states: 'You can modify the default device information and enter more information about the device for identification purposes.' The form contains two columns of input fields. The left column includes 'Serial Number', 'Model', 'Description', and 'Hardware Version'. The right column includes 'Manufacturer', 'Device Class', 'Firmware Version', and 'Descriptive Location'. Each field has a placeholder text 'Enter [field name]'. At the bottom left of the form is a blue button labeled 'Add Metadata +'. At the bottom right are 'Back' and 'Next' buttons. The top right of the page shows the user's email 'barkavice19@gmail.com' and ID 'hw3zh6'. The bottom of the screen shows a Windows taskbar with various application icons and a system tray displaying '75°F Cloudy' and the date '11/3/2022'.

IBM Watson IoT Platform

barkavice19@gmail.com
ID: hw3zh6

Browse Action Device Types Interfaces

Identity Device Information Security Summary

You can modify the default device information and enter more information about the device for identification purposes.

Serial Number Enter Serial Number

Model Enter Model

Description Enter Description

Hardware Version Enter Hardware Version

Manufacturer Enter Manufacturer

Device Class Enter Device Class

Firmware Version Enter Firmware Version

Descriptive Location Enter Descriptive Location

Add Metadata +

Back Next

75°F Cloudy

ENG IN 6:55 PM 11/3/2022

STEP 11:

The screenshot shows the 'Add Device' page in the IBM Watson IoT Platform, specifically the 'Security' step. The breadcrumb trail is 'Browse > Action > Device Types > Interfaces'. The progress bar shows 'Identity' (checked), 'Device Information' (checked), 'Security' (active), and 'Summary'. The page title is 'There are two options for selecting a device authentication token.' Below this, there are two sections: 'Auto-generated authentication token (default)' and 'Self-provided authentication token'. The 'Auto-generated' section explains that the service will generate an 18-character alphanumeric token. The 'Self-provided' section explains that the user must provide their own token, which must be 8-36 characters long and contain a mix of lowercase and uppercase letters, numbers, and symbols. At the bottom, there is an 'Authentication Token' input field with a placeholder 'Enter an optional token' and an information icon. Below the input field, a note states: 'Make a note of the generated token. Lost authentication tokens cannot be recovered. Tokens are encrypted before being stored.' and 'Authentication token are encrypted before we store them.' The top right of the page shows the user's email 'barkavice19@gmail.com' and ID 'hw3zh6'. The bottom of the screen shows a Windows taskbar with various application icons and a system tray displaying '75°F Cloudy' and the date '11/3/2022'.

IBM Watson IoT Platform

barkavice19@gmail.com
ID: hw3zh6

Browse Action Device Types Interfaces

Identity Device Information Security Summary

There are two options for selecting a device authentication token.

Auto-generated authentication token (default)

Allow the service to generate an authentication token for you. Tokens are 18 characters and contain a mix of alphanumeric characters and symbols. The token is returned to you at the end of the device registration process.

Self-provided authentication token

Provide your own authentication token for this device. The token must be between 8 and 36 characters and contain a mix of lowercase and uppercase letters, numbers, and symbols, which can include hyphens, underscores, and periods. Do not use repeated characters, dictionary words, user names, or other predefined sequences.

Authentication Token Enter an optional token ⓘ

Make a note of the generated token. Lost authentication tokens cannot be recovered. Tokens are encrypted before being stored.

Authentication token are encrypted before we store them.

75°F Cloudy

ENG IN 6:55 PM 11/3/2022

STEP 12:

The screenshot shows the 'Add Device' wizard in the IBM Watson IoT Platform. The wizard consists of four steps: Identity, Device Information, Security, and Summary. The 'Device Information' step is currently active, showing the following details:

- Device Type: NodeMCU
- Device ID: 12345
- Security Token: To be generated

A 'View Metadata' button is visible below the device information. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. The bottom status bar shows the temperature as 75°F Cloudy and the time as 6:56 PM on 11/3/2022.

STEP 13:

The screenshot shows the 'Device Drilldown - 12345' page in the IBM Watson IoT Platform. The page displays the 'Device Credentials' section, which includes the following information:

Organization ID	hw3zh6
Device Type	NodeMCU
Device ID	12345
Authentication Method	use-token-auth
Authentication Token	4mLyMddXLDo(XDZRV1

A warning message at the bottom states: 'Authentication tokens are non-recoverable. If you misplace this token, you will need to re-register the device to generate a new token.' The left sidebar contains a navigation menu with options like 'Device Credentials', 'Connection Information', 'Recent Events', 'State', 'Device Information', 'Metadata', 'Diagnostics', 'Connection Logs', and 'Device Actions'. The bottom status bar shows the temperature as 75°F Cloudy and the time as 6:57 PM on 11/3/2022.

STEP 14:

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. The 'Browse' tab is active, and the 'All Devices' button is selected. The dashboard displays a table of devices with the following columns: Device ID, Status, Device Type, Class ID, and Date Added. A single device is listed with ID 12345, Status 'Disconnected', Device Type 'NodeMCU', Class ID 'Device', and Date Added 'Nov 3, 2022 6:56 PM'. The page also includes a search bar, a 'Device Simulator' toggle, and pagination controls showing '1 of 1 page'.

Device ID	Status	Device Type	Class ID	Date Added
12345	Disconnected	NodeMCU	Device	Nov 3, 2022 6:56 PM

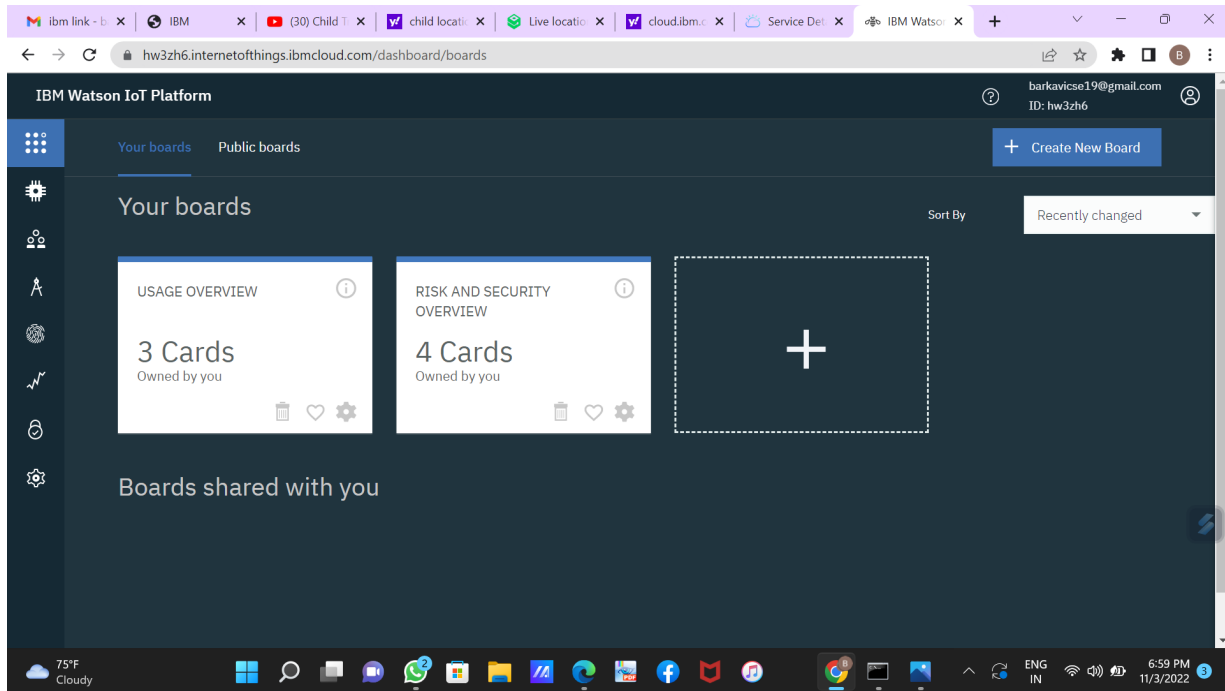
STEP 15:

The screenshot shows the 'Device Drilldown' for device 12345. The left sidebar contains a list of navigation options: 'Connection Information', 'Recent Events', 'State', 'Device Information', 'Metadata', 'Diagnostics', 'Connection Logs', and 'Device Actions'. The 'Connection Information' section is selected, displaying the following details:

- Device ID: 12345
- Device Type: NodeMCU
- Date Added: Nov 3, 2022 6:56 PM
- Added By: barkavice19@gmail.com
- Connection Status: Disconnected

The 'Recent Events' section is also visible, with a description: 'The recent events listed show the live stream of data that is coming and going from this device.'

STEP 16:



RESULT:

Thus, IBM Watson IoT platform and device was created.