# CYBERSECURITY DAILY DAIRY

**Day 12: Introduction to DevOps and DevOps Tools (July 1, 2025)**

**Topics Covered:**

- Introduction to DevOps.
- Role of a DevOps Engineer.
- Key responsibilities.
- Common DevOps tools.

**What I Did:**

I learned about DevOps, which combines Development (Dev) and Operations (Ops) to deliver software faster and more reliably. I also looked at tools that automate these processes.

**What is DevOps?**

DevOps improves collaboration and speeds up software delivery by:

- Automating tasks.
- Continuous Integration (CI).
- Frequent Deployment (CD).
- Monitoring performance.
- Ensuring stability, scalability, security.
  It promotes shared responsibility and continuous improvement.

**Who is a DevOps Engineer?**

A DevOps Engineer manages the CI/CD pipeline. Responsibilities include:

- Building/maintaining CI/CD pipelines.
- Managing infrastructure with Infrastructure as Code (IaC).
- Monitoring performance.
- Ensuring high availability, scalability, security.
- Automating testing, deployment, provisioning.

**Common DevOps Tools:**

| Tool | Purpose |
|------|---------|
| **Kubernetes** | Container orchestration |
| **Ansible** | Configuration management |
| **Terraform** | Infrastructure as Code |
| **Docker** | Containerization |
| **Jenkins** | Automates CI/CD pipelines |