

Cloud Native Bioinformatics Infrastructure — Hands-on

Build cloud-native foundations for bioinformatics at scale. This hands-on module covers Kubernetes on AWS/GCP/Azure, infrastructure-as-code with Terraform, GitOps with ArgoCD, secure networking/IAM, high-throughput storage, batch/GPU scheduling, monitoring/alerts, and cost governance. Leave with a production-ready reference stack and runbooks.

Cloud Native Bioinformatics Infrastructure — AWS • GCP • Azure

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Session 1

Fee: Rs 17,200 [Apply Now](#)

Foundations: Accounts, VPC & Kubernetes

Cloud accounts & org setup

[AWS/GCP/Azure orgs](#) [billing & guardrails](#) [tags/labels](#)

Networking & identity

[VPC/VNet/Subnets](#) [IAM/STS/Workload ID](#) [private endpoints](#)

Kubernetes clusters

EKS/GKE/AKS **node pools/GPUs** **autoscaling**

Session 2

Fee: Rs 23,000 Apply Now

laC & GitOps: Terraform, Helm & ArgoCD

Infrastructure as Code

Terraform modules **remote state** **policies & plans**

K8s packaging & delivery

Helm/Kustomize **charts/values** **secrets mgmt**

GitOps & environments

ArgoCD apps **dev→staging→prod** **rollbacks**

Session 3

Fee: Rs 29,800 Apply Now

Storage, Compute & Security for Bio

Storage & data planes

S3/GS/Azure Blob **CSI/EFS/Filestore** **caching & tiers**

Batch, GPUs & scaling

Batch/Spot/PBL **GPU operators** **HPA/Karpenter**

Security & observability*

RBAC/NetworkPolicies **KMS/KeyVault/CloudKMS**

Prometheus/Grafana/ELK

*Educational guidance only; not formal compliance advice.

Session 4

Fee: Rs 36,400 Apply Now

Mini Capstone: Reference Platform

Deploy a bioinformatics reference stack (K8s + GitOps)

Theory + Practical

SLAs, scaling & runbooks

alerts/dashboards **DR/backups** **cost reports**

Deliverables: repo, manifests & ops guide

Terraform/Helm/ArgoCD **monitoring stack** **PDF/HTML**
runbook