# WebApi网关Kong/Konga精讲

## 课前准备

1. 学习基础：熟悉Web Api、了解C#编程
2. 演示环境：CentoOS8、Windows 11、VMware Workstation Pro/VMware VCenter
3. 软件环境：Kong、Konga、Visual Studio 2022
4. 课件资料：<https://github.com/zmrbak/kong>
5. 课程类别：演示、实操教学
6. 参考资料：
   1. <https://konghq.com/>
   2. <https://pantsel.github.io/konga/>
   3. <https://www.vmware.com/cn/products/workstation-pro.html>

## VMware Workstation Pro 16安装

<http://www.vmware.com>

<https://www.vmware.com/cn.html>

## 下载&安装CentOS 8

<https://www.centos.org/>

<https://www.centos.org/download/>

## 下载&安装Docker引擎

<https://docs.docker.com/engine/install/centos/>

**卸载旧Docker**

yum remove docker \

docker-client \

docker-client-latest \

docker-common \

docker-latest \

docker-latest-logrotate \

docker-logrotate \

docker-engine

**安装yum工具**

yum install -y yum-utils

yum-config-manager \

--add-repo \

https://download.docker.com/linux/centos/docker-ce.repo

yum-config-manager --enable docker-ce-nightly

yum-config-manager --enable docker-ce-test

yum-config-manager --disable docker-ce-nightly

**安装Docker引擎**

yum install -y docker-ce docker-ce-cli containerd.io

**启动Docker**

systemctl start docker

systemctl enable docker

**验证Docker**

docker run hello-world

## 下载&安装Kong、Konga

**下载kong镜像**

docker pull kong

**命名kong（如果kong带有版本号）**

docker tag kong kong

**下载数据库**

docker pull postgres:9.6

**下载konga**

docker pull pantsel/konga

**创建网络**

docker network create kong-net

**创建数据库存储卷**

docker volume create kong-volume

**运行数据库**

docker run -d --name kong-database\

--network=kong-net \

-v kong-volume:/var/lib/postgresql/data \

-p 5432:5432 \

-e "POSTGRES\_USER=kong" \

-e "POSTGRES\_DB=kong" \

-e "POSTGRES\_PASSWORD=kong" \

--restart=always \

postgres:9.6

**为kong创建数据表**

docker run --rm --network=kong-net \

-e "KONG\_DATABASE=postgres" \

-e "KONG\_PG\_HOST=172.17.0.1" \

-e "KONG\_PG\_PASSWORD=kong" \

-e "KONG\_PASSWORD=kong" \

kong kong migrations bootstrap

**运行kong**

docker run -d --name kong\

--network=kong-net \

-e "KONG\_DATABASE=postgres" \

-e "KONG\_PG\_HOST=kong-database " \

-e "KONG\_PG\_USER=kong" \

-e "KONG\_PG\_PASSWORD=kong" \

-e "KONG\_CASSANDRA\_CONTACT\_POINTS=kong-database" \

-e "KONG\_PROXY\_ACCESS\_LOG=/dev/stdout" \

-e "KONG\_ADMIN\_ACCESS\_LOG=/dev/stdout" \

-e "KONG\_PROXY\_ERROR\_LOG=/dev/stderr" \

-e "KONG\_ADMIN\_ERROR\_LOG=/dev/stderr" \

-e "KONG\_ADMIN\_LISTEN=0.0.0.0:8001, 0.0.0.0:8444 ssl" \

-p 80:8000 \

-p 443:8443 \

-p 127.0.0.1:8001:8001 \

-p 127.0.0.1:8444:8444 \

--restart=always \

kong

**测试**

curl -i -X GET --url <http://127.0.0.1:8001/services>

**为konga创建数据表**

docker run --rm pantsel/konga -c prepare -a postgres -u postgresql://kong:kong@172.17.0.1/konga

**运行konga**

docker run -d -p 1337:1337 \

--network kong-net \

-e "TOKEN\_SECRET=kong" \

-e "DB\_ADAPTER=postgres" \

-e "DB\_HOST=kong-database" \

-e "DB\_PORT=5432" \

-e "DB\_USER=kong" \

-e "DB\_PASSWORD=kong" \

-e "DB\_DATABASE=konga" \

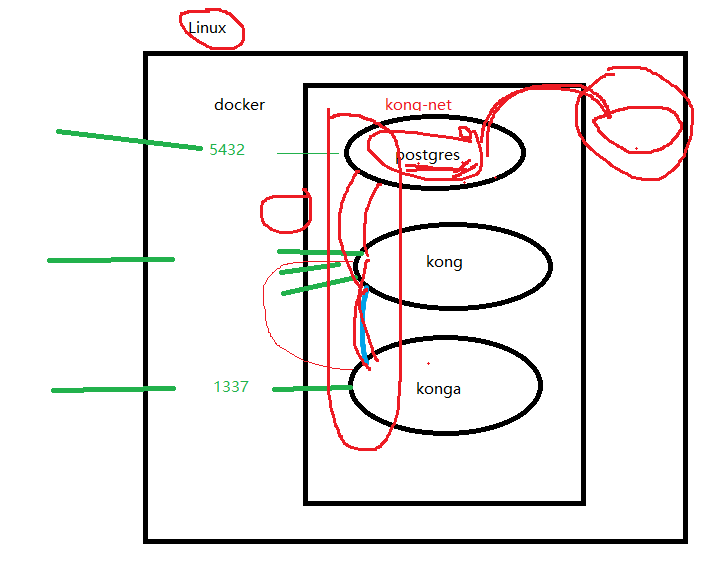
-e "NODE\_ENV=production" \

--name konga \

--restart=always \

pantsel/konga

## 安装kong、konga注意事项



## 在Linux服务器上安装.NET运行环境

yum install dotnet -y

{

"runtimeOptions": {

"tfm": "net6.0",

"framework": {

"name": "Microsoft.NETCore.App",

**"version": "6.0.0-rc.2.21470.23"**

},

"configProperties": {

"System.Reflection.Metadata.MetadataUpdater.IsSupported": false

}

}

}

firewall-cmd --add-service=http **--permanent**

firewall-cmd --reload

## 通过kong发布一个简单的服务

## 通过kong发布一个简单的路由

## 用多个服务器为服务提供负载平衡

## BASIC AUTH授权实战

## BASIC AUTH认证请求编码

## Key Auth认证实战

## Hmac Auth认证实战