

引导服务器dhcp和NIS

■ 本章学习目标

- 掌握dhcp服务器的配置和使用
- 了解nis
- 掌握nis服务器的配置和使用



dhcp的相关文件

■ dhcp的主配置文件

➤ /etc/dhcpd.conf

■ dhcp网卡配置文件

➤ /etc/sysconfig/dhcpd

■ dhcp中继网卡配置文件

➤ /etc/sysconfig/dhcrelay

■ dhcp服务的启动/停止/重启

➤ service dhcpd start

➤ service dhcpd stop

➤ service dhcpd restart

dhcp的查询

■ dhcp是否安装

```
[root@RHEL5 ~]# rpm -qa |grep dhcp
dhcpv6-0.10-33.el5
dhcp-3.0.5-3.el5
dhcpv6_client-0.10-33.el5
[root@RHEL5 ~]# █
```

■ 查看dhcp服务

```
[root@RHEL5 ~]# chkconfig --list dhcpd
dhcpd          0:关闭  1:关闭  2:关闭  3:关闭  4:关闭  5:关闭  6:关闭
[root@RHEL5 ~]# █
```

配置dhcp服务器

■ 查看本机ip `[root@RHEL5 ~]# ifconfig |grep 'inet addr'`
 `inet addr:192.168.10.217 Bcast:192.168.10.255 Mask:255.255.255.0`
 `inet addr:127.0.0.1 Mask:255.0.0.0`
 `[root@RHEL5 ~]#`

■ 编辑主配置文件

➤ vi /etc/dhcpd.conf

```
7
8 subnet 192.168.10.0 netmask 255.255.255.0 {
9
10 # --- default gateway
11     option routers                192.168.10.217;
12     option subnet-mask            255.255.255.0;
13
14     option nis-domain              "domain.org";
15     option domain-name            "domain.org";
16     option domain-name-servers    192.168.10.217;
17
24
25     range dynamic-bootp 192.168.10.128 192.168.10.200;
26     default-lease-time 21600;
27     max-lease-time 43200;
28
```

配置dhcp服务器

■ 给dhcp配置网卡

```
[root@RHEL5 ~]# vi /etc/sysconfig/dhcpd
[root@RHEL5 ~]# cat /etc/sysconfig/dhcpd
# Command line options here
DHCPDARGS=eth0
[root@RHEL5 ~]#
```

■ 启动dhcp服务

```
[root@RHEL5 ~]# service dhcpd start
Starting dhcpd:
[root@RHEL5 ~]#
```

[OK]

配置dhcp中继服务器

■ 查看dhcp中继服务

```
[root@RHEL5 ~]# chkconfig --list dhcrelay
dhcrelay          0:关闭  1:关闭  2:关闭  3:关闭  4:关闭  5:关闭  6:关闭
[root@RHEL5 ~]#
```

■ 配置的dhcp中继网卡

```
[root@RHEL5 ~]# vi /etc/sysconfig/dhcrelay
[root@RHEL5 ~]# cat /etc/sysconfig/dhcrelay
# Command line options here
INTERFACES="eth1"
DHCPSEVERs="192.168.10.217"
[root@RHEL5 ~]#
```

配置dhcp中继服务器

■ 启动dhcp中继服务

```
[root@RHEL5 ~]# service dhcrelay start
Starting dhcrelay: Internet Systems Consortium DHCP Relay Agent V3.0.5-RedHat
Copyright 2004-2006 Internet Systems Consortium.
All rights reserved.
For info, please visit http://www.isc.org/sw/dhcp/
Listening on LPF/eth0/00:0c:29:f4:a1:6b
Sending on   LPF/eth0/00:0c:29:f4:a1:6b
Sending on   Socket/fallback

[ OK ]

[root@RHEL5 ~]# █
```

开启路由器或三层交换机支持DHCP中继功能
ip help-address 192.168.0.254

NIS简介

■ NIS

- **Network Information Services**,网络信息服务
- NIS原来的名称为黄页(**Yellow Pages**)
- **Sun Microsystems**组织开发
- 用于**UNIX**系统的集中管理



nis的相关文件

■ nis的主配置文件

➤ /etc/ypserv.conf

■ nis的客户端配置文件

➤ /etc/yp.conf

■ nis服务器的启动/停止/重启

➤ **service ypserv start;service yppasswdd start**

➤ **service ypserv stop**

➤ **service ypserv restart**

nis的查询

■ 软件是否安装

```
[root@RHEL51 ~]# rpm -qa |grep ypserv
ypserv-2.19-3
[root@RHEL51 ~]# █
[root@RHEL51 ~]# rpm -qa |grep ypbind
ypbind-1.19-7.el5
[root@RHEL51 ~]#
```

■ 查询nis服务

```
[root@RHEL51 ~]# chkconfig --list ypserv
ypserv          0:关闭  1:关闭  2:关闭  3:关闭  4:关闭  5:关闭  6:关闭
[root@RHEL51 ~]# chkconfig --list ypbind
ypbind          0:关闭  1:关闭  2:关闭  3:关闭  4:关闭  5:关闭  6:关闭
[root@RHEL51 ~]# chkconfig --list yppasswdd
yppasswdd       0:关闭  1:关闭  2:关闭  3:关闭  4:关闭  5:关闭  6:关闭
[root@RHEL51 ~]#
```

配置nis服务器

■ 服务器端的设置

- 设置nis域名
- vi /etc/sysconfig/network
- vi /etc/rc.local
- disdomainname nis域名

```
[root@RHEL51 ~]# vi /etc/sysconfig/network
[root@RHEL51 ~]# tail -1 /etc/sysconfig/network
NISDOMAIN=nisl
[root@RHEL51 ~]# vi /etc/rc.local
[root@RHEL51 ~]# tail -1 /etc/rc.local
nisdomainname nisl
[root@RHEL51 ~]# nisdomainname nisl
[root@RHEL51 ~]# nisdomainname
nisl
[root@RHEL51 ~]#
```

配置nis服务器

■ 编辑主配置文件

➤ vi /etc/ypserv.conf

```
[root@RHEL5 ~]# vi /etc/ypserv.conf
[root@RHEL5 ~]# tail -3 /etc/ypserv.conf
127.0.0.0/255.255.0.0      : *      : *      : none
192.168.10.0/255.255.255.0 : *      : *      : none
*                          : *      : *      : none
[root@RHEL5 ~]#
```

■ 编辑客户端配置文件

➤ vi /etc/yp.conf

```
[root@RHEL5 ~]# vi /etc/yp.conf
[root@RHEL5 ~]# tail -1 /etc/yp.conf
ypserver      127.0.0.1
[root@RHEL5 ~]# █
```

配置nis服务器

■ 启动nis服务

➤ 查看portmap服务

```
[root@RHEL51 ~]# chkconfig --list portmap
portmap          0:关闭  1:关闭  2:关闭  3:启用  4:启用  5:启用  6:关闭
[root@RHEL51 ~]#
```

➤ 启动ypserv和yppasswdd服务

```
[root@RHEL51 ~]# service ypserv start
Starting YP server services:
[root@RHEL51 ~]# service yppasswdd start
Starting YP passwd service:
[root@RHEL51 ~]#
```

[OK]

[OK]

配置nis服务器

■ 初始化nis域

```
[root@RHEL51 ~]# /usr/lib/yp/ypinit -m
```

At this point, we have to construct a list of the hosts which will run NIS servers. RHEL51 is in the list of NIS server hosts. Please continue to add the names for the other hosts, one per line. When you are done with the list, type a <control D>.

```
next host to add: RHEL51
```

```
next host to add:
```

■ 配置指定的网络访问nis域

■ vi /var/yp/securenets

```
[root@RHEL51 ~]# vi /var/yp/securenets
[root@RHEL51 ~]# cat /var/yp/securenets
host 127.0.0.1
255.255.255.0 192.168.10.0
[root@RHEL51 ~]#
```

配置nis服务器

■ 启动客户端服务

```
[root@RHEL51 ~]# service ypbind start
Turning on allow_ypbind SELinux boolean
Binding to the NIS domain:
Listening for an NIS domain server.
..
```

■ 测试

- ypwhich -x
- ypcat passwd

配置nis服务器

```
[root@RHEL51 ~]# ypwhich -x
Use "ethers"      for map "ethers.byname"
Use "aliases"     for map "mail.aliases"
Use "services"    for map "services.byname"
Use "protocols"   for map "protocols.bynumber"
Use "hosts"       for map "hosts.byname"
Use "networks"    for map "networks.byaddr"
Use "group"       for map "group.byname"
Use "passwd"      for map "passwd.byname"
[root@RHEL51 ~]# ypcat passwd
u3:$1$sOnGjIuh$EAUoHM/Gq9tjECwXuMBvz0:502:502::/home/u3:/bin/bash
u5:$1$NiF0qxu3$DbEMDKNBVkndJmQQfgCcF.:504:504::/home/u5:/bin/bash
u2:$1$q6ulW96D$i5PrbpxNk8DNw5HKui8jj0:501:501::/home/u2:/bin/bash
u1:$1$i71awpFN$OX0Y8iHE1EUUEz4ZF97Kh1:500:500::/home/u1:/bin/bash
u4:$1$h.71ul4s$cUrC/pfR.8LzGP5K5luVn1:503:503::/home/u4:/bin/bash
[root@RHEL51 ~]#
```

配置nis客户端

■ 设置nis域名

- vi /etc/sysconfig/network
- vi /etc/rc.local
- nisdomainname nis域名

```
[root@RHEL52 ~]# vi /etc/sysconfig/network
[root@RHEL52 ~]# tail -1 /etc/sysconfig/network
NISDOMAIN=nisl
[root@RHEL52 ~]# vi /etc/rc.local
[root@RHEL52 ~]# tail -1 /etc/rc.local
nisdomainname nisl
[root@RHEL52 ~]# nisdomainname nisl
[root@RHEL52 ~]# nisdomainname
nisl
[root@RHEL52 ~]#
```


配置nis客户端

■ 配置/etc/yp.conf

➤ vi /etc/yp.conf

```
[root@RHEL52 ~]# vi /etc/yp.conf
[root@RHEL52 ~]# tail -1 /etc/yp.conf
domain nis1 server 192.168.10.237
[root@RHEL52 ~]# █
```

■ 配置/etc/nsswitch.conf

```
33 passwd:      files nis
34 shadow:      files nis
35 group:       files nis
36
37 #hosts:       db files nisplus nis dns
38 hosts:       files nis dns
```


配置nis客户端

■ 启动客户端服务,并设置ypbind开机自动启动

➤ **service ypbind start**

➤ **chkconfig --level 2345 ypbind on**

```
[root@RHEL52 ~]# service ypbind start
Turning on allow_ypbind SELinux boolean
Binding to the NIS domain: [ OK ]
Listening for an NIS domain server.
[root@RHEL52 ~]# chkconfig --level 2345 ypbind on
[root@RHEL52 ~]#
```

➤ 测试连接

```
[root@RHEL52 ~]# ypcat passwd
u3:$1$sOnGjIuh$EAUoHM/Gq9tjECwXuMBvz0:502:502::/home/u3:/bin/bash
u5:$1$NiF0qxu3$DbEMDKNBVknJmQQfgCcF.:504:504::/home/u5:/bin/bash
u2:$1$q6ulW96D$i5PrbpXNk8DNw5HKui8jj0:501:501::/home/u2:/bin/bash
u1:$1$i71awpFN$OX0Y8iHE1EUUEz4ZF97Kh1:500:500::/home/u1:/bin/bash
u4:$1$h.71ul4s$cUrC/pfR.8LzGP5K5luVn1:503:503::/home/u4:/bin/bash
[root@RHEL52 ~]#
```

配置nis客户端

■ 配置客户端启动时登录到NIS域

```
[root@RHEL52 ~]# vi /etc/sysconfig/authconfig
[root@RHEL52 ~]# tail -1 /etc/sysconfig/authconfig
USENIS=yes
[root@RHEL52 ~]# █
```

■ 测试

```
[root@RHEL52 ~]# ssh u1@192.168.10.239
u1@192.168.10.239's password:
Last login: Mon Dec 31 15:40:51 2007 from 192.168.10.239
Could not chdir to home directory /home/u1: No such file or directory
-bash-3.1$ pwd
/
-bash-3.1$ █
```

服务器端配置客户端漫游配置文件

■ 配置nfs

➤ nfs开机自动启动

- `chkconfig --level 345 nfs on`

➤ 配置/home目录为nfs共享

```
[root@RHEL51 ~]# vi /etc/exports
[root@RHEL51 ~]# cat /etc/exports
/home 192.168.10.0/24(rw,sync)
[root@RHEL51 ~]#
```

➤ 重启nfs

- `service nfs restart`

客户端设定

■ 更改开机自动加载文件

```
[root@RHEL52 ~]# vi /etc/fstab
[root@RHEL52 ~]# tail -1 /etc/fstab
192.168.10.237:/home      /home      nfs      defaults      0 0
[root@RHEL52 ~]# █
```

■ 重新加载并测试

```
[root@RHEL52 ~]# ssh u1@192.168.10.239
u1@192.168.10.239's password:
Last login: Mon Dec 31 15:53:44 2007 from 192.168.10.239
[u1@RHEL52 ~]$ pwd
/home/u1
[u1@RHEL52 ~]$ █
```

总结

- dhcp服务器的作用
- nis是什么?作用是什么?



上机实验

- 配置dhcp服务器
 - 两个作用域
- 配置nis服务器和nis客户端



作业

■ 配置dhcp服务器

- 多个作用域
- IP地址域MAC地址绑定

■ 配置nis

- 服务器
- 客户端
- 测试



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