Project 4: Implementing Compliance Controls in AWS

Detailed Report

Project Objective: Implement and manage compliance controls in an AWS environment for regulatory standards such as GDPR, HIPAA, and PCI-DSS.

Guide

1. **Identify Compliance Requirements:**
   o Research and document relevant regulatory requirements.
2. **Set up AWS Config Rules:**
   o Configure AWS Config Rules to monitor compliance with standards.
3. **Manage Compliance Reports:**
   o Use AWS Artifact to manage and provide compliance reports.
4. **Set up Compliance Dashboards:**
   o Configure CloudWatch dashboards to monitor compliance status and audit logs.
5. **Conduct Regular Audits:**
   o Schedule and perform regular compliance audits.

Key Activities and Implementation:

1. **Identifying Compliance Requirements:**
   o Researched and documented regulatory requirements relevant to the industry.
2. **Using AWS Config Rules:**
   o Configured AWS Config Rules to monitor compliance with industry standards.

```json
{
  "ConfigRuleName": "required-tags",
  "Source": {
    "Owner": "AWS",
    "SourceIdentifier": "REQUIRED_TAGS"
  },
  "Scope": {
    "ComplianceResourceTypes": [
      "AWS::EC2::Instance"
    ]
  },
  "InputParameters":
"{\"tag1Key\":\"Environment\",\"tag2Key\":\"Owner\"}"
}
```

3. **Managing Compliance Reports with AWS Artifact:**
   o Utilized AWS Artifact to manage and provide compliance reports.

```bash
aws artifact download-agreement --name GDPR --revision-id r1234567890
```

4. **Setting up Compliance Dashboards in AWS CloudWatch:**
   o Configured dashboards to monitor compliance status and audit logs.

```json
```

```
{
  "widgets": [
    {
      "type": "metric",
      "x": 0,
      "y": 0,
      "width": 6,
      "height": 6,
      "properties": {
        "metrics": [
          [ "AWS/Config", "ComplianceSummary", "ComplianceType",
"NON_COMPLIANT" ]
        ],
        "period": 300,
        "stat": "Sum",
        "region": " eu-central-1 ",
        "title": "Compliance Summary"
      }
    }
  ]
}
```

5. **Conducting Regular Compliance Audits:**
   o Performed regular compliance audits and generated reports to ensure all requirements are met.

Outcome: A compliant AWS environment that continuously monitors and adheres to stringent regulatory requirements.