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**Sub: CS**

## **Assignment-1 [Batch-71]**

### **Assignment -1**

**Exercise 1: Create a Kubernetes cluster on IBM Cloud and integrate it with IBM Cloud activity tracker.**

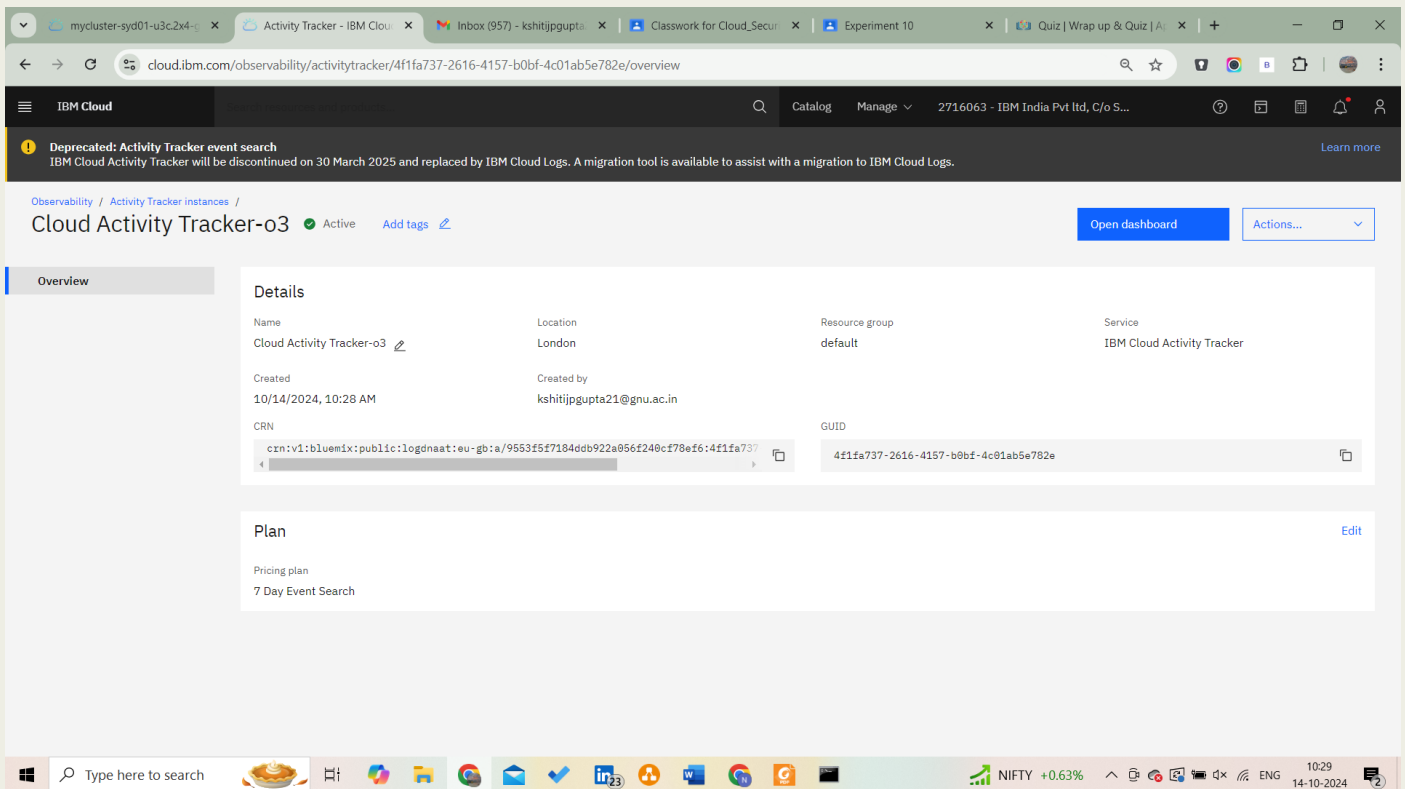
**Objective: Track and analyze activity in the IBM Cloud Kubernetes environment.**

**Steps:**

- 1. Set up Cloud Activity Tracker with LogDNA or Activity Tracker with Log Insights.**
- 2. Monitor activities like creating, updating, and deleting Kubernetes resources (e.g., deployments, services, and pods).**
- 3. Deliverables:**
  - A report on how different Kubernetes actions (like pod creation or service deletion) are logged.**
  - Screenshots showing tracked activities in the Cloud Activity Tracker dashboard.**

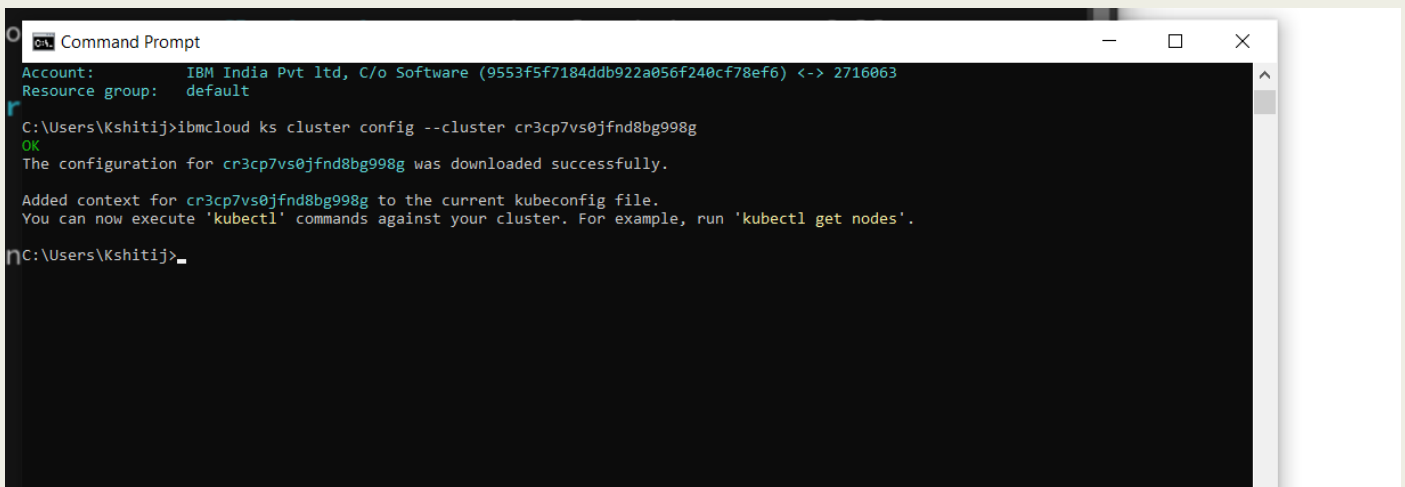
**First we will log in to IBM cloud CLI and target the default resource group**





There is only one Activity Tracker instance allowed in a location , so I am using an already created service.

Now in our CLI we will set the current context to our kubernetes cluster.



Once we do this we can see the status being checked in the Activity Tracker.



```
C:\Users\Kshitij>ibmcloud ks cluster get --cluster mycluster-syd01-u3c.2x4-group2 --show-resources
Retrieving cluster mycluster-syd01-u3c.2x4-group2 and all its resources...
OK

Name: mycluster-syd01-u3c.2x4-group2
ID: cr3cp7vs0jfd8bg998g
State: normal
Status: All Workers Normal
Created: 2024-08-22T05:30:19+0000
Location: syd01
Pod Subnet: 172.30.0.0/16
Service Subnet: 172.21.0.0/16
Master URL: https://c105.au-syd.containers.cloud.ibm.com:30209
Public Service Endpoint URL: https://c105.au-syd.containers.cloud.ibm.com:30209
Private Service Endpoint URL: -
Master Location: Sydney
Master Status: Ready (2 weeks ago)
Master State: deployed
Master Health: normal
Ingress Subdomain: mycluster-syd01-u3-325769-3e4769f510db5aaf1089354e49621b41-0000.au-syd.containers.appdomain.cloud
Ingress Secret: mycluster-syd01-u3-325769-3e4769f510db5aaf1089354e49621b41-0000
Ingress Status: warning
Ingress Message: Some Ingress components are in a warning state. To view the state of your Ingress components, run `ibmcloud ks ingress status-report get`.
Workers: 1
Worker Zones: syd01
Version: 1.30.5_1537
Creator: -
Monitoring Dashboard: -
Resource Group ID: 34a8edb54fe347328456cb2a25a7de3d
Resource Group Name: default
Connectivity Server URL: https://c105.au-syd.containers.cloud.ibm.com:30113

Subnet VLANs
VLAN ID Subnet CIDR Public User-managed
3438701 159.23.71.176/29 true false
3438703 10.210.21.128/29 false false

C:\Users\Kshitij>clear
'clear' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Kshitij>
```

we get the log of list addons here

```
Oct 14 10:49:54 ingress-cluster-healthcheck-74fc77564-8jc9j ingress-cluster-healthcheck info {"level":"info","ts":172883194.5513668,"caller":"armada-ingress-cluster-healthcheck/main.go:75","msg":"report created/updated"}
Oct 14 10:49:56 dashboard-metrics-scraper-57dcf4b5f-bl246 dashboard-metrics-scraper info {"level":"info","msg":"Database updated: 1 nodes, 34 pods","time":"2024-10-14T05:19:56Z"}
Oct 14 10:49:57 kube-cr3cp7vs0jfd8bg998g-myclustersy-default-000001dc syslog E1014 05:19:57.040042 8908 pod_workers.go:1298] "Error syncing pod, skipping" err="failed to \\"StartContainer\\" for \\"mynew-app\\" with ImagePullBackOff: \\"Back-off pulling image \\"\\\"au.icr.io/internalexam2/internal-exam-img\\\"\\\" pod=\"default/kshitij-deploy-5d75486899-trd9f\" podUID=\"6e6a88bf-9c15-433f-8298-9d36b6297e00\""
Oct 14 10:49:57 kube-cr3cp7vs0jfd8bg998g-myclustersy-default-000001dc kubelet.log E1014 05:19:57.040042 8908 pod_workers.go:1298] "Error syncing pod, skipping" err="failed to \\"StartContainer\\" for \\"mynew-app\\" with ImagePullBackOff: \\"Back-off pulling image \\"\\\"au.icr.io/internalexam2/internal-exam-img\\\"\\\" pod=\"default/kshitij-deploy-5d75486899-trd9f\" podUID=\"6e6a88bf-9c15-433f-8298-9d36b6297e00\""
Oct 14 10:50:02 dashboard-metrics-scraper-57dcf4b5f-bl246 dashboard-metrics-scraper 10.210.8.251 - - [14/Oct/2024:05:20:02 +0000] "GET / HTTP/1.1" 200 6 "" "kube-probe/1.30"
Oct 14 10:50:02 dashboard-metrics-scraper-57dcf4b5f-bl246 dashboard-metrics-scraper 10.210.8.251 - - [14/Oct/2024:05:20:02 +0000] "GET / HTTP/1.1" 200 6 "" "kube-probe/1.30"
Oct 14 10:50:03 kube-cr3cp7vs0jfd8bg998g-myclustersy-default-000001dc syslog I1014 05:20:03.849461 8908 kubelet_getters.go:218] "Pod status updated" pod="kube-system/ibm-master-proxy-static-10.210.8.251" status="Running"
Oct 14 10:50:03 kube-cr3cp7vs0jfd8bg998g-myclustersy-default-000001dc kubelet.log I1014 05:20:03.849461 8908 kubelet_getters.go:218] "Pod status updated" pod="kube-system/ibm-master-proxy-static-
```