

用 bind 和 squid 打造自己的 CDN 单服务器版

-----Easy-CDN 系列之 LINUX 版

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前 言

本教程是 Easy-CDN 系列的第二篇，前一篇是<< bind+squid 打造 WIN2003 下的 CDN 菜鸟图文版>>,相对来说非常简单，能够快速的搭建一个 WIN 版的 CDN 测试平台。这篇我再讲一下如何快速的搭建 LINUX 下单服务器的 CDN 平台，希望能够对大家有点用处。

本教程综指是快速打造 CDN 系统，所以本教程中会给出详细的配置供大家参考，本教程中的整套系统架构都运行在 CentOS5.0 上,当然也可以是其它的的 LINUX。

准备工作

前期准备工作

- 域名一个 (我们做智能 DNS 用)
- 两台服务器 (一台安装智能 DNS，一台安装 squid)

在两台服务器上分别安装 centos5.0 的系统，安装上开发工具，将其它服务器的全部去掉，就要干净的系统!具体的安装过程我就不写了，比如我们的源服务器放在教育,,那么 squid 服务器就到到电信通。然后到万网或者新网，把域名迁出，交给我们的服务器自己解释，(注：这个到供应商那去弄，万网好像要钱的，新网可以免费开通)

申请 ns.easy-cdn.cn 211.13.153.103

Ns1.easy-cdn.cn 58.109.32.88

源服务器 ip:58.109.32.26

Squid 服务器 ip:211.13.153.104

智能 DNS 安装

再在我们来安装 DNS，，先下载 bind

```
[root@localhost ~]#wget http://ftp.isc.org/isc/bind9/9.4.2/bind-9.4.2.tar.gz
```

```
[root@localhost ~]#tar -zxvf bind-9.4.2.tar.gz
```

```
[root@localhost ~]#cd bind-9.4.2
```

```
[root@localhost bind-9.4.2]#./configure --prefix=/usr/local/named
```

```
[root@localhost bind-9.4.2]#make;make install
```

我们将 bind 编译，再安装到/usr/local/bind 的目录下,等待安装完成后，再到

```
[root@localhost ~]# cd /usr/local/named
```

```
[root@localhost named]# ls
```

```
bin  etc  include  lib  sbin  share  var
```

```
[root@localhost named]
```

然后我们对 BIND 进行配置，

```
[root@localhost named]cd sbin
```

```
[root@localhost sbin] ./rndc-confgen -a
```

```
[root@localhost sbin] ./rndc-confgen >../etc/rndc.conf
```

```
[root@localhost sbin]cd ../etc
```

```
[root@localhost etc] tail -10 rndc.conf |head -9 |sed s/#\ //g >named.conf
```

```
[root@localhost etc]dig >named.root
```

```
[root@localhost etc]cat named.conf
```

```
key "rndc-key" {  
    algorithm hmac-md5;  
    secret "e4Byvnc7nWweCsYVMJvrYA==";  
};
```

```
controls {  
    inet 127.0.0.1 port 953  
        allow { 127.0.0.1; } keys { "rndc-key"; };  
};
```

```
logging {  
    channel warning  
    { file "/var/log/named/dns_warnings" versions 3 size 1240k;  
    severity warning;  
    print-category yes;  
    print-severity yes;  
    print-time yes;  
    };  
    channel general_dns  
    { file "/var/log/named/dns_logs" versions 3 size 1240k;  
    severity info;
```

```
print-category yes;
print-severity yes;
print-time yes;
};
category default { warning; };
category queries { general_dns; };
};
```

```
include "edu.conf";
view "view_edu" {
match-clients { EDU; };
zone "." {
type hint;
file "named.root";
};
```

```
zone "0.0.127.IN-ADDR.ARPA" {
type master;
file "localhost.zone";
};
```

```
include "master/edu.def";
};
```

```
view "view_any" {
match-clients { any; };
zone "." {
type hint;
file "named.root";
};
```

```
zone "0.0.127.IN-ADDR.ARPA" {
type master;
file "localhost.zone";
};
```

```
include "master/telecom.def";
};
```

创建日志存档目录及文件

```
[root@localhost etc]# mkdir -p /var/log/named
[root@localhost etc]# > /var/log/named /dns_warnings
[root@localhost etc]# > /var/log/named /dns_logs
[root@localhost etc]# chmod 777 /var/log/named /dns_warnings
```

```
[root@localhost etc]# chmod 777 /var/log/named /dns_logs
```

```
[root@localhost etc]# cat edu.conf
```

```
#2007/11/22 by badboy
```

```
acl "EDU" {
```

```
162.105.0.0/16;
```

```
166.111.0.0/16;
```

```
202.4.128.0/19;
```

```
202.112.64.0/18;
```

```
202.112.128.0/17;
```

```
202.113.0.0/16;
```

```
202.204.0.0/14;
```

```
210.31.0.0/16;
```

```
211.68.0.0/16;
```

```
211.71.0.0/16;
```

```
211.81.0.0/16;
```

```
211.82.0.0/16;
```

```
//这里不全，大家可以自己找
```

```
};
```

```
[root@localhost etc]# cat localhost.zone
```

```
$TTL 86400
```

```
$ORIGINlocalhost.
```

```
@ 1D IN SOA @ root (
```

```
42 ; serial
```

```
3H ; refresh
```

```
15M ; retry
```

```
1W ; expiry
```

```
1D ) ; minimum
```

```
1D IN NS @
```

```
1D IN A 127.0.0.1
```

```
[root@localhost etc]mkdir master
```

```
[root@localhost master]cat edu.def
```

```
zone "easy-cdn.cn" {
```

```
type master;
```

```
file "master/edu/easy-cdn.cn";
```

```
};
```

```
[root@localhost master]cat telecom.def
```

```
zone "easy-cdn.cn" {
```

```
type master;
```

```
file "master/telecom/easy-cdn.cn";
```

```
};
```

```
[root@localhost etc]mkdir edu;mkdir telecom
```

```
[root@localhost etc]cd edu
[root@localhost edu]cat easy-cdn.cn
3600
    Easy-cdn.cn.
@ IN SOA ns.easy-cdn.cn. root.ns.easy-cdn.cn.(
2006111520 ;Serial
3600 ; Refresh ( seconds )
900 ; Retry ( seconds )
68400 ; Expire ( seconds )
15 );Minimum TTL for Zone ( seconds )
;
@ IN NS ns1.easy-cdn.cn.
@ IN A 58.109.32.88
www IN A 58.109.32.26
* IN A 58.109.32.26
;
;end
[root@localhost etc]cd ../cd telecom
[root@localhost telecom]cat easy-cdn.cn
3600
    Easy-cdn.cn.
@ IN SOA ns1.easy-cdn.cn. root.ns1.easy-cdn.cn.(
2006111520 ;Serial
3600 ; Refresh ( seconds )
900 ; Retry ( seconds )
68400 ; Expire ( seconds )
15 );Minimum TTL for Zone ( seconds )
;
@ IN NS ns.easy-cdn.cn.
@ IN A 211.13.153.103
www IN A 211.13.153.104
* IN A 211.13.153.104
;
;end
```

//运行

```
[root@localhost etc]cd ../cd bin
[root@localhost bind]./.named -g
[root@localhost bind]echo "/usr/local/named/sbin/named -g" >>/etc/rc.local
```

这样智能 DNS 就安装好了，接下来安装 squid

这样，教育网用户全部解释到 58.109.32.26 上去，而除教育网外的所以用户解释到 211.13.153.104 上面。

Squid 的安装及配置

接下来在另一台服务器上安装 squid，现在我们用的是 2.6B17

编译选项为

```
./configure --prefix=/usr/local/squid --enable-follow-x-forwarded-for  
--enable-storeio=aufs,ufs --with-maxfd=65536 --with-pthreads --enable-dlmalloc  
--enable-poll --enable-stacktraces --enable-removal-policies=heap,lru  
--enable-delay-pools --enable-snmp --disable-internal-dns
```

这些就不一一讲了，就讲两个吧，

--enable-follow-x-forwarded-for 让缓存的用户可以看到实际的 IP

--disable-internal-dns 使用内部的 DNS，也可用 hosts

编译安装完后，SQUID 的目录为 /usr/local/squid

下面就是配置 squid

到 /usr/local/squid/etc/ 下，将 squid.conf 删除，新建一个 squid.conf，内容如下

```
http_port 80 vhost  
acl apache rep_header Server ^Apache  
broken_vary_encoding allow apache  
cache_mem 64 MB  
maximum_object_size 4096 KB  
minimum_object_size 0 KB  
maximum_object_size_in_memory 256 KB  
cache_dir ufs /cache1 20480 16 256  
cache_dir ufs /cache2 20480 16 256  
cache_swap_low 80  
cache_swap_high 97  
strip_query_terms off  
request_body_max_size 5 MB  
memory_pools on  
memory_pools_limit 50 MB  
access_log none  
cache_log /var/log/squid/cache.log  
cache_store_log none  
pid_filename /var/run/squid.pid  
hosts_file /etc/hosts  
  
refresh_pattern ^ftp: 1440 20% 1440  
refresh_pattern -i .gif 10 40% 30 ignore-reload  
refresh_pattern -i .jpg 10 40% 30 ignore-reload  
refresh_pattern -i .htm 120 90% 1 reload-into-ims  
refresh_pattern -i .html 120 90% 1 reload-into-ims  
refresh_pattern -i .css 10 40% 30 ignore-reload  
refresh_pattern -i .swf 10 40% 30 ignore-reload  
refresh_pattern -i .cur 10 40% 30 ignore-reload
```



```
refresh_pattern -i .js$ 10 40% 30 ignore-reload
refresh_pattern . 0 20% 60

acl all src 0.0.0.0/0.0.0.0
acl p-manager proto cache_object
acl s-localhost src 127.0.0.1/255.255.255.255
acl d-localhost dst 127.0.0.0/8
acl d-domains dstdomain "/cdn/squid/etc/dstdn.conf"
acl p-ssl port 443 563
acl p-safe port 80 443 563
acl m-conn method CONNECT
acl m-purge method PURGE
acl n-maxconn maxconn 15
http_access allow p-manager s-localhost
http_access allow m-purge
http_access deny !p-safe
http_access deny m-conn !p-ssl
http_access deny n-maxconn
http_access allow p-manager
http_access allow d-domains
http_access deny all
http_reply_access allow all
acl r-url urlpath_regex realtime
cache deny r-url
icp_access allow all
follow_x_forwarded_for allow all
acl_uses_indirect_client offrange_offset_limit -1
dns_timeout 2 seconds
forward_timeout 10 seconds
connect_timeout 10 seconds
peer_connect_timeout 6 seconds
read_timeout 10 seconds
request_timeout 6 seconds
persistent_request_timeout 16 seconds
cache_mgr badb0y@easy-cdn.cn
cache_effective_user nobody
cache_effective_group nobody
visible_hostname telecom.easy-cdn.cn
logfile_rotate 0
always_direct allow all
error_directory /usr/local/squid/share/errors/Simplify_Chinese
```

//再创建缓存目录

cd /

```
mkdir cache1;mkdir cache2
chown -R nobody:nobody cache1
chown -R nobody:nobody cache2
chmod -R 777 cache1
chmod -R 777 cache2

//创建日志目录
mkdir -p /var/log/squid
chown -R nobody:nobody /var/log/squid
chmod -R 777 /var/log/squid
>/var/log/squid/cache.log
chmod 777 /var/log/squid/cache.log

>/var/run/squid.pid
chmod 777 /var/run/squid.pid

//缓存的域名,,可以多加
cat dstdn.conf
.easy-cdn.cn

//添加 HOST 的内容
Cat /etc/hosts
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1    localhost.localdomain localhost
::1        localhost6.localdomain6 localhost6
58.109.32.26    www.easy-cdn.cn    easy-cdn.cn telecom.easy-cdn.cn

//生成缓存目录
/usr/local/squid/sbin/squid -z

//加入到启动里面
Echo "/usr/local/squid/sbin/squid -D" >>/etc/rc.local
```

Squid 已经安装好了

测 试

可能到现在了，还有些人很晕，那么现在我简单的来说明一下过程。

首先，智能 DNS 通用用户的 dns 来判断用来来自那个网，如果是教育的话，智能 DNS 就把用户解释到源服务器--58.109.32.26 上去，如果发现不 IP 段不在 edu.conf 所定义的范围内，那么，智能 DNS 就把域名指到 211.13.153.104 上，但 211.13.153.104 是没有内容的，通过/etc/hosts，它会向 58.109.32.26 上拿资源，再返回给非教育网的用户。从而实现的内容缓存。好了，其它不多讲了，现在来测试一下

```
C:\>nslookup www.easy-cdn.cn 202.38.64.1
```

这个是教育网的 DNS，所以返回 58.109.32.26 是正确的

```
C:\>nslookup www.easy-cdn.cn 219.141.140.10
```

```
C:\>nslookup www.easy-cdn.cn 202.106.0.20
```

上面两个 DNS 一个是电信，一个是网通，所以返回的是 211.13.153.104 是正确的

查看是否被缓存，WIN 下可以用 curl 来查看，下载地址为：

<http://curl.haxx.se/latest.cgi?curl=win32-nossl>

```
curl.exe -I http://www.easy-cdn.cn
```

如果出现 X-Cache: HIT from telecom.easy-cdn.cn,就表明被缓存了，

后 记

下一次会讲 easy-cdn 的第三讲，建一个企业级的 CDN，智能 CDN 会采用 mysql+php 进行管理，squid 也会改用 3.0 的，SQUID3.0 和 2.6 的配置有一些不一样，squid3.0 的命中率更高。Squid 也会采用集群模式。

因本人不擅长写文章，所以文章写的有些乱。最近在 GOOGLE 开了一个开源项目，对 CDN 有兴趣的朋友可以加入进来，希望能把 Easy-CDN 做的更好

<http://code.google.com/p/easy-cdn>

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