



Linux World Docker Presentation Roster

March 2025 – Week 1

Prepared for : Team 13

Presentation Timeline & Speakers

1. 20th March 2025 (Thursday) - Kiran Rakh
2. 21st March 2025 (Friday) - Sachin Singh Patel
3. 22nd March 2025 (Saturday) - Bhushan Yadav
4. 23rd March 2025 (Sunday) - Gaurav Pandharinath Patil
5. 24th March 2025 (Monday) - Manasi Patil

Schedule & Content to be prepared

📅 DATE: 20th March 2025 (Thursday)

Presenter: Kiran Rakh

Topics
Introduction to Docker:
- What is Docker?
- History and evolution of Docker
Why Docker is super fast:
- Lightweight containers vs. traditional VMs
- Less overhead and faster boot-up times
Containerization vs. Virtualization:
- Key differences and benefits
- Real-world use cases of Docker
Docker Architecture:
- Docker Engine, Docker Daemon, Docker CLI
- Container lifecycle
Docker Volumes:
- What are Docker volumes?
- Types of volumes:
- Bind mounts
- Named volumes
- Managing volumes:
- `docker volume create`
- Persisting data with volumes

📅 DATE: 21st March 2025 (Friday)

Presenter: Sachin Singh Patel

Topics
Installing Docker:
- On Linux
- Post-installation configuration and verification
Essential Docker Commands:
- Running containers:
- `docker run`
- `docker start`
- `docker stop`
- `docker rm`
- Listing and managing containers:
- `docker ps`
- `docker inspect`
- `docker logs`

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Docker Images:
- What are Docker images?
- Pulling images from Docker Hub:
- `docker pull`
- Viewing and managing images:
- `docker images`
- `docker rmi`
Docker Networking Basics:
- Default networks:
- `bridge`
- `host`
- `none`
- Creating and using custom networks:
- `docker network create`

📅 DATE: 22nd March 2025 (Saturday)

Presenter: Bhushan Yadav

Topics
Dockerfile Basics:
- Purpose and structure of Dockerfiles
- Key instructions:
- `FROM`
- `RUN`
- `COPY`
- `CMD`
- `ENTRYPOINT`
- `ENV`
- `WORKDIR`
- Building images from Dockerfile:
- `docker build -t <image-name>`
Multi-Stage Dockerfile:
- What is Multi-Stage Docker build?
- Benefits of Multi-Stage builds:
- Smaller and optimized images
- Example with step-by-step explanation
Docker Image Optimization Tips:
- Minimize layers
- Use lightweight base images (e.g., Alpine)
- Caching strategies for faster builds

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📅 DATE: 23rd March 2025 (Sunday)

Presenter: Gaurav Pandharinath Patil

Topics
Docker Compose Basics:
- What is Docker Compose?
- Benefits of using Docker Compose
- Writing `docker-compose.yml` file
- Defining services, networks, and volumes
Docker Compose Commands:
- `docker-compose up` → Start services
- `docker-compose down` → Stop services
- `docker-compose ps` → List running services
Environment Variables in Docker Compose
Scaling services with Docker Compose:
- `docker-compose up --scale <service>=<replicas>`
Linking services and container-to-container communication
Health checks in Docker Compose

📅 DATE: 24th March 2025 (Monday)

Presenter: Manasi Patil

Topics
Docker Swarm:
- What is Docker Swarm?
- Difference between Docker Swarm and Kubernetes
- Setting up a Swarm cluster
Deploying services on Swarm:
- `docker swarm init` → Initialize Swarm
- `docker service create` → Create a service
- `docker service scale` → Scale services
Swarm Management:
- High availability and fault tolerance
- Rolling updates and rollback
- Load balancing in Swarm
Docker Security Best Practices:
- Running containers with least privilege
- Limiting resource usage:
- `--memory`
- `--cpu-shares`
Docker Logs & Monitoring:
- `docker logs <container>`
- Monitoring container logs