# Prerequisites

1. Operating System: Amazon Linux 2 or Amazon Linux 2023.
2. Hardware Requirements:
   * Minimum 4GB RAM (8GB recommended).
   * Sufficient disk space for Docker images and containers.
3. Tools:
   * Terminal with admin privileges.
   * Internet access to download packages.

# Step 1: Update System Packages

Run the following command to update the system packages:

sudo yum update -y

# Step 2: Install Docker

1. Enable Docker in Amazon Linux Extras:

> sudo amazon-linux-extras enable docker

1. Install Docker:

>sudo yum install -y docker

1. Start the Docker service:

>sudo systemctl start docker

1. Enable Docker to start on boot:

> sudo systemctl enable docker

1. Verify Docker installation: > docker --version

Step 3: Configure Docker

1.Allow non-root users to access Docker (Optional):

* sudo usermod -aG docker $USER newgrp docker

1. Test the Docker installation:

* docker run hello-world

# Step 4: Install Docker Compose

1. Download Docker Compose:

* sudo curl -L "https://github.com/docker/compose/releases/latest/download/docker-compose-$(uname

-s)-$(uname -m)" -o /usr/local/bin/docker-compose

1. Apply execute permissions:

* sudo chmod +x /usr/local/bin/docker-compose

1. Verify Docker Compose installation: > docker-compose --version

# Step 5: Test Docker Functionality

1. Run a test container:

* docker run hello-world

1. List running containers:

* docker ps

1. List all containers (including stopped): > docker ps -a
2. Remove a container:

* docker rm <con-id>

1. List Docker images: > docker images
2. Remove an image:

* docker rmi <image\_id>

# Step 6: Manage Docker Services

1. Check Docker service status: >sudo systemctl status docker
2. Restart Docker service:

>sudo systemctl restart docker

1. Stop Docker service:

>sudo systemctl stop docker

# Troubleshooting

1. Check Docker logs:

* sudo journalctl -u docker

1. Reinstall Docker if necessary: -sudo yum remove docker

* sudo amazon-linux-extras disable docker > sudo rm -rf /var/lib/docker

1. Restart Docker service: -> > sudo systemctl restart docker
2. Upgrade Docker:

* sudo yum update -y docker