# WebSocket Cluster Setup with Docker:

## 1.Install Docker on Linux:

**Follow these steps to install Docker on your Linux machine.**

**# Update package index**

**sudo apt-get update**

**# Install prerequisites**

**sudo apt-get install -y \**

**apt-transport-https \**

**ca-certificates \**

**curl \**

**gnupg \**

**lsb-release**

**# Add Docker GPG key**

**curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /usr/share/keyrings/docker-archive-keyring.gpg**

**# Add Docker repository**

**echo "deb [arch=amd64 signed-by=/usr/share/keyrings/docker-archive-keyring.gpg] https://download.docker.com/linux/ubuntu $(lsb\_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null**

**# Install Docker engine**

**sudo apt-get update**

**sudo apt-get install -y docker-ce docker-ce-cli containerd.io**

**# Set Docker to restart always**

**sudo docker update --restart=always <container\_id\_or\_name>**

**# Check running containers**

**sudo docker ps -a**

**# Enable Docker to start on boot**

**systemctl enable docker.service**

**# Manually start Docker**

**systemctl start docker**

**# Stop Docker from starting on boot**

**systemctl disable docker.service**

**# Manually stop Docker**

**systemctl stop docker**

## 2.Install RabbitMQ with Docker:

**# Pull RabbitMQ image:**

**docker pull rabbitmq:latest**

**Run RabbitMQ container:**

**# bash**

**# Copy code**

**docker run -d --hostname rabbitmq --name myrabbitmq -p 15672:15672 -p 5672:5672 rabbitmq:latest**

**Access RabbitMQ management interface:**

**# bash**

**# Copy code**

**# Enable management plugin**

**docker exec -it <container\_id> /bin/bash**

**rabbitmq-plugins enable rabbitmq\_management**

**# Access RabbitMQ management interface in a browser**

**http://localhost:15672/**

**Restart RabbitMQ:**

**# bash**

**# Copy code**

**docker start <container\_id>**

**Deploy WebSocket Application with Docker:**

**In Visual Studio, add Dockerfile to the solution.**

**Publish to Docker Hub.**

**On the remote Linux server:**

**# bash**

**# Copy code**

**docker run --name mywebsocket -p 6969:6969 -d --restart=always lingxingyike/websocketapplication1:latest**

## 3.Nginx Installation with Docker:

**# Pull Nginx image:**

**# bash**

**# Copy code**

**docker pull nginx**

**Run Nginx container:**

**# bash**

**# Copy code**

**docker run --name mynginx -p 80:80 -d --restart=always nginx:latest**

**Access Nginx container:**

**# bash**

**# Copy code**

**docker exec -it mynginx /bin/bash**

**# Nginx Reverse Proxy Configuration:**

**# Nginx configuration file:**

**# nginx**

**# Copy code**

**user nginx;**

**worker\_processes auto;**

**error\_log /var/log/nginx/error.log notice;**

**pid /var/run/nginx.pid;**

**events {**

**worker\_connections 1024;**

**}**

**http {**

**upstream backend {**

**server 124.222.236.109:6969;**

**}**

**server {**

**listen 80;**

**server\_name 124.222.236.109;**

**location / {**

**proxy\_pass http://backend;**

**proxy\_redirect off;**

**proxy\_http\_version 1.1;**

**proxy\_read\_timeout 90;**

**proxy\_set\_header Upgrade $http\_upgrade;**

**proxy\_set\_header Connection "upgrade";**

**proxy\_set\_header Host $host:$server\_port;**

**proxy\_set\_header X-Real-IP $remote\_addr;**

**proxy\_set\_header X-Forwarded-For $proxy\_add\_x\_forwarded\_for;**

**}**

**}**

**}**

## References:

[.NET Core WebSocket Chat Room](https://zhuanlan.zhihu.com/p/144724847" \t "https://chat.openai.com/c/_new)

[.NET Core RabbitMQ Push](https://www.cnblogs.com/Leo_wl/p/10058742.html" \t "https://chat.openai.com/c/_new)

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[.NET Core RabbitMQ Operation](https://www.jb51.net/article/211896.htm" \t "https://chat.openai.com/c/_new)

[.NET Core RabbitMQ Usage](https://www.cnblogs.com/owenzh/p/11087923.html" \t "https://chat.openai.com/c/_new)

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