上章回顾

- httpd.conf配置文件中哪一个选项是用来设置网站名称的?
- 如何设置网站的首页?
- 如何指定网站文档所在的目录?

本章内容

- 学会Web服务的访问控制
- 学会构建虚拟Web主机

本章结构

1、httpd服务的访问控制
   1）客户机地址限制
   2）用户授权限制
2、构建虚拟Web主机
   1）基于域名的虚拟主机
   2）基于IP地址的虚拟主机
   3）基于端口的虚拟主机

一、httpd服务的访问限制

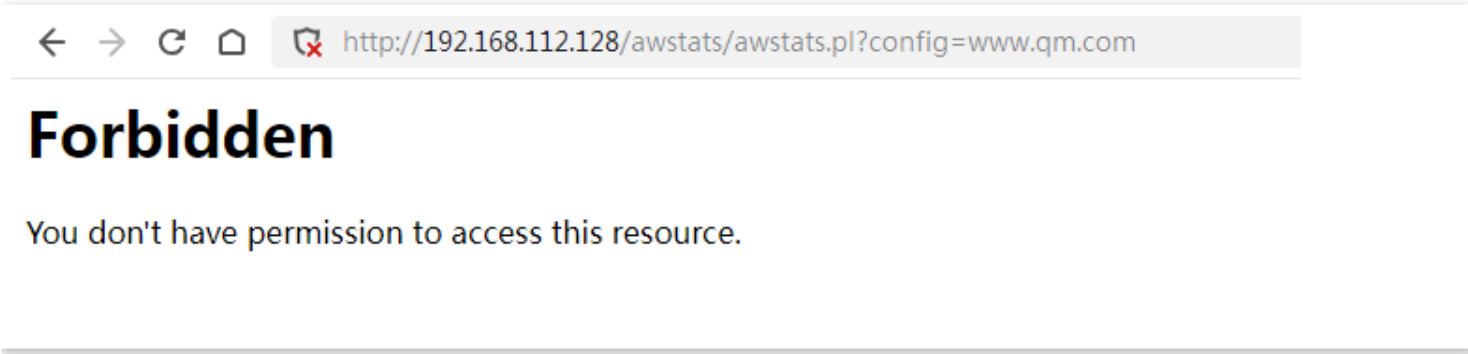
> 一般仅针对日志系统做限制，正常httpd展示页面不做限制

1、限制的作用以及方法
   - 控制对网页资源的查看
   - 针对用户地址限制登录
   - 登录网页需要提供账号密码认证

2、客户机地址限制
   - 如果改为将允许所有注释掉，Require ip 192.168.112.1 则表示仅允许这个IP访问
   - Require ip 192.168.112 #仅允许112.0网段访问

```
[root@localhost ] vim /usr/local/httpd/conf/httpd.conf
....
<Directory "/usr/local/awstats/wwwroot">
    Options None
    AllowOverride None
#    Order allow,deny
#    Allow from all
<RequireAll>
    Require all granted
    Require not ip 192.168.112.1
</RequireAll>
```

```
</Directory>
```



3、授权用户访问

1）创建授权文件

- htpasswd：生成密码脚本文件
- -c：创建文件，如果添加用户则不需要添加此选项

2）添加用户授权选项

- AuthName "awstats_name"　#保护区域名称
- AuthType Basic　#授权类型
- AuthUserFile /usr/local/httpd/conf/.awspwd　#授权用户的文件
- require valid-user　#授权有有效的用户，也就是文件中的所有用户，如果单个用户则直接添加用户名

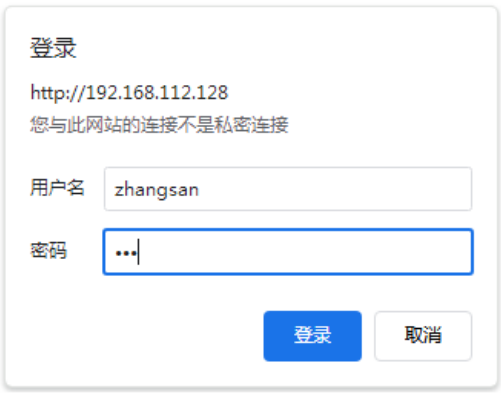
```
[root@localhost ~] /usr/local/httpd/bin/htpasswd -c /usr/local/httpd/conf/.awspwd zhangsan
New password:
Re-type new password:
Adding password for user zhangsan
[root@localhost ~] cat /usr/local/httpd/conf/.awspwd
zhangsan:$apr1$n9t.RVM0$VZzIXuR4YJgDQSw3GvT8M1
[root@localhost ~] /usr/local/httpd/bin/htpasswd  /usr/local/httpd/conf/.awspwd lisi
New password:
Re-type new password:
Adding password for user lisi
[root@localhost ~] cat /usr/local/httpd/conf/.awspwd
zhangsan:$apr1$n9t.RVM0$VZzIXuR4YJgDQSw3GvT8M1
lisi:$apr1$/TUbPeTQ$qvf6uoHU050eWbSfC2N2J.

[root@localhost ~] vim /usr/local/httpd/conf/httpd.conf
......
<Directory "/usr/local/awstats/wwwroot">
    Options None
    AllowOverride None
```

```
#    Order allow,deny
#    Allow from all
<Requireall>
        Require ip 192.168.4.254
        AuthName "sui bian xie mei guan xi"
        AuthType Basic
        AuthUserFile /usr/local/httpd/conf/.awspwd
        Require valid-user
</Requireall>


</Directory>

```



二、虚拟的web主机

1、优势

- 在一台物理机中部署多个独立的web站点
- 相互之间互不干扰

2、类型

- 基于域名的web主机
- 基于IP的web主机
- 基于端口的web主机

3、实例（基于域名）

1）部署DNS服务，搭建www.aaa.com、www.bbb.com域名

2）域名IP地址均指向web服务，客户机使用nslookup验证

```
C:\Users\a>nslookup www.aaa.com
```

```
服务器:  UnKnown
Address:  192.168.112.128

名称:    www.aaa.com
Address:  192.168.112.128


C:\Users\a>nslookup www.bbb.com
服务器:  UnKnown
Address:  192.168.112.128

名称:    www.bbb.com
Address:  192.168.112.128
```

3）httpd虚拟主机配置

```
[root@localhost ~] mkdir -p /html/aaa
[root@localhost ~] mkdir -p /html/bbb
[root@localhost ~] echo "this is aaa" > /html/aaa/index.html
[root@localhost ~] echo "this is bbb" > /html/bbb/index.html
[root@localhost ~] vim /usr/local/httpd/conf/extra/httpd-vhosts.conf
......
#
<VirtualHost *:80>
    DocumentRoot "/html/aaa"    #指定网站存储文档的路径
    ServerName www.aaa.com        #域名
    ErrorLog "logs/aaa.com-error_log"    #错误日志存放位置
    CustomLog "logs/aaa.com-access_log" common          #正确日志存放位置
</VirtualHost>

<VirtualHost *:80>
    DocumentRoot "/html/bbb"
    ServerName www.bbb.com
    ErrorLog "logs/bbb.com-error_log"
    CustomLog "logs/bbb.com-access_log" common
</VirtualHost>

[root@localhost ~] vim /usr/local/httpd/conf/httpd.conf
<Directory />
    AllowOverride none
   # Require all denied
```

```
    Require all granted     #开启允许访问权限
</Directory>
# Virtual hosts
Include conf/extra/httpd-vhosts.conf     #包含虚拟主机的配置文件
[root@localhost ~] systemctl restart httpd

```

4）客户机通过域名访问





4、实例（基于IP）

1）需要添加双网卡，实验环境可以使用临时虚拟网卡代替

```
[root@localhost ~] ifconfig ens33:1 192.168.112.100
[root@localhost ~] ifconfig ens33:2 192.168.112.101
[root@localhost ~] ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.112.128  netmask 255.255.255.0  broadcast 192.168.112.255
        inet6 fe80::700d:98a8:85ec:5adc  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:
f6:d0:6c  txqueuelen 1000  (Ethernet)
```

```
        RX packets 24437  bytes 20803074 (19.8 MiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 11134  bytes 3646858 (3.4 MiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

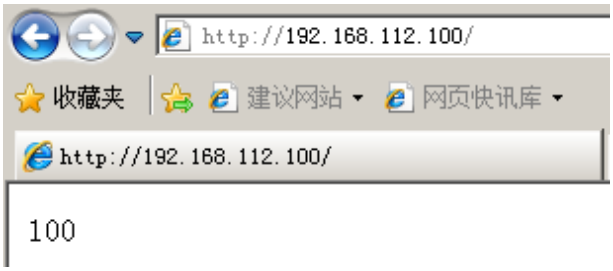
ens33:1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.112.100  netmask 255.255.255.0  broadcast 192.168.112.255
        ether 00:0c:29:f6:d0:6c  txqueuelen 1000  (Ethernet)

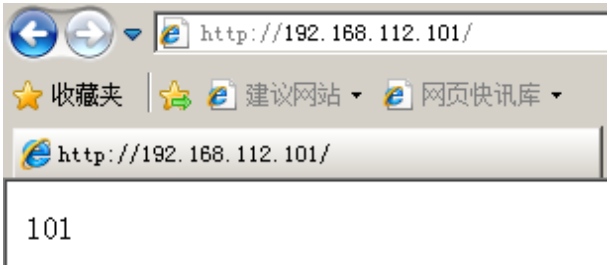
ens33:2: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.112.101  netmask 255.255.255.0  broadcast 192.168.112.255
        ether 00:0c:29:f6:d0:6c  txqueuelen 1000  (Ethernet)

[root@localhost ~] vim /usr/local/httpd/conf/httpd.conf
#
<VirtualHost 192.168.112.100:80>
    DocumentRoot "/html/aaa"
    ServerName www.aaa.com
    ErrorLog "logs/aaa.com-error_log"
    CustomLog "logs/aaa.com-access_log" common
</VirtualHost>

<VirtualHost 192.168.112.101:80>
    DocumentRoot "/html/bbb"
    ServerName www.bbb.com
    ErrorLog "logs/bbb.com-error_log"
    CustomLog "logs/bbb.com-access_log" common
</VirtualHost>
[root@localhost ~] systemctl restart httpd
[root@localhost ~] echo "100" > /html/aaa/index.html
[root@localhost ~] echo "101" > /html/bbb/index.html
```

2）重启服务通过IP地址登录





5、实例（基于端口）

1）需要添加Listen 端口号设置服务器允许监听新家的端口

```
[root@localhost ~] vim /usr/local/httpd/conf/extra/httpd-vhosts.conf
#
<VirtualHost 192.168.112.100:8888>
    DocumentRoot "/html/aaa"
    ServerName www.aaa.com
    ErrorLog "logs/aaa.com-error_log"
    CustomLog "logs/aaa.com-access_log" common
</VirtualHost>

<VirtualHost 192.168.112.100:6666>
    DocumentRoot "/html/bbb"
    ServerName www.bbb.com
    ErrorLog "logs/bbb.com-error_log"
    CustomLog "logs/bbb.com-access_log" common
</VirtualHost>

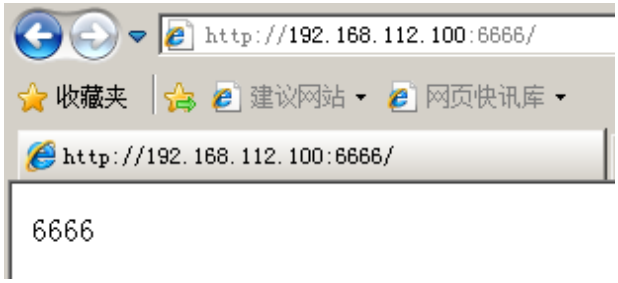
[root@localhost ~] vim /usr/local/httpd/conf/httpd.conf
...
Listen 80
Listen 8888
Listen 6666

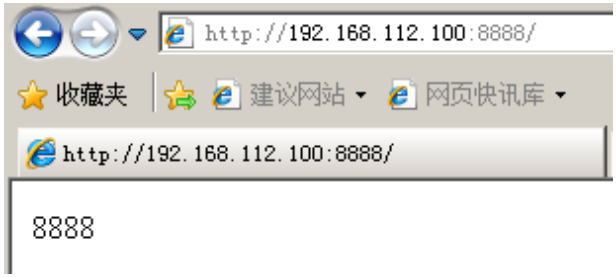
[root@localhost ~] systemctl restart httpd
[root@localhost ~] netstat -anpt | grep httpd
tcp6       0      0 :::6666                 :::*                    LISTEN
31729/httpd
tcp6       0      0 :::80                   :::*                    LISTEN
31729/httpd
tcp6       0      0 :::8888                 :::*                    LISTEN
31729/httpd

[root@localhost ~] echo "8888" > /html/aaa/index.html
[root@localhost ~] echo "6666" > /html/bbb/index.html
```

```
30
```

2）客户端输入ip:端口访问





如何实现拒绝192.168.1.0/24访问，允许其他所有访问?
访问网页时，报“Authorization Required”错误，可能是什么原因引起的

作业：

一、限制

1、要求仅客户机一台主机可以访问awstats网页！

2、要求使用用户访问，用户名为自己的名字

二、虚拟主机

1、完成基于域名、IP、端口的虚拟主机，两个域名分别都是同名域名，必须安装DNS服务完成