DevOps Learning Path: Manual Deployment Before Docker

Summary:
Don't wait to learn Docker before practicing deployments. Start deploying your projects now on your Linux Mini PC.
This will give you real-world experience that makes Docker easier to understand later.

Why You Should Start Now:
1. Reinforce your Linux skills:
- Practice with services, Nginx, pm2, permissions, ports, and environment variables.
2. Understand what Docker automates:
- Learn what isolation, dependencies, and container restarts mean by doing them manually first.
3. Get your projects live:
- Run your Express backend and React frontend now to build confidence.

Suggested Learning Path:
1. Deploy manually (current stage):
- React frontend served via Nginx or Apache.
- Express backend run via pm2 or as a systemd service.
- Practice reverse proxy and firewall configuration.
2. Learn Docker next:
- Containerize both services using Dockerfile and docker-compose.
- Observe how Docker simplifies manual setup.
3. Expand your toolset later:
- CI/CD (GitHub Actions, Jenkins)
- Load balancing (Nginx)
- Monitoring (Prometheus, Grafana)
- Automation (Ansible, Kubernetes)

Mini Practice Project:
1. Deploy Express API on port 5000.
2. Build React app (npm run build) and serve via Nginx on port 80.
3. Configure Nginx reverse proxy so /api routes to the backend.
4. Create systemd services for both apps.
5. Set up logging and verify with journalctl.

Once working, redo the same setup using Docker to experience the simplification it provides.

Conclusion:
Manual deployment first $\rightarrow$ Deeper understanding later with Docker.
You'll become a stronger DevOps engineer by knowing what happens under the hood.