项目要求

项目名称: ABC公司IDC机房托管中心项目实施

项目要求：
1. 租用IDC机房机柜,机柜带宽,服务器性能自己挑选
2. 使用pxe(cobbler)批量安装系统与初始化配置（规划IP地址）
3. 服务器采用2网卡设计,接入公网与内网IP
4. 实现智能DNS，方便公网用户快速访问
5. 采用LNMP架构,实现ABC公司论坛到搭建,论坛采用PHP语言开发
6. 采用nginx+tomcat+jdk+jsp页面,实现对公司企业网站的WEB实现
7. 使用nginx调度器，对2套网页(php,jsp)负载均衡
8. 采用CDN架构(squid/varnish)实现静态数据加速
9. 采用rsync-sersync将所有服务器数据实现一致性
10. 安装mysql集群实现一主多从,通过读写分离实现主读从写
11. 使用redis或者memcache对PHP加速缓存，解决JSP会话一致性
12. 采用openldap，实现对服务器帐号集中制管理
13. 设计内网ssh管理方案
14. 设置公网防火墙,对ssh与http协议开放
15. 使用监控系统cacti,nagios,zabbix监控主机资源及时报警
16. IDC托管中心考察广州几家：如唯一网络,长城带宽等(各种费用)

说明(思路)
1) 搭建pxe批量安装系统(kvm克隆)
2) 安装后端数据库实现mysql读写分离与主从复制(建议5台[1台])
3) 安装servsync实现页面一致性的发布(NFS共享存储)
4) 安装nginx+php+memcache/redis(php论坛) bbs.abc.com 2台
5) 安装nginx+tomcat+jdk+jsp+memcache(jsp企业网站) www.abc.com 2台
6) 安装nginx反向代理服务器(调度器)实现负载均衡(轮循) 1台
7) 安装squid或者varnish实现静态缓存加速（CDN）2台
8) 安装nginx反向代理服务器(双机互备) 1台
9) 通过DNS轮循访问2台nginx调度器 建议2台<DNS主从> 1台
10) 搭建openldap实现帐号集中制管理
11) 设计ssh服务(监听内网,使用密钥对登录,设置跳板机)
12) 设计防火墙规则,只允许公网访问http与ssh协议
13) 编写项目文档

----
mysql/servsync 1台
nginx+php+memcache 2台
nginx+tomcat+memcache 2台
nginx反向代理 2台
squid反向代理 2台
DNS轮循 1台
-----------------------10台----------

项目准备工作

步骤
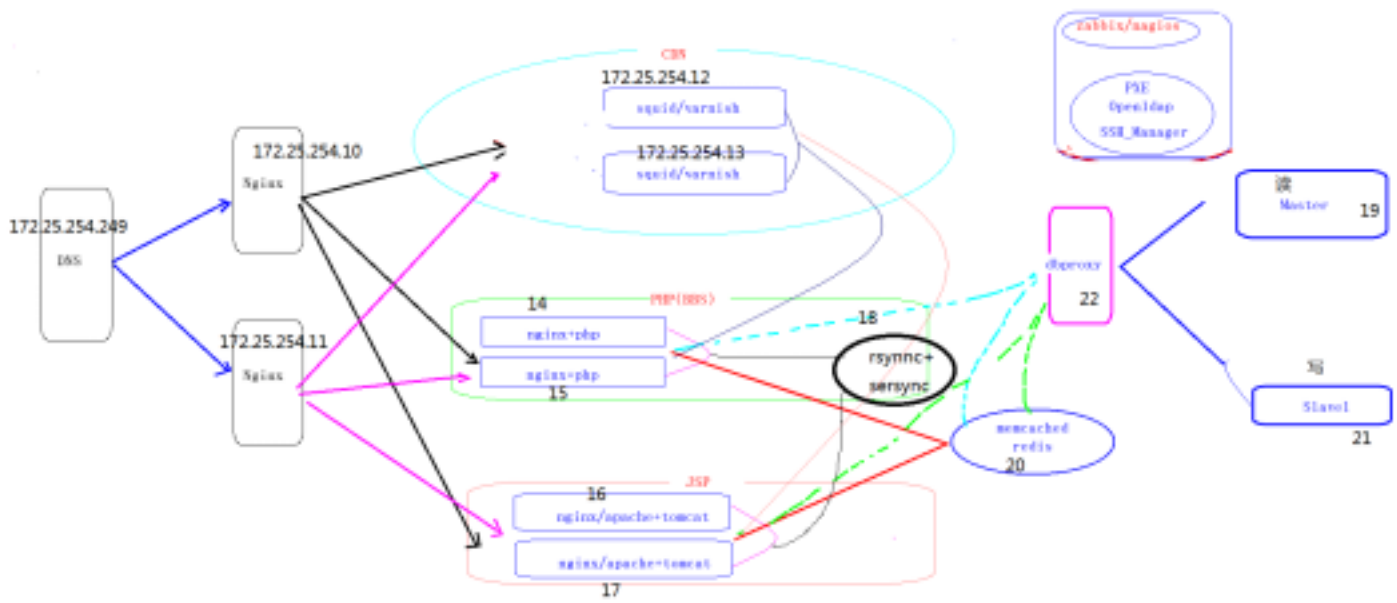
nginxa   172.25.254.10(调度器)
phpe   172.25.254.14
mysqlj   172.25.254.19

[root@nginxa ~]# rpm -ivh nginx-1.8.1-1.el7.ngx.x86_64.rpm

[root@phpe ~]# rpm -ivh spawn-fcgi-1.6.3-5.el7.x86_64.rpm
[root@phpe ~]# rpm -ivh nginx-1.8.1-1.el7.ngx.x86_64.rpm
[root@phpe ~]# yum -y install php php-mysql
[root@mysqlj ~]# yum -y install mariadb

[root@nginxa ~]# cd /etc/nginx/conf.d/

[root@nginxa conf.d]# ls
default.conf example_ssl.conf

[root@nginxa conf.d]# cat default.conf
```
server {
    listen       80;
    server_name 127.0.0.1;
      location ~ .*\.php$ {
          proxy_pass   http://wphp_pools;
          proxy_set_header Host $host;
          proxy_set_header X-Forwarded-For $remote_addr;
       }
       location / {
       index  index.php index.html index.htm;
          proxy_pass   http://wphp_pools;
          proxy_set_header Host $host;
          proxy_set_header X-Forwarded-For $remote_addr;
       }
}
```

```
[root@nginxa conf.d]# vim /etc/nginx/nginx.conf

    upstream wphp_pools {
        server 172.25.254.14;
}


[root@phpe ~]# ls
anaconda-ks.cfg          nginx-1.8.1-1.el7.ngx.x86_64.rpm  upload
Discuz_X3.1_SC_UTF8.zip  readme                            utility
[root@phpe ~]# mkdir /usr/share/nginx/wphp.com
[root@phpe ~]# unzip Discuz_X3.1_SC_UTF8.zip

[root@phpe ~]# cp -r upload/* /usr/share/nginx/wphp.com
[root@phpe ~]# cd /usr/share/nginx/
[root@phpe nginx]# chown -R nginx. wphp.com/


[root@nginxa ~]#systemctl start nginx
[root@mysqlj ~]#systemctl start mariadb
[root@mysqlj ~]# mysql

MariaDB [(none)]> delete from mysql.user where user=";
MariaDB [(none)]> update mysql.user set password=password('mysql') where user='root';
MariaDB [(none)]> flush privileges;
```

新建BBS论坛 JSP网站库
```
MariaDB [(none)]> create database php default charset utf8;
MariaDB [(none)]> create database jsp default charset utf8;

MariaDB [(none)]> grant all on php.* to wphp@'%' identified by 'wphp';
MariaDB [(none)]> grant all on jsp.* to wjsp@'%' identified by 'wjsp';
MariaDB [(none)]> flush privileges;

[root@phpe ~]# vim /etc/sysconfig/spawn-fcgi

OPTIONS="-u nginx -g nginx -p 9000 -C 32 -F 1 -P /var/run/spawn-fcgi.pid -- /usr/bin/php-cgi"

[root@phpe /]# systemctl start spawn-fcgi
```
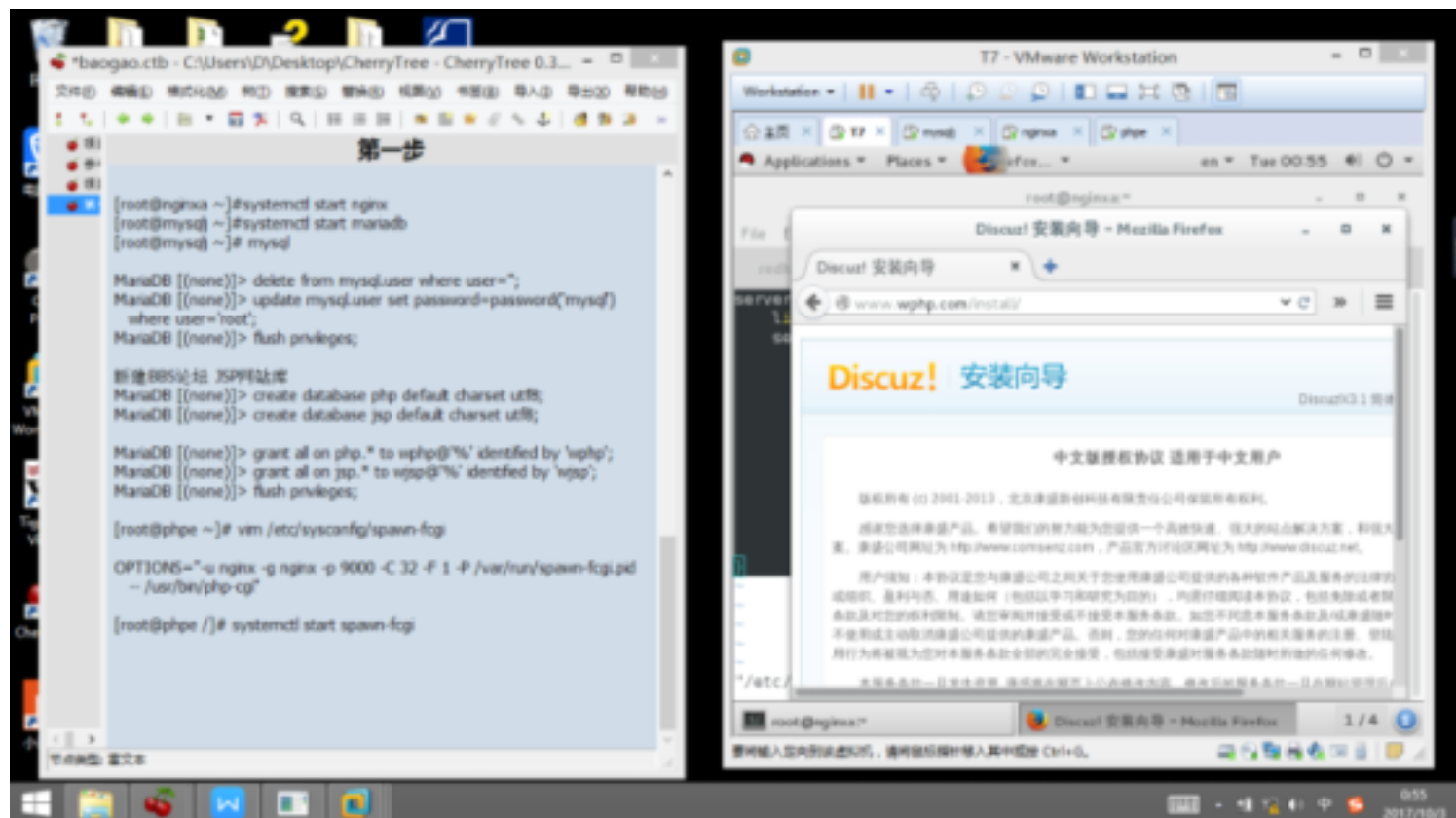
phpf   172.25.254.15


```
[root@nginxa ~]# rpm -ivh nginx-1.8.1-1.el7.ngx.x86_64.rpm
[root@phpf ~]# rpm -ivh spawn-fcgi-1.6.3-5.el7.x86_64.rpm
[root@phpf ~]# yum -y install php php-mysql
[root@phpf ~]# mkdir /usr/share/nginx/wphp.com
```

```
[root@phpe ~]# scp -r /usr/share/nginx/wphp.com/*  172.25.254.15:/usr/share/nginx/wphp.com
[root@phpf wphp.com]# ls
admin.php   cp.php          home.php    portal.php test.php
api         crossdomain.xml index.php   robots.txt uc_client
api.php     data            install     search.php uc_server
archiver    favicon.ico     member.php  source     userapp.php
config      forum.php       misc.php    static
connect.php group.php       plugin.php  template


[root@phpe ~]# scp  /etc/sysconfig/spawn-fcgi 172.25.254.15:/etc/sysconfig/spawn-fcgi

[root@phpf ~]# cd /usr/share/nginx/
[root@phpf nginx]# chown -R nginx. wphp.com/
[root@phpf nginx]# systemctl start spawn-fcgi
[root@nginxa conf.d]# vim /etc/nginx/nginx.conf

    upstream wphp_pools {
        server 172.25.254.14;
        server 172.25.254.15;
}


[root@nginxa ~]#systemctl start nginx
```
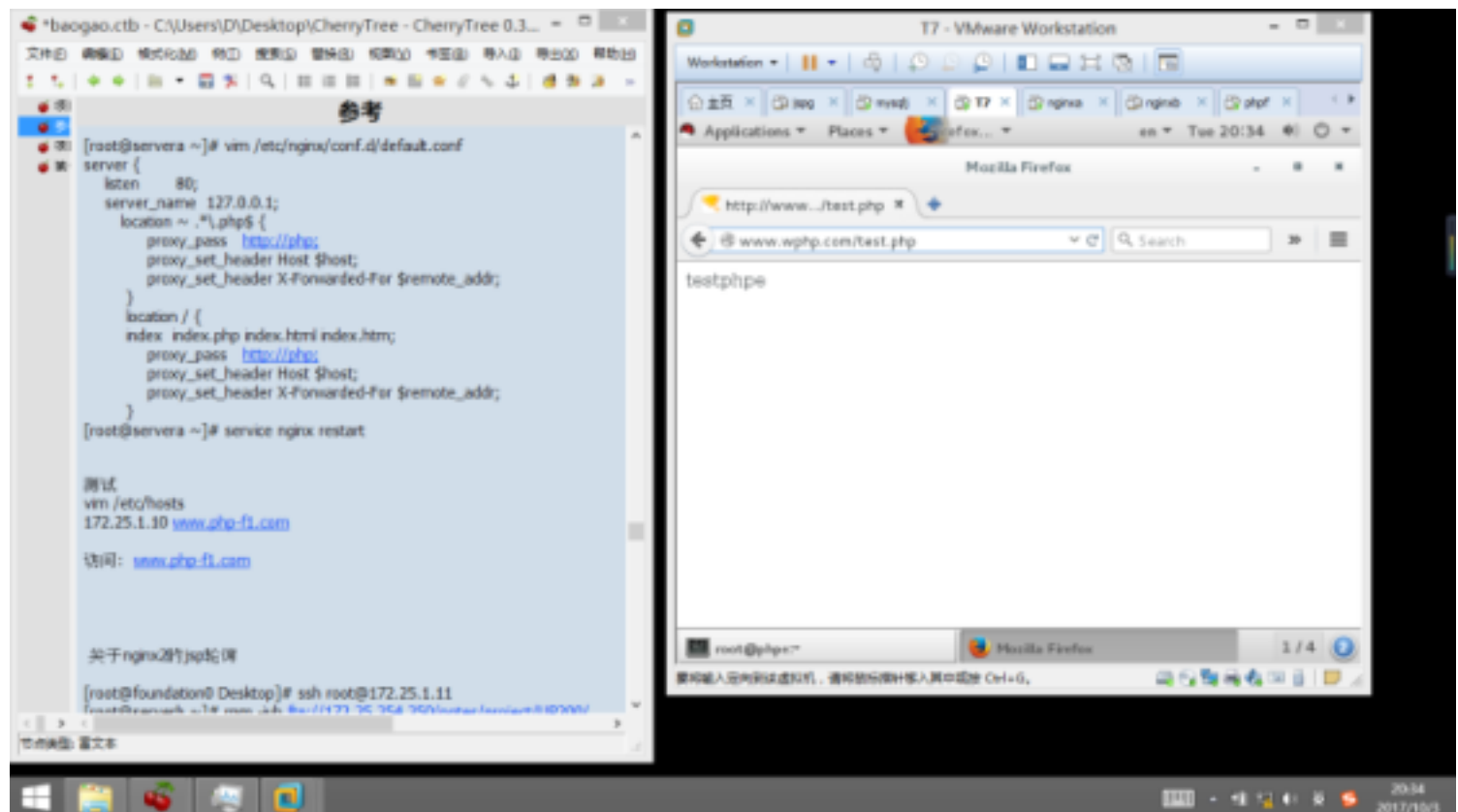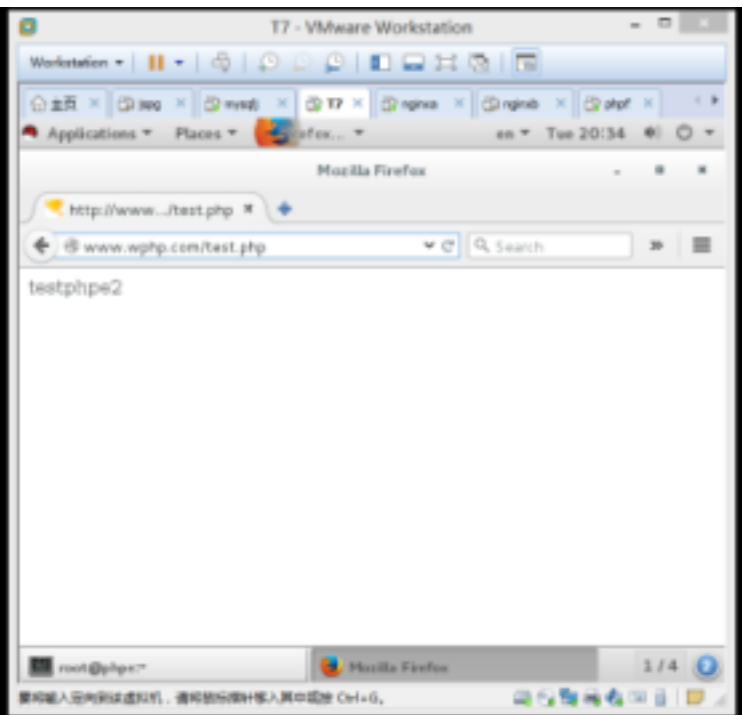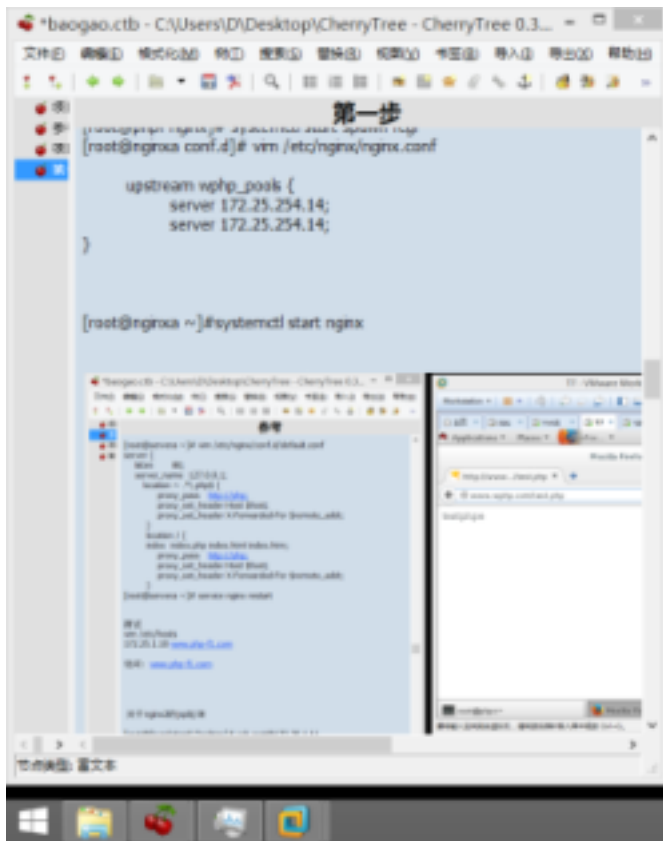
第二步：
用以下机子搭建一个jsp论坛
nginxb   172.25.254.11
jspg   172.25.254.16
mysqlj   172.25.254.19

```
[root@jspg ~]# ls
anaconda-ks.cfg            jdk-7u15-linux-x64.tar.gz
apache-tomcat-8.0.24.tar.gz


[root@jspg ~]# tar -xf jdk-7u15-linux-x64.tar.gz  -C /opt/
[root@jspg ~]# mv /opt/jdk1.7.0_15/ /opt/java
[root@jspg ~]# mkdir /usr/local/tomcat
[root@jspg ~]# tar -xf apache-tomcat-8.0.24.tar.gz -C /usr/local/tomcat/

[root@jspg ~]# groupadd -g 888 tomcat
[root@jspg ~]# useradd -g 888 -u 888 tomcat -s /sbin/nologin
[root@jspg ~]#  cd /usr/local/tomcat/apache-tomcat-8.0.24/bin/
[root@jspg bin]# tar -xf commons-daemon-native.tar.gz
[root@jspg bin]# cd commons-daemon-1.0.15-native-src/unix/

[root@jspg unix]# yum -y install gcc
[root@jspg unix]# ./configure  --with-java=/opt/java
[root@jspg unix]#make

[root@jspg unix]# cp -a jsvc  /usr/local/tomcat/apache-tomcat-8.0.24/bin/
[root@jspg unix]# cd /usr/local/tomcat/apache-tomcat-8.0.24/bin/
[root@jspg bin]# cp daemon.sh /etc/init.d/tomcat
```

```
[root@jspg bin]# vim /etc/init.d/tomcat
# chkconfig: 2345 30 20
CATALINA_HOME=/usr/local/tomcat/apache-tomcat-8.0.24
CATALINA_BASE=/usr/local/tomcat/apache-tomcat-8.0.24
JAVA_HOME=/opt/java/

[root@jspg bin]# chmod +x /etc/init.d/tomcat


[root@jspg bin]# chown tomcat.tomcat -R /usr/local/tomcat/apache-tomcat-8.0.24/

[root@jspg bin]#  service tomcat start
[root@jspg bin]# ps aux |grep tomcat

root      4344 0.0 0.0 10684   20 ?       Ss   23:48  0:00 jsvc.exec -java-home /opt/java/ -user tomcat -
pidfile /usr/local/tomcat/apache-tomcat-8.0.24/logs/catalina-daemon.pid -wait 10 -outfile /usr/local/tomcat/
apache-tomcat-8.0.24/logs/catalina-daemon.out -errfile &1 -classpath /usr/local/tomcat/apache-tomcat-8.0.24/bin/
bootstrap.jar:/usr/local/tomcat/apache-tomcat-8.0.24/bin/commons-daemon.jar:/usr/local/tomcat/apache-
tomcat-8.0.24/bin/tomcat-juli.jar -Djava.util.logging.config.file=/usr/local/tomcat/apache-tomcat-8.0.24/conf/
logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djava.endorsed.dirs= -
Dcatalina.base=/usr/local/tomcat/apache-tomcat-8.0.24 -Dcatalina.home=/usr/local/tomcat/apache-
tomcat-8.0.24 -Djava.io.tmpdir=/usr/local/tomcat/apache-tomcat-8.0.24/temp
org.apache.catalina.startup.Bootstrap
tomcat     4345 28.2 21.5 818580 36620 ?      Sl   23:48  0:10 jsvc.exec -java-home /opt/java/ -user tomcat -
pidfile /usr/local/tomcat/apache-tomcat-8.0.24/logs/catalina-daemon.pid -wait 10 -outfile /usr/local/tomcat/
apache-tomcat-8.0.24/logs/catalina-daemon.out -errfile &1 -classpath /usr/local/tomcat/apache-tomcat-8.0.24/bin/
bootstrap.jar:/usr/local/tomcat/apache-tomcat-8.0.24/bin/commons-daemon.jar:/usr/local/tomcat/apache-
tomcat-8.0.24/bin/tomcat-juli.jar -Djava.util.logging.config.file=/usr/local/tomcat/apache-tomcat-8.0.24/conf/
logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djava.endorsed.dirs= -
Dcatalina.base=/usr/local/tomcat/apache-tomcat-8.0.24 -Dcatalina.home=/usr/local/tomcat/apache-
tomcat-8.0.24 -Djava.io.tmpdir=/usr/local/tomcat/apache-tomcat-8.0.24/temp
org.apache.catalina.startup.Bootstrap
root      4361 1.0 0.1 112644  288 pts/0   R+   23:49  0:00 grep --color=auto tomcat


[root@jspg bin]# netstat -tnlp  |grep :80
tcp6      0    0 :::8009             :::*              LISTEN     4345/jsvc.exec
tcp6      0    0 :::8080             :::*              LISTEN     4345/jsvc.exec

[root@jspg bin]# vim /usr/local/tomcat/apache-tomcat-8.0.24/conf/server.xml

    <Host name="www.wjsp.com"  appBase="wjsp.com"
        unpackWARs="true" autoDeploy="true">
      <Valve className="org.apache.catalina.valves.AccessLogValve" directory="logs"
          prefix="wjsp.com_access_log" suffix=".txt"
          pattern="%h %l %u %t &quot;%r&quot; %s %b" />
    </Host>

[root@jspg bin]# mkdir -p /usr/local/tomcat/apache-tomcat-8.0.24/wjsp.com/ROOT/

[root@jspg bin]# cd /usr/local/tomcat/apache-tomcat-8.0.24/wjsp.com/ROOT/

[root@jspg ROOT]# echo "testjsp" > index.jsp

[root@localhost pkg]# echo "172.25.254.16 www.wjsp.com" >> /etc/hosts
```
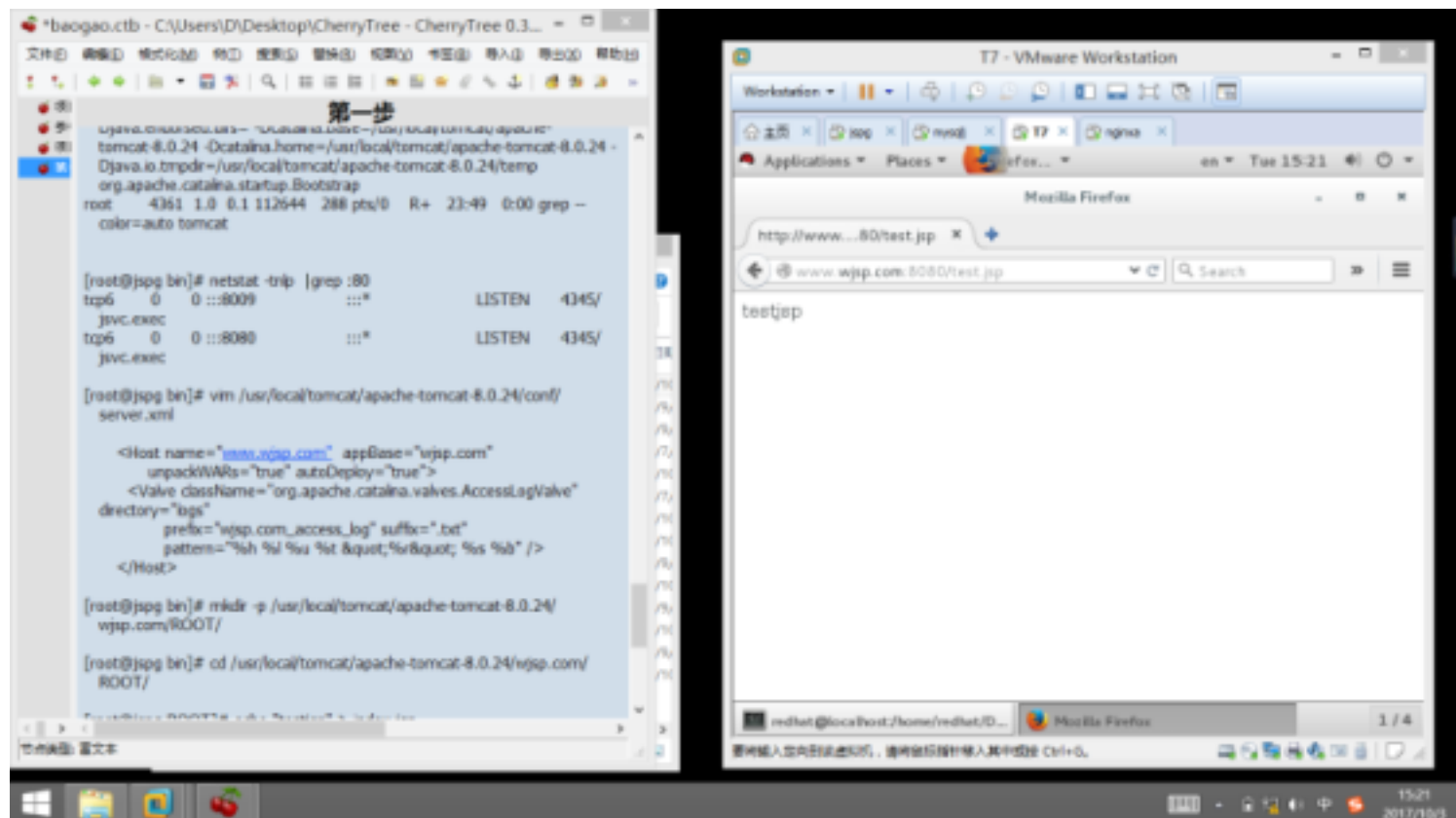
改端口

[root@jspg wjsp.com]# vim /usr/local/tomcat/apache-tomcat-8.0.24/conf/server.xml

```
    <Connector port="80" protocol="HTTP/1.1"
            connectionTimeout="20000"
            redirectPort="8443" />
```

[root@jspg ~]# unzip ejforum-2.3.zip -d /tmp/
[root@jspg ~]# cd /tmp/
[root@jspg tmp]# ls
4454.jsvc_up ejforum-2.3 hsperfdata_tomcat tmpwqqOFS

[root@jspg tmp]# cp -r ejforum-2.3/ejforum/* /usr/local/tomcat/apache-tomcat-8.0.24/wjsp.com/ROOT/
[root@jspg tmp]# cd /usr/local/tomcat/apache-tomcat-8.0.24/wjsp.com/ROOT/
[root@jspg ROOT]# ls
admin   include   register.jsp   topic.jsp
advsearch.jsp index.jsp   report.jsp   upload
error.jsp   js   resetpwd.jsp   userlist.jsp
feeds.jsp   login.jsp   search_result.jsp uspace.jsp
findpwd.jsp   manage.jsp   spec_topics.jsp   WEB-INF
forum.jsp   member   stat
help   perform.jsp styles
images   post.jsp   test.jsp

[root@jspg ~]# tar -xf mysql-connector-java-5.1.36.tar.gz -C /tmp/
[root@jspg ~]# cp /tmp/mysql-connector-java-5.1.36/mysql-connector-java-5.1.36-bin.jar /usr/local/tomcat/
apache-tomcat-8.0.24/lib/

[root@jspg ~]# cd //usr/local/tomcat/apache-tomcat-8.0.24/wjsp.com/ROOT/WEB-INF/conf/

[root@jspg conf]# vim config.xml
将第一段注释掉，打开第二段和mysql的连接
<database maxActive="10" maxIdle="10" minIdle="2" maxWait="10000"

```
                username="wjsp" password="wjsp"
                driverClassName="com.mysql.jdbc.Driver"
                url="jdbc:mysql://172.25.254.19:3306/jsp?
characterEncoding=gbk&amp;autoReconnect=true&amp;autoReconnectForPools=true&amp;zeroDateTimeBehavior=co
                sqlAdapter="sql.MysqlAdapter"/>
```

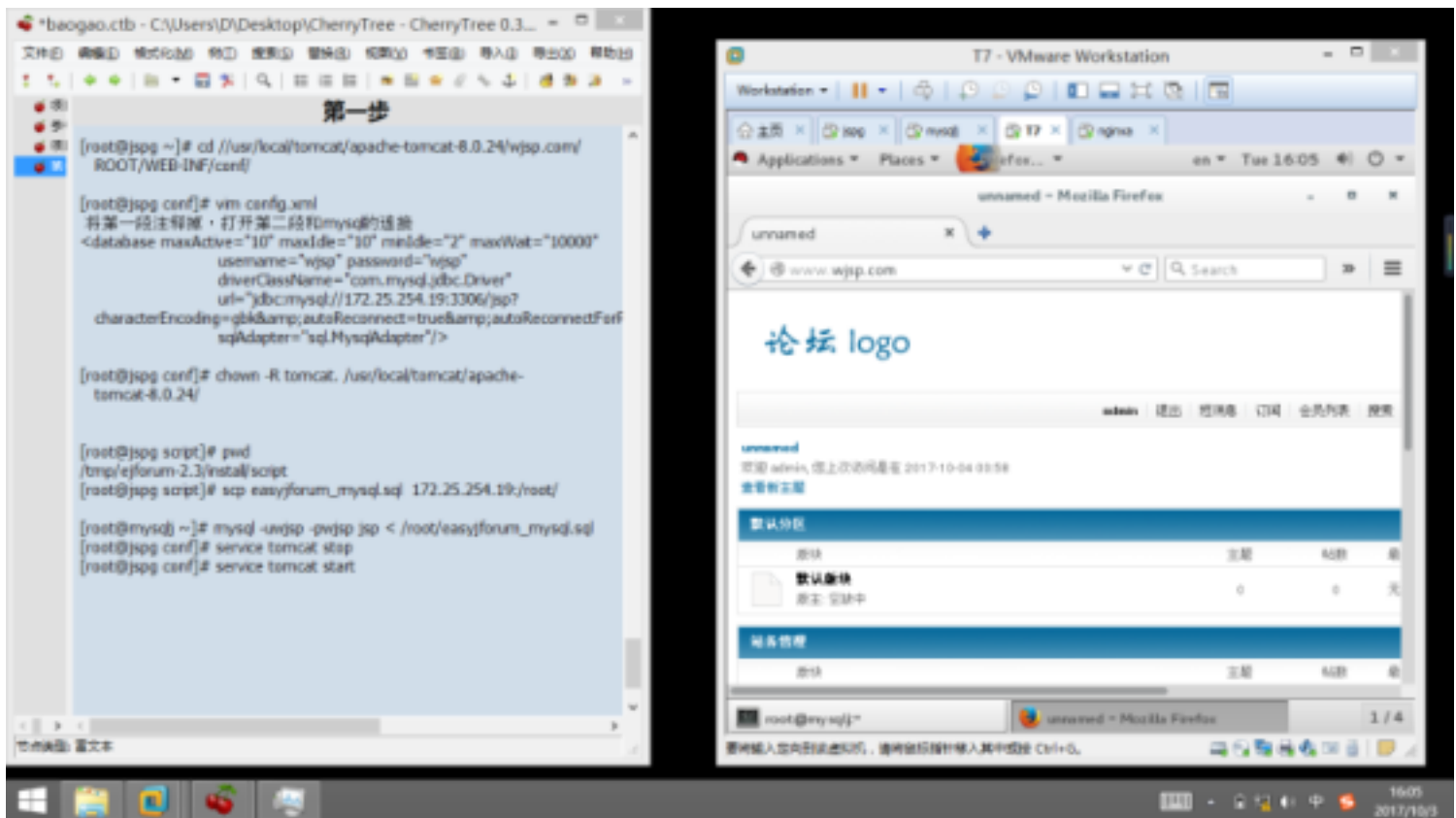[root@jspg conf]# chown -R tomcat. /usr/local/tomcat/apache-tomcat-8.0.24/

[root@jspg script]# pwd
/tmp/ejforum-2.3/install/script
[root@jspg script]# scp easyjforum_mysql.sql 172.25.254.19:/root/

[root@mysqlj ~]# mysql -uwjsp -pwjsp jsp < /root/easyjforum_mysql.sql
[root@jspg conf]# service tomcat stop
[root@jspg conf]# service tomcat start

nginxb 172.25.254.11 代理jspg访问 www.wjsp.com

[root@nginxb ~]# rpm -ivh nginx-1.8.1-1.el7.ngx.x86_64.rpm

[root@nginxb ~]# vim /etc/nginx/nginx.conf

[root@nginxb ~]# vim /etc/nginx/conf.d/default.conf

```
    upstream  wjsp_pools {
          server 172.25.254.16;
}
```

[root@nginxb ~]# vim /etc/nginx/conf.d/default.conf

server {

```
    listen      80;
    server_name  127.0.0.1;
    location / {
        proxy_pass http://wjsp_pools;
        proxy_set_header Host $host;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_next_upstream error timeout invalid_header http_500 http_502 http_503 http_504 http_404;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_redirect off;
    }
}
```

[root@localhost pkg1]# echo "172.25.254.11 www.wjsp.com" >> /etc/hosts
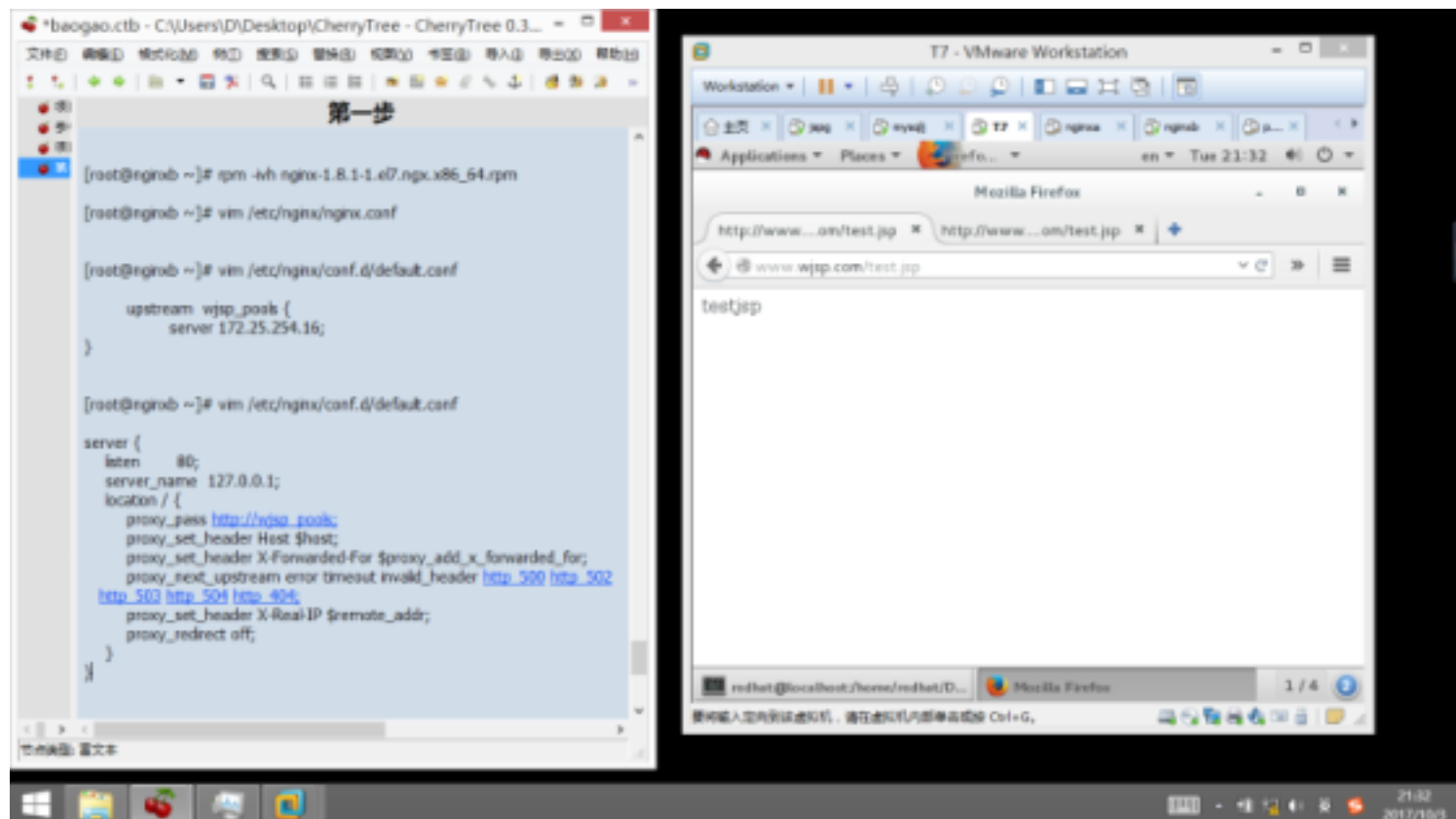
nginxb 轮询 jspg 和jsph 访问www.wjsp.com

jsph 172.25.254.17

将jspg数据同步到jsph

[root@jspg bin]# scp   /etc/init.d/tomcat 172.25.254.17:/etc/init.d/tomcat
[root@jspg bin]# scp -r /opt/java 172.25.254.17:/opt
[root@jspg ~]# scp -r   /usr/local/tomcat/ 172.25.254.17:/usr/local/
[root@jsph bin]# chmod +x /etc/init.d/tomcat
[root@jsph ~]# groupadd -g 888 tomcat
[root@jsph ~]# useradd -g 888 -u 888 tomcat -s /sbin/nologin

[root@jsph bin]# chown tomcat.tomcat -R /usr/local/tomcat/apache-tomcat-8.0.24/

第一步
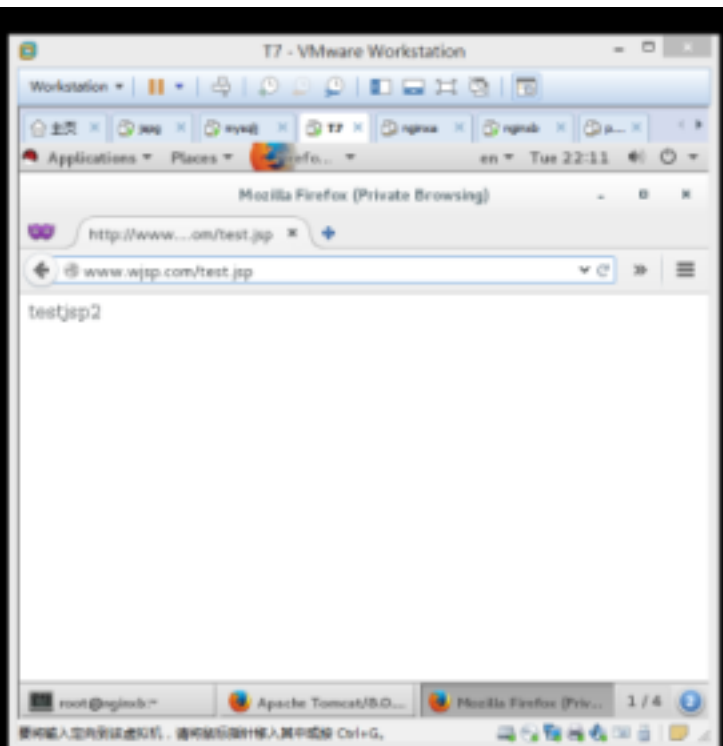
同步成功,开始做轮询

[root@nginxb ~]# vim /etc/nginx/conf.d/default.conf

```
    upstream  wjsp_pools {
          server 172.25.254.16;
          server 172.25.254.17;
}
```
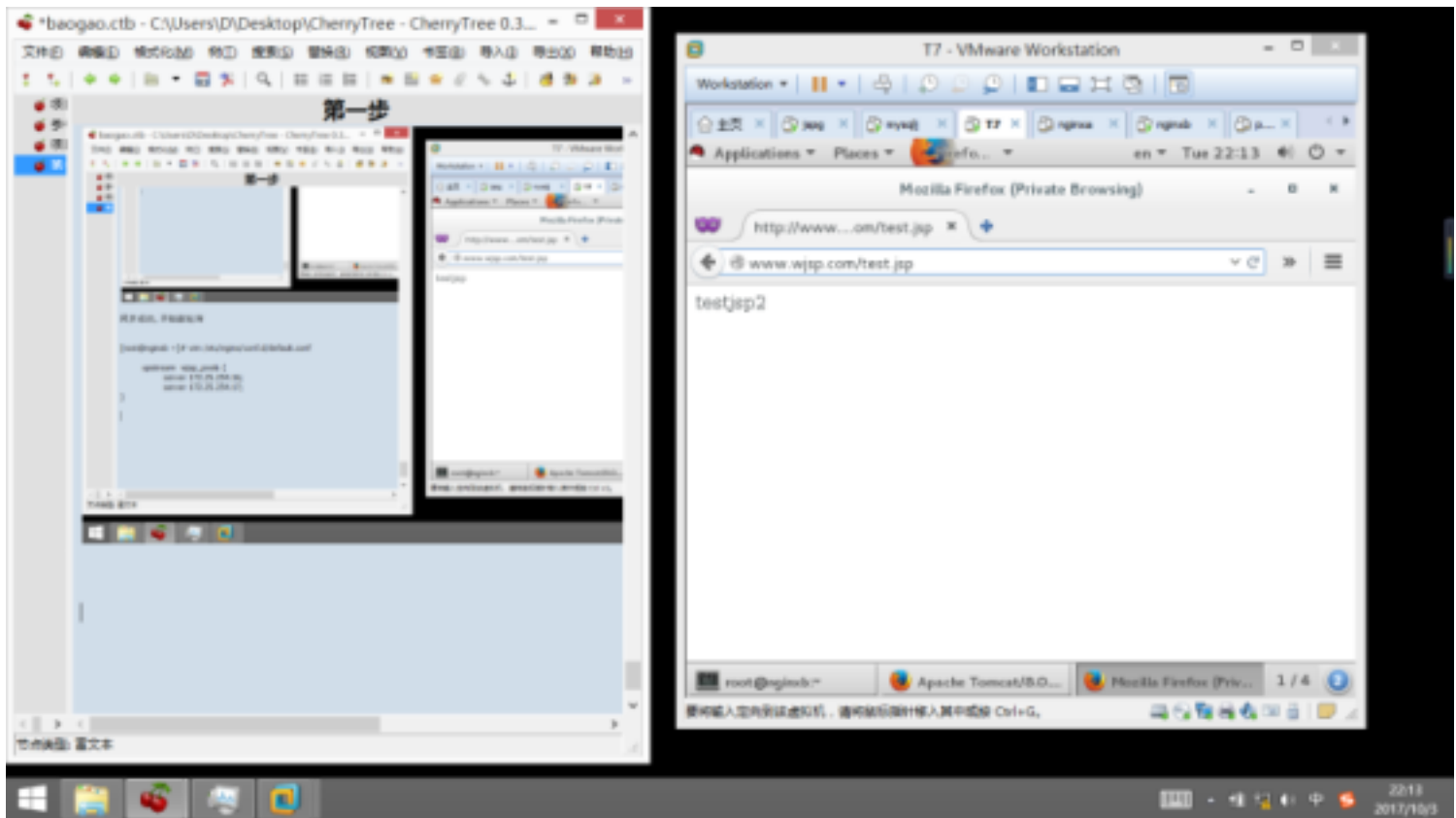
第三步： rsync+sersync ：172.25.254.18 同步php数据
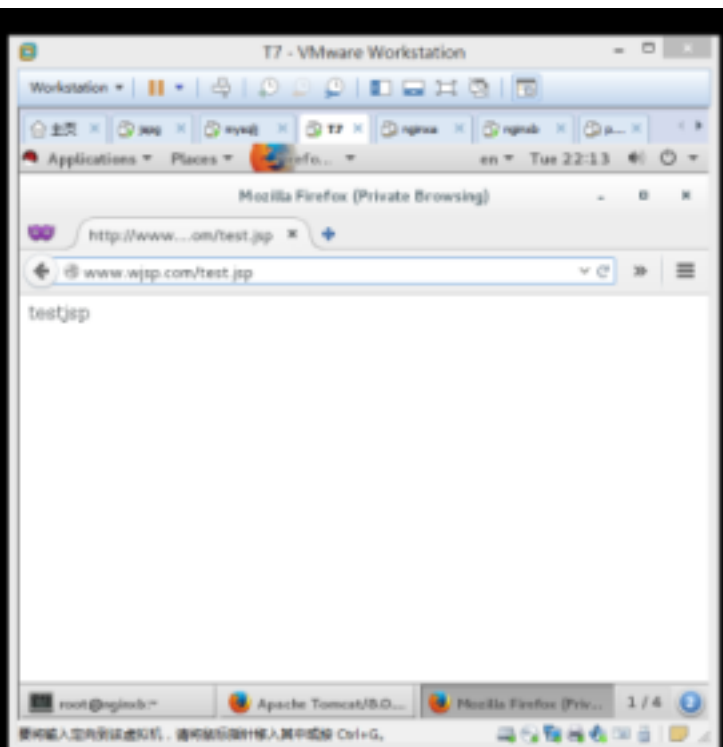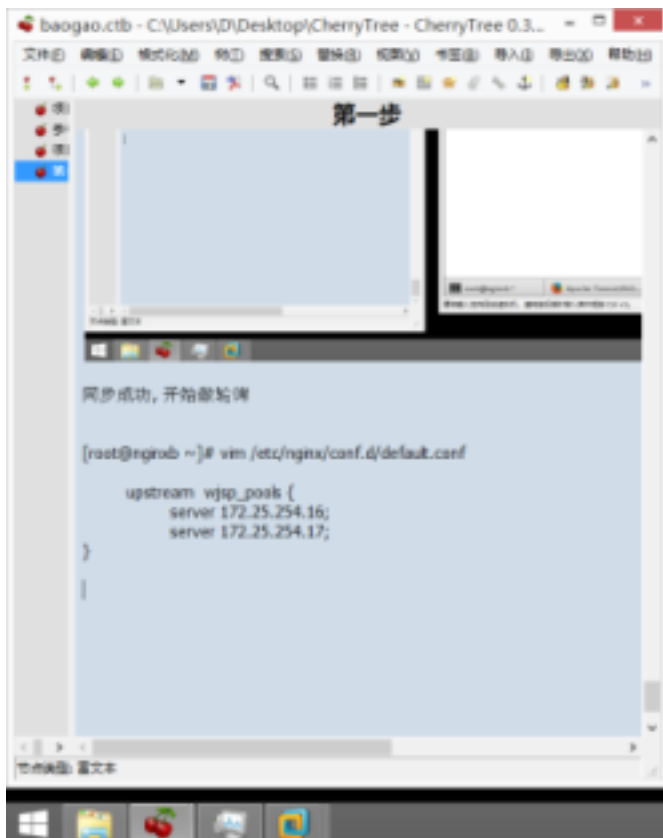
rsynci：172.25.254.18

[root@phpe ~]# yum -y install rsync

[root@phpe ~]# cat /etc/rsyncd.conf
uid=nginx
gid=nginx
use chroot=no
address=172.25.254.14
port 873
log file=/var/log/rsyncd.log
pid file=/var/run/rsyncd.pid
host allow=172.25.254.0/24

[wphp]
    path=/usr/share/nginx/wphp.com
    comment= web wphp share with rsync
    read only=no
    dont compress=*.gz *.bz2 *.tgz *.rar *.zip
    auth users=root
    secrets file=/etc/rsyncd_user.pass

[root@phpe ~]# cat /etc/rsyncd_user.pass
root:admin
[root@phpe ~]# chmod 600 /etc/rsyncd_user.pass
[root@phpe ~]# rsync --daemon

[root@phpe ~]# netstat -tpnl |grep 873
tcp   0   0 0.0.0.0:873   0.0.0.0:*   LISTEN   2803/rsync
tcp6   0   0 :::873   :::*   LISTEN   2803/rsync

```
[root@phpf ~]# yum -y install rsync

[root@phpf ~]# cat /etc/rsyncd.conf
uid=nginx
gid=nginx
use chroot=no
address=172.25.254.15
port 873
log file=/var/log/rsyncd.log
pid file=/var/run/rsyncd.pid
host allow=172.25.254.0/24

[wphp]
     path=/usr/share/nginx/wphp.com
     comment= web wphp share with rsync
     read only=no
     dont compress=*.gz *.bz2 *.tgz *.rar *.zip
     auth users=root
     secrets file=/etc/rsyncd_user.pass


[root@phpf ~]#  cat /etc/rsyncd_user.pass
root:admin

[root@phpf ~]#  chmod 600 /etc/rsyncd_user.pass

[root@phpf ~]# rsync  --daemon

[root@phpf ~]# netstat -tpnl |grep 873
tcp     0     0 0.0.0.0:873          0.0.0.0:*          LISTEN     2803/rsync
tcp6    0     0 :::873               :::*               LISTEN     2803/rsync

[root@rsynci ~]# yum -y install rsync
[root@rsynci ~]# rsync -v 172.25.254.14::
wphp            www.wphp.com html page

[root@rsynci ~]# rsync -v 172.25.254.15::
wphp            www.wphp.com html page

[root@rsynci ~]# touch test001


测试：

[root@rsynci ~]# touch test123
[root@rsynci ~]# rsync -avz  /root/test001 root@172.25.254.14::wphp
Password:
sending incremental file list
test001

sent 64 bytes  received 27 bytes  36.40 bytes/sec
total size is 0  speedup is 0.00

[root@rsynci ~]# ls
anaconda-ks.cfg                      test001
sersync2.5.4_64bit_binary_stable_final.tar.gz

[root@rsynci ~]# tar -xf sersync2.5.4_64bit_binary_stable_final.tar.gz  -C /opt/
[root@rsynci ~]# cd /opt/
[root@rsynci opt]# ls
GNU-Linux-x86
```

```
[root@rsynci opt]# mv GNU-Linux-x86/ sersync

[root@rsynci ~]# cat /opt/sersync/confxml.xml

 <sersync>
     <localpath watch="/root/wphp">
         <remote ip="172.25.254.14" name="wphp"/>
         <remote ip="172.25.254.15" name="wphp"/>
     </localpath>
     <rsync>
         <commonParams params="-artuz"/>
         <auth start="true" users="root" passwordfile="/etc/rsync.pas"/>
         <userDefinedPort start="false" port="874"/><!-- port=874 -->
         <timeout start="false" time="100"/><!-- timeout=100 -->
         <ssh start="false"/>
     </rsync>


[root@rsynci ~]# mkdir wphp
[root@phpe ~]# scp -r /usr/share/nginx/wphp.com/* 172.25.254.18:/root/wphp


[root@phpe wphp.com]# ll |grep test111
-rw-r--r--.  1 nginx nginx    0 Oct  9 07:12 test111


[root@rsynci wphp]#  ./sersync2 -d -r -n 12 -o ./confxml.xml
[root@rsynci ~]# cd wphp/
[root@rsynci wphp]# touch test111

[root@phpf wphp.com]# ll |grep test111
-rw-r--r--.  1 nginx nginx    0 Oct  9 07:12 test111
```

第四步： rsync+sersync ：172.25.254.18 同步jsp数据

rsynci：172.25.254.18

```
[root@rsynci opt]# cp sersync/ sersync2/ -r

[root@jspf ~]# yum -y install rsync

[root@jspf ~]# cat /etc/rsyncd.conf
uid=tomcat
gid=tomcat
use chroot=no
address=172.25.254.16
port 873
log file=/var/log/rsyncd.log
pid file=/var/run/rsyncd.pid
host allow=172.25.254.0/24

[wjsp]
    path=/usr/local/tomcat/apache-tomcat-8.0.24/wjsp.com/
    comment= web wjsp share with rsync
    read only=no
    dont compress=*.gz *.bz2 *.tgz *.rar *.zip
    auth users=root
    secrets file=/etc/rsyncd_user.pass
```

```
[root@jspf ~]#  cat /etc/rsyncd_user.pass
root:admin
[root@jspf ~]#  chmod 600 /etc/rsyncd_user.pass
[root@jspf ~]# rsync  --daemon

[root@jspf ~]# netstat -tpnl |grep 873
tcp     0     0 0.0.0.0:873          0.0.0.0:*            LISTEN     2803/rsync
tcp6    0     0 :::873               :::*                 LISTEN     2803/rsync


[root@jsph ~]# yum -y install rsync

[root@jsph~]# cat /etc/rsyncd.conf
uid=tomcat
gid=tomcat
use chroot=no
address=172.25.254.17
port 873
log file=/var/log/rsyncd.log
pid file=/var/run/rsyncd.pid
host allow=172.25.254.0/24

[wjsp1]
      path=/usr/local/tomcat/apache-tomcat-8.0.24/wjsp.com/
      comment= web wjsp share with rsync
      read only=no
      dont compress=*.gz *.bz2 *.tgz *.rar *.zip
      auth users=root
      secrets file=/etc/rsyncd_user.pass


[root@jspf ~]#  cat /etc/rsyncd_user.pass
root:admin

[root@jspf ~]#  chmod 600 /etc/rsyncd_user.pass

[root@jspf ~]# rsync  --daemon

[root@jspf ~]# netstat -tpnl |grep 873
tcp     0     0 0.0.0.0:873          0.0.0.0:*            LISTEN     2803/rsync
tcp6    0     0 :::873               :::*                 LISTEN     2803/rsync


[root@rsynci ~]# rsync -v 172.25.254.16::
wjsp           www.wjsp.com html page

[root@rsynci ~]# rsync -v 172.25.254.15::
wjsp           www.wjsp.com html page

[root@rsynci ~]# touch test001


测试：

[root@rsynci ~]# touch test123
[root@rsynci ~]# rsync -avz  /root/test001 root@172.25.254.16::wjsp
Password:
sending incremental file list
test001
```

```
sent 64 bytes  received 27 bytes  36.40 bytes/sec
total size is 0  speedup is 0.00

[root@rsynci ~]# ls
anaconda-ks.cfg                          test001
sersync2.5.4_64bit_binary_stable_final.tar.gz


[root@rsynci ~]# cat /opt/sersync2/confxml.xml

 <sersync>
     <localpath watch="/root/wjsp">
        <remote ip="172.25.254.14" name="wphp"/>
        <remote ip="172.25.254.15" name="wphp1"/>
        <remote ip="172.25.254.16" name="wjsp"/>
        <remote ip="172.25.254.17" name="wjsp1"/>
     </localpath>
     <rsync>
        <commonParams params="-artuz"/>
        <auth start="true" users="root" passwordfile="/etc/rsync.pas"/>
        <userDefinedPort start="false" port="874"/><!-- port=874 -->
        <timeout start="false" time="100"/><!-- timeout=100 -->
        <ssh start="false"/>
     </rsync>


[root@rsynci ~]# mkdir wjsp
[root@phpf ~]# scp -r  /usr/local/tomcat/apache-tomcat-8.0.24/wjsp.com/*  172.25.254.18:/root/wjsp


[root@rsynci wjsp]#  ./sersync2 -d -r -n 12 -o ./confxml.xml
[root@rsynci ~]# cd wjsp/
[root@rsynci wjsp]# touch test111



[root@jsph wphp.com]# ll |grep test111
-rw-r--r--.  1 nginx nginx    0 Oct  9 07:12 test111
```

第五步： 配置静态缓存

```
squidc ： 172.25.254.12
squidd ： 172.25.254.13

[root@squidc ~]# yum -y install squid

[root@squidc ~]# vim /etc/squid/squid.conf

56 http_access  allow  all
57
58 # Squid normally listens to port 3128
59 http_port 3128 accel vhost vport
75 cache_dir ufs /var/spool/squid 256 16 256
76 cache_peer 172.25.254.14 parent 80 0 no-query originserver na    me=web1
77 cache_peer 172.25.254.15 parent 80 0 no-query originserver na    me=web2
78 cache_peer 172.25.254.16 parent 80 0 no-query originserver na    me=web3
79 cache_peer 172.25.254.17 parent 80 0 no-query originserver na    me=web4
80 cache_peer_domain web1  www.wphp.com
81 cache_peer_domain web2  www.wphp.com
82 cache_peer_domain web1  172.25.254.14
```

```
 83 cache_peer_domain web2  172.25.254.15
 84 cache_peer_domain web3  www.wjsp.com
 85 cache_peer_domain web4  www.wjsp.com
 86 cache_peer_domain web3  172.25.254.16
 87 cache_peer_domain web4  172.25.254.17

[root@squidc ~]# systemctl start squid
[root@squidc ~]# netstat -tpnl |grep 3128
tcp6    0    0 :::3128            :::*              LISTEN    3240/(squid-1)

[root@localhost peizhiwenjian]# cat /etc/hosts
127.0.0.1   localhost localhost.localdomain localhost4 localhost4.localdomain4
::1         localhost localhost.localdomain localhost6 localhost6.localdomain6
172.25.254.12 www.wphp.com
172.25.254.12 www.wjsp.com

[root@localhost peizhiwenjian]# curl -I http://www.wphp.com:3128/static/image/common/logo.png
HTTP/1.1 200 OK
Server: nginx/1.8.1
Date: Mon, 09 Oct 2017 00:09:29 GMT
Content-Type: image/png
Content-Length: 4425
Last-Modified: Sun, 08 Oct 2017 23:06:30 GMT
ETag: "59daaf76-1149"
Accept-Ranges: bytes
X-Cache: MISS from localhost
X-Cache-Lookup: MISS from localhost:3128
Via: 1.1 localhost (squid/3.3.8)
Connection: keep-alive

[root@localhost peizhiwenjian]# curl -I http://www.wphp.com:3128/static/image/common/logo.png
HTTP/1.1 200 OK
Server: nginx/1.8.1
Date: Mon, 09 Oct 2017 00:09:29 GMT
Content-Type: image/png
Content-Length: 4425
Last-Modified: Sun, 08 Oct 2017 23:06:30 GMT
ETag: "59daaf76-1149"
Accept-Ranges: bytes
Age: 4
X-Cache: HIT from localhost
X-Cache-Lookup: HIT from localhost:3128
Via: 1.1 localhost (squid/3.3.8)
Connection: keep-alive


[root@localhost peizhiwenjian]# curl -I http://www.wjsp.com:3128/images/answer.gif
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Accept-Ranges: bytes
ETag: W/"864-1507048207000"
Last-Modified: Tue, 03 Oct 2017 16:30:07 GMT
Content-Type: image/gif
Content-Length: 864
Date: Mon, 09 Oct 2017 00:23:24 GMT
X-Cache: MISS from localhost
X-Cache-Lookup: MISS from localhost:3128
Via: 1.1 localhost (squid/3.3.8)
Connection: keep-alive


[root@localhost peizhiwenjian]# curl -I http://www.wjsp.com:3128/images/answer.gif
```

```
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Accept-Ranges: bytes
ETag: W/"864-1507048207000"
Last-Modified: Tue, 03 Oct 2017 16:30:07 GMT
Content-Type: image/gif
Content-Length: 864
Date: Mon, 09 Oct 2017 00:23:24 GMT
Age: 23
X-Cache: HIT from localhost
X-Cache-Lookup: HIT from localhost:3128
Via: 1.1 localhost (squid/3.3.8)
Connection: keep-alive
```

配置squidd

```
[root@squidd ~]# yum -y install squid

[root@squidd ~]# vim /etc/squid/squid.conf

56 http_access  allow  all
57
58 # Squid normally listens to port 3128
59 http_port 3128 accel vhost vport
75 cache_dir ufs /var/spool/squid 256 16 256
76 cache_peer 172.25.254.14 parent 80 0 no-query originserver na    me=web1
77 cache_peer 172.25.254.15 parent 80 0 no-query originserver na    me=web2
78 cache_peer 172.25.254.16 parent 80 0 no-query originserver na    me=web3
79 cache_peer 172.25.254.17 parent 80 0 no-query originserver na    me=web4
80 cache_peer_domain web1  www.wphp.com
81 cache_peer_domain web2  www.wphp.com
82 cache_peer_domain web1  172.25.254.14
83 cache_peer_domain web2  172.25.254.15
84 cache_peer_domain web3  www.wjsp.com
85 cache_peer_domain web4  www.wjsp.com
86 cache_peer_domain web3  172.25.254.16
87 cache_peer_domain web4  172.25.254.17

[root@squidd ~]# systemctl start squid
[root@squidd ~]# netstat -tpnl |grep 3128
tcp6    0    0 :::3128            :::*              LISTEN      3240/(squid-1)
```

<mark>第六步： php/jsp/squid 轮询</mark>

```
[root@nginxa ~]# vim /etc/nginx/conf.d/default.conf
server {
    listen      80;
    server_name  127.0.0.1;
    location / {
        proxy_pass http://jingtai_pools;
        proxy_set_header Host $host;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_next_upstream error timeout invalid_header http_500 http_502 http_503 http_504 http_404;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_redirect off;
    }
```

```
    location ~ .*\.php$ {
     proxy_pass http://wphp_pools;
     proxy_set_header Host $host;
     proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
     proxy_next_upstream error timeout invalid_header http_500 http_502 http_503 http_504 http_404;
     proxy_set_header X-Real-IP $remote_addr;
     proxy_redirect off;
   }

    location ~ .*\.jsp$ {
     proxy_pass http://wjsp_pools;
     proxy_set_header Host $host;
     proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
     proxy_next_upstream error timeout invalid_header http_500 http_502 http_503 http_504 http_404;
     proxy_set_header X-Real-IP $remote_addr;
     proxy_redirect off;
   }

}

[root@nginxa ~]# vim /etc/nginx/nginx.conf

 #gzip  on;
     upstream wphp_pools {
          server 172.25.254.14;
          server 172.25.254.15;
}
     upstream jingtai_pools {
          server 172.25.254.12:3128;
          server 172.25.254.13:3128;
}
     upstream wjsp_pools {
          server 172.25.254.16;
          server 172.25.254.17;
}

   include /etc/nginx/conf.d/*.conf;
}

[root@localhost b]# cat /etc/hosts
127.0.0.1   localhost localhost.localdomain localhost4 localhost4.localdomain4
::1         localhost localhost.localdomain localhost6 localhost6.localdomain6
172.25.254.10 www.wphp.com
172.25.254.10 www.wjsp.com
```
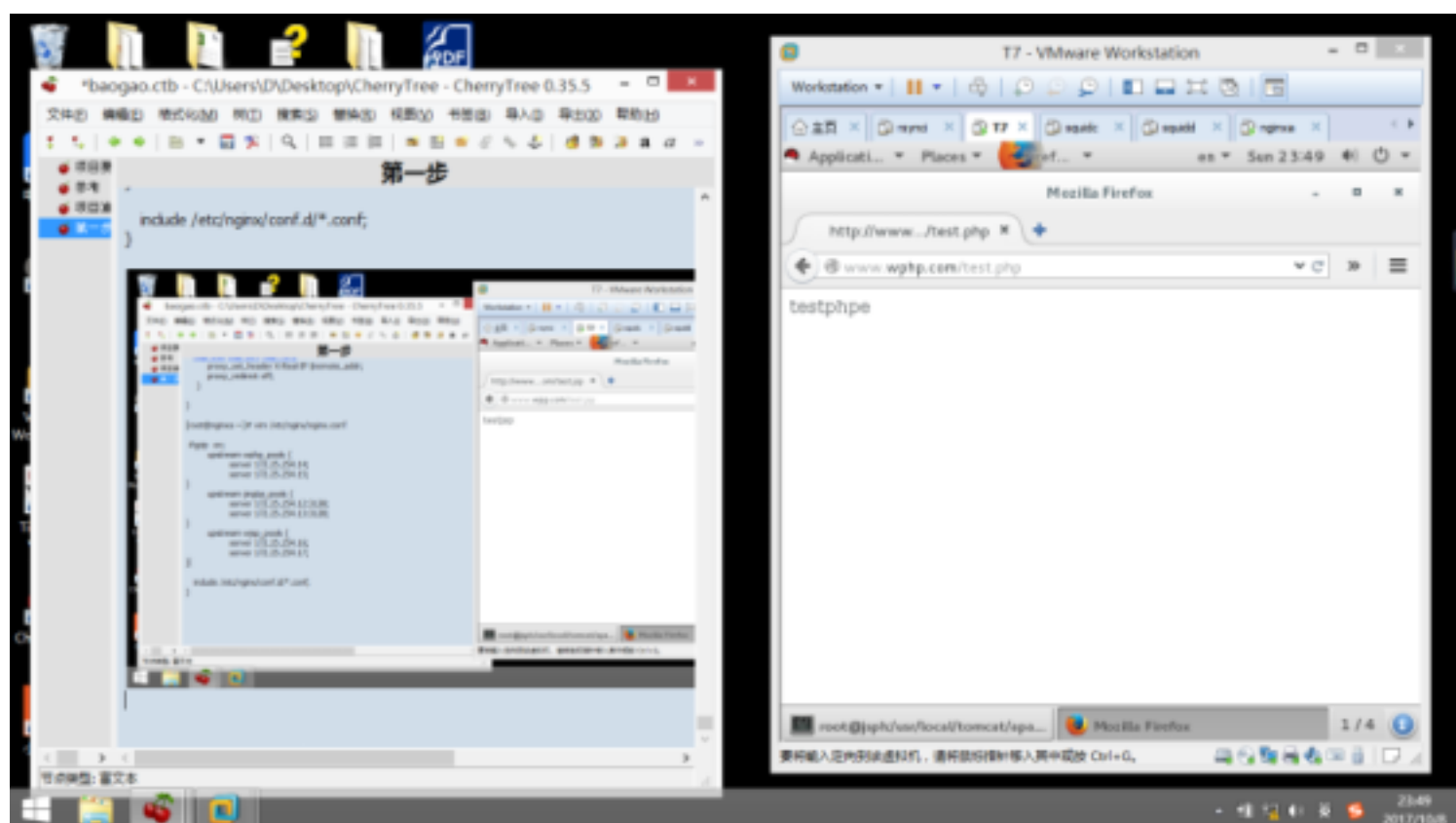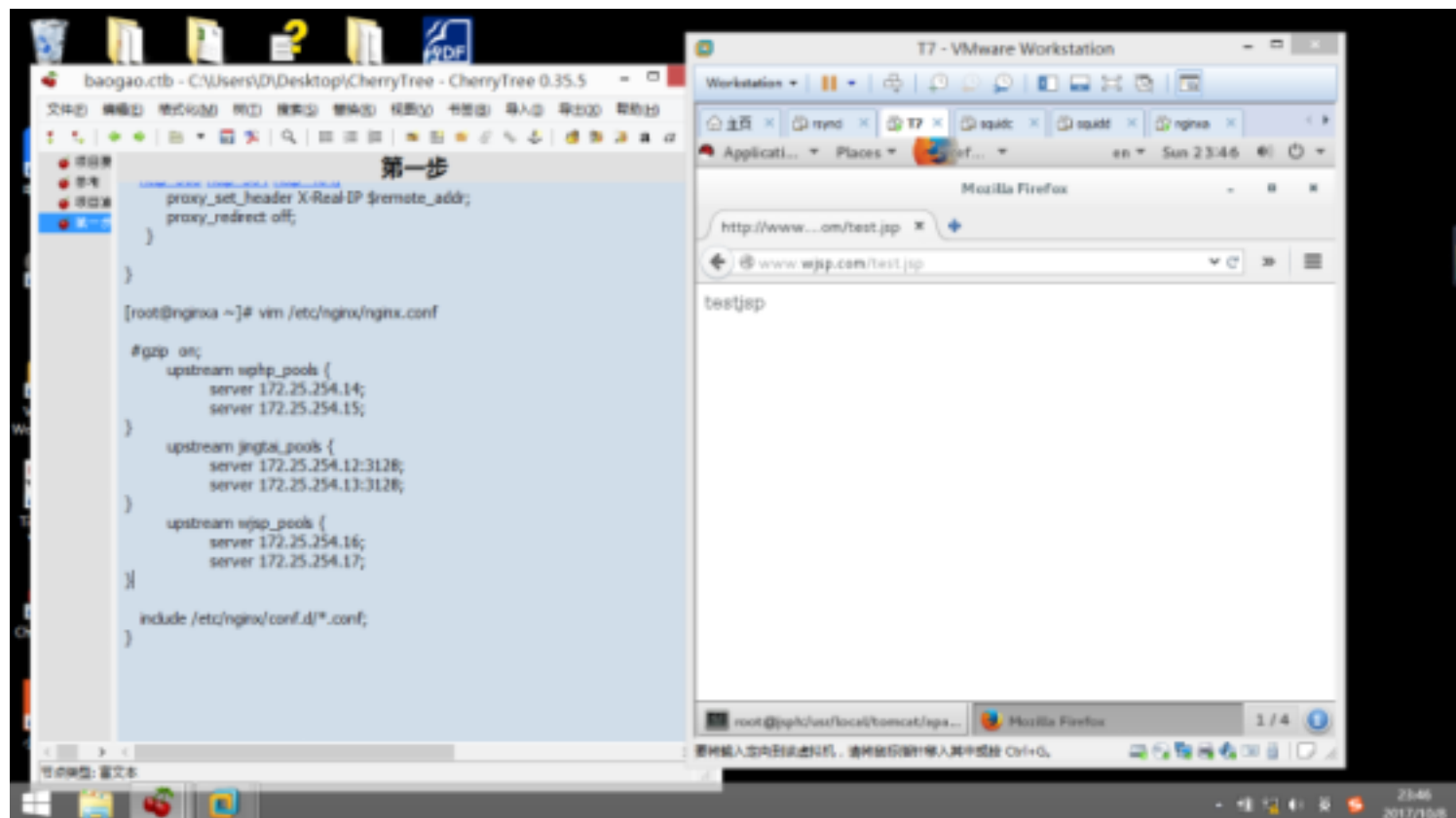
配置nginxb

```
[root@nginxa ~]# scp /etc/nginx/conf.d/default.conf  172.25.254.11:/etc/nginx/conf.d/default.conf
[root@nginxa ~]# scp /etc/nginx/nginx.conf  172.25.254.11:/etc/nginx/nginx.conf

[root@nginxb ~]#  systemctl restart nginx
```

第七步 ： DNS解析

dns ： localhost ： 172.25.254.249

```
[root@localhost ~]# yum -y install bind
[root@localhost ~]# vim /etc/named.conf
 11        listen-on port 53 { 127.0.0.1; any; };
 17        allow-query     { localhost; any; };

 29        recursion yes;
 30
 31        dnssec-enable no;
 32        dnssec-validation no;

 [root@localhost named]# vim /etc/named.rfc1912.zones
 zone "wphp.com" IN {
      type master;
      file "wphp.com.zone";
      allow-update { none; };
};
zone "wjsp.com" IN {
      type master;
      file "wjsp.com.zone";
      allow-update { none; };
};


 [root@localhost ~]# cd /var/named/

 [root@localhost named]# cp  -a named.localhost wphp.com.zone
[root@localhost named]# cp -a named.localhost wjsp.com.zone

[root@localhost named]# cat wphp.com.zone
$TTL 1D
@    IN SOA     ns1.wphp.com. rname.invalid. (
                          10     ; serial
                          1D     ; refresh
                          1H     ; retry
                          1W     ; expire
                          3H ) ; minimum
@    NS   ns1.wphp.com.
ns1   A     172.25.254.249
www         A     172.25.254.14
www         A     172.25.254.15
[root@localhost named]# cat wjsp.com.zone
$TTL 1D
@     IN SOA     ns1.wjsp.com. rname.invalid. (
                          10     ; serial
                          1D     ; refresh
                          1H     ; retry
                          1W     ; expire
                          3H ) ; minimum
@    NS   ns1.wjsp.com.
ns1   A     172.25.254.249
www         A     172.25.254.16
www         A     172.25.254.17


[root@localhost named]#  named-checkconf /etc/named.conf
[root@localhost named]# named-checkzone wphp.com /var/named/wphp.com.zone
zone wphp.com/IN: loaded serial 10
OK
[root@localhost named]# named-checkzone wjsp.com /var/named/wjsp.com.zone
```

```
zone wjsp.com/IN: loaded serial 10
OK

[root@localhost named]# vim /etc/resolv.conf
nameserver 172.25.254.249

[root@localhost named]# service  named start

[root@localhost named]# netstat -tpnl |grep 53
tcp      0    0 172.25.254.249:53     0.0.0.0:*          LISTEN     11860/named
tcp      0    0 127.0.0.1:53          0.0.0.0:*          LISTEN     11860/named
tcp      0    0 192.168.122.1:53      0.0.0.0:*          LISTEN     2923/dnsmasq
tcp      0    0 127.0.0.1:953         0.0.0.0:*          LISTEN     11860/named
tcp6     0    0 ::1:53                :::*               LISTEN     11860/named
tcp6     0    0 ::1:953               :::*               LISTEN     11860/named


[root@localhost named]# cat /etc/hosts
127.0.0.1    localhost localhost.localdomain localhost4 localhost4.localdomain4
::1          localhost localhost.localdomain localhost6 localhost6.localdomain6



[root@localhost named]# ping www.wjsp.com
PING www.wjsp.com (172.25.254.16) 56(84) bytes of data.
64 bytes from 172.25.254.16: icmp_seq=1 ttl=64 time=0.530 ms
64 bytes from 172.25.254.16: icmp_seq=2 ttl=64 time=0.500 ms

[root@localhost named]# ping www.wjsp.com
PING www.wjsp.com (172.25.254.17) 56(84) bytes of data.
64 bytes from 172.25.254.16: icmp_seq=1 ttl=64 time=0.530 ms
64 bytes from 172.25.254.16: icmp_seq=2 ttl=64 time=0.500 ms

[root@localhost named]# ping www.wphp.com
PING www.wphp.com (172.25.254.14) 56(84) bytes of data.
64 bytes from 172.25.254.14: icmp_seq=1 ttl=64 time=0.312 ms
64 bytes from 172.25.254.14: icmp_seq=2 ttl=64 time=0.693 ms

[root@localhost named]# ping www.wphp.com
PING www.wphp.com (172.25.254.15) 56(84) bytes of data.
64 bytes from 172.25.254.14: icmp_seq=1 ttl=64 time=0.308 ms
64 bytes from 172.25.254.14: icmp_seq=2 ttl=64 time=0.531 ms
```

第八步：memcache
memcache ： 172.25.254.20

```
[root@jspg ~]# ls
anaconda-ks.cfg          jdk-7u15-linux-x64.tar.gz
apache-tomcat-8.0.24.tar.gz  msm
ejforum-2.3.zip          mysql-connector-java-5.1.36.tar.gz
[root@jspg ~]# ls msm/
asm-3.2.jar                  minlog-1.2.jar
kryo-1.04.jar                msm-kryo-serializer-1.8.1.jar
kryo-serializers-0.11.jar        reflectasm-1.01.jar
memcached-session-manager-1.8.1.jar     spymemcached-2.11.1.jar
memcached-session-manager-tc8-1.8.1.jar

[root@jspg ~]# cp -r msm/* /usr/local/tomcat/apache-tomcat-8.0.24/lib/
[root@jsph ~]# cp -r msm/* /usr/local/tomcat/apache-tomcat-8.0.24/lib/
```

```
[root@jspg ~]# vim /usr/local/tomcat/apache-tomcat-8.0.24/conf/context.xml
 （在此文件的<Context>和</Context>里面加上下面一段）
<?xml version='1.0' encoding='utf-8'?>
<Context>
    <WatchedResource>WEB-INF/web.xml</WatchedResource>
    <WatchedResource>${catalina.base}/conf/web.xml</WatchedResource>
<Manager className="de.javakaffee.web.msm.MemcachedBackupSessionManager"
 memcachedNodes="n1:172.25.254.20:11211"
 lockingMode="auto"
 sticky="false"
 requestUriIgnorePattern= ".*\.(png|gif|jpg|css|js)$"
 sessionBackupAsync= "false"
 sessionBackupTimeout= "100"
 copyCollectionsForSerialization="true"
 transcoderFactoryClass="de.javakaffee.web.msm.serializer.kryo.KryoTranscoderFactory" />
</Context>


[root@jsph ~]# vim /usr/local/tomcat/apache-tomcat-8.0.24/conf/context.xml
 （在此文件的<Context>和</Context>里面加上下面一段）
<?xml version='1.0' encoding='utf-8'?>
<Context>
    <WatchedResource>WEB-INF/web.xml</WatchedResource>
    <WatchedResource>${catalina.base}/conf/web.xml</WatchedResource>
<Manager className="de.javakaffee.web.msm.MemcachedBackupSessionManager"
 memcachedNodes="n2:172.25.254.20:11211"
 lockingMode="auto"
 sticky="false"
 requestUriIgnorePattern= ".*\.(png|gif|jpg|css|js)$"
 sessionBackupAsync= "false"
 sessionBackupTimeout= "100"
 copyCollectionsForSerialization="true"
 transcoderFactoryClass="de.javakaffee.web.msm.serializer.kryo.KryoTranscoderFactory" />
</Context>

[root@memcache ~]# yum -y install memcached

[root@memcache ~]# cat /etc/sysconfig/memcached
PORT="11211"
USER="memcached"
MAXCONN="1024"
CACHESIZE="64"
OPTIONS=""

[root@jspg ~]# cat /usr/local/tomcat/apache-tomcat-8.0.24/wjsp.com/ROOT/test.jsp
<html>
    <body bgcolor="red">
        <center>
        <%out.print(request.getSession().getId()) ;%>
        <h1>Tomcat1</h1>
    </body>
</html>


[root@jsph ~]# cat /usr/local/tomcat/apache-tomcat-8.0.24/wjsp.com/ROOT/test.jsp

<html>
    <body bgcolor="blue">
        <center>
        <%out.print(request.getSession().getId()) ;%>
        <h1>Tomcat2</h1>
```
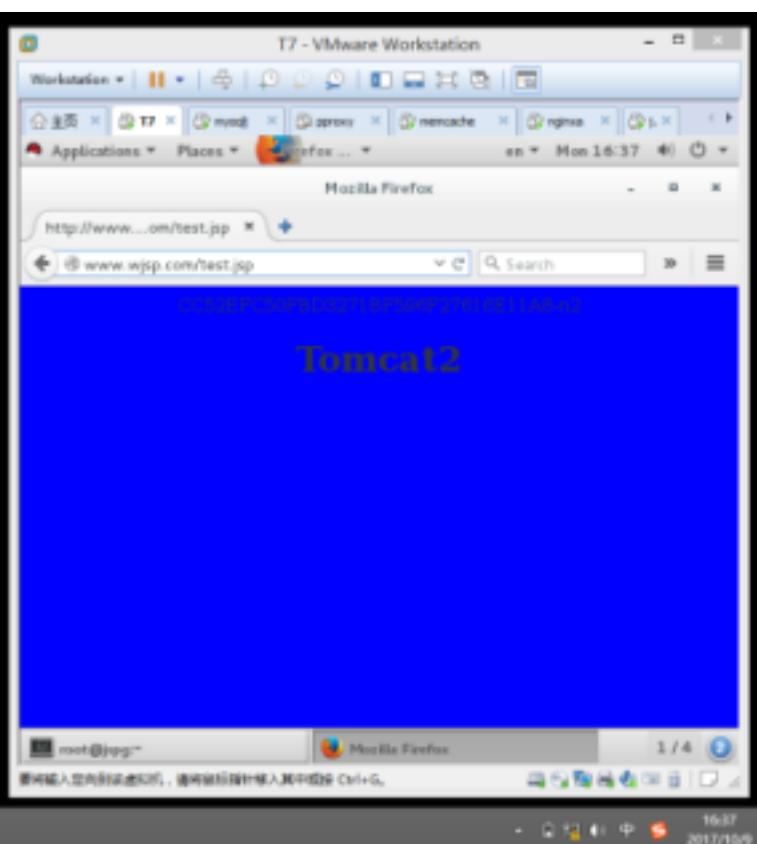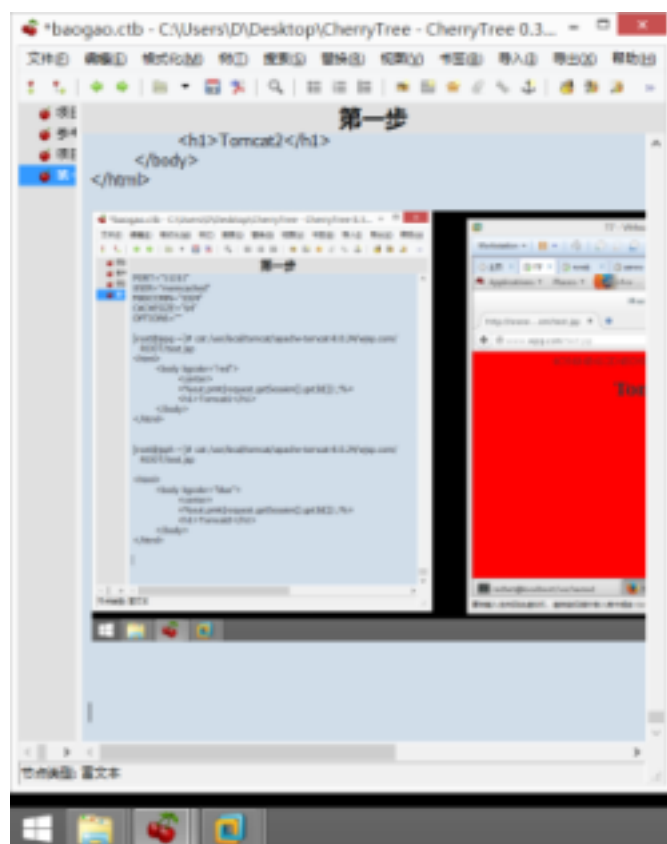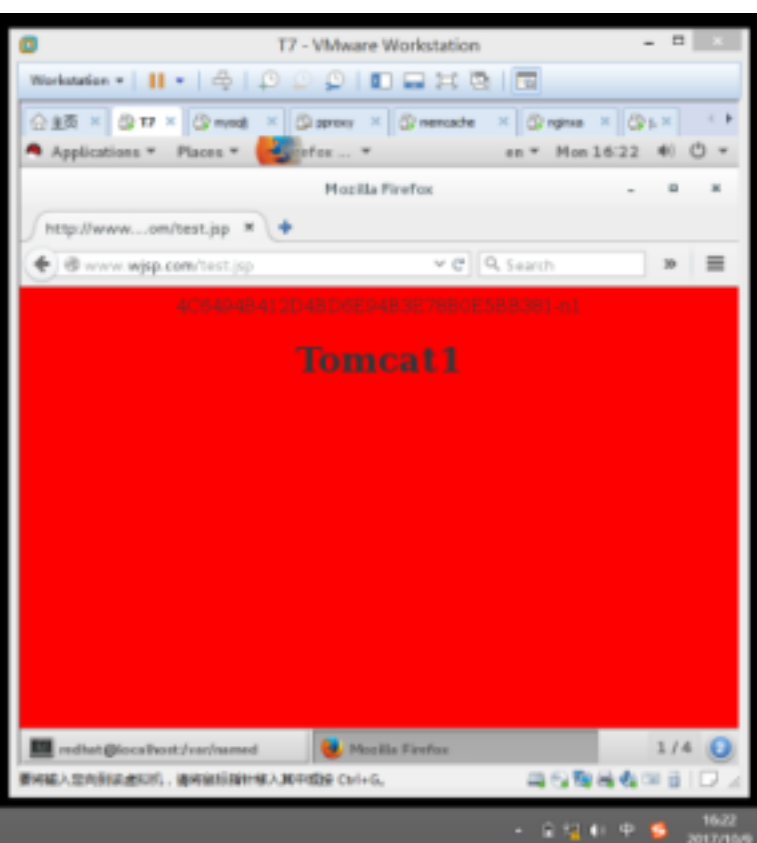
```
        </body>
</html>
```


[root@phpe msm]# yum -y install php-pecl-memcache

设置页面代码启动memached功能
[root@phpe msm]# vim /usr/share/nginx/wphp.com/config/config_global.php

```
$_config['memory']['memcache']['server'] = '172.25.254.20';
$_config['memory']['memcache']['port'] = 11211;
$_config['memory']['memcache']['pconnect'] = 1;
$_config['memory']['memcache']['timeout'] = 1;
```

[root@phpe msm]# systemctl restart spawn-fcgi

[root@phpf msm]# yum -y install php-pecl-memcache

设置页面代码启动memached功能
[root@phpf msm]# vim /usr/share/nginx/wphp.com/config/config_global.php

```
$_config['memory']['memcache']['server'] = '172.25.254.20';
$_config['memory']['memcache']['port'] = 11211;
$_config['memory']['memcache']['pconnect'] = 1;
$_config['memory']['memcache']['timeout'] = 1;
```


[root@phpf msm]# systemctl restart spawn-fcgi

登录网页后台 http://www.wphp.com/admin.php
全局---> 性能优化 ---> 内存优化 ---> memcache   支持 打开 内存清理

第九步：mysql主从

主：mysqlj 172.25.254.19
从：mysql2 172.25.254.21
[root@mysql2 ~]# rpm -q mariadb
mariadb-5.5.44-2.el7.x86_64

先保持数据一致性
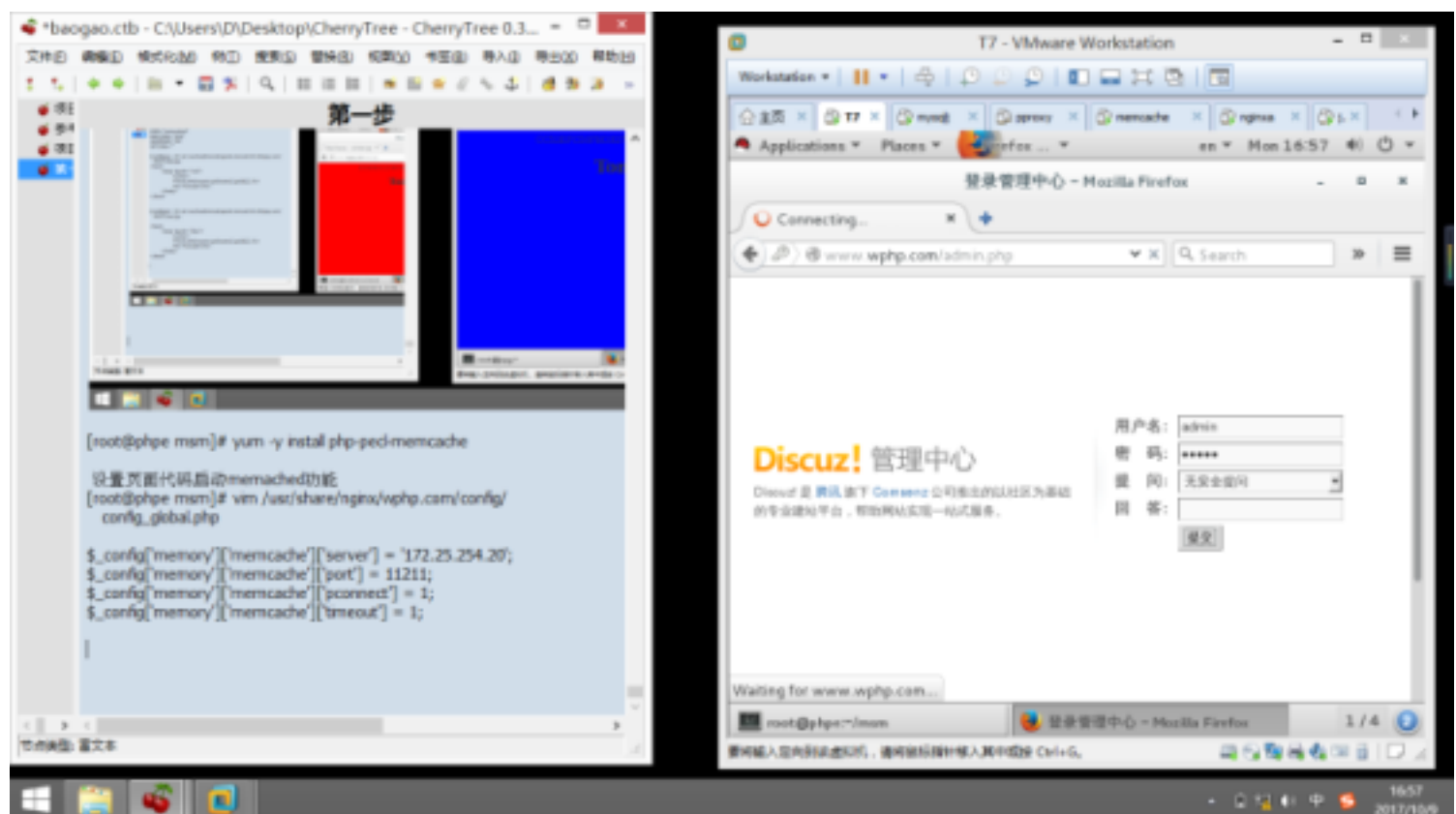
```
[root@mysqlj mysql]# scp -r php/ 172.25.254.21:/var/lib/mysql/
[root@mysqlj mysql]# scp -r mysql 172.25.254.21:/var/lib/mysql/

[root@mysqlj mysql]# scp -r jsp/ 172.25.254.21:/var/lib/mysql/
[root@mysql2 mysql]# chown -R mysql. jsp/
[root@mysql2 mysql]# chown -R mysql. php/
[root@mysql2 mysql]# chown -R mysql. mysql/
[root@mysql2 mysql]# systemctl restart mariadb

mysqlj：
MariaDB [(none)]> grant replication slave on *.* to 'slave'@'%' identified by 'slave';

[root@mysqlj ~]# vim /etc/my.cnf

[mysqld]
datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
port=3306
log-bin=/var/lib/mysql/master-bin.log
server-id=100


[root@mysql2 ~]# vim /etc/my.cnf

[mysqld]
datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
port=3306
relay-log=/var/lib/mysql/slave-relay.log
server-id=200
log-slave-updates=1




mysql2：
MariaDB [(none)]> change master to
master_host='172.25.254.19',master_user='slave',master_password='slave',master_port=3306,
master_log_file='master-bin.000014',master_log_pos=118675;


MariaDB [(none)]> start slave;


MariaDB [(none)]> show slave status\G;
*************************** 1. row ***************************
               Slave_IO_State: Waiting for master to send event
                  Master_Host: 172.25.254.19
                  Master_User: slave
                  Master_Port: 3306
                Connect_Retry: 60
              Master_Log_File: master-bin.000014
          Read_Master_Log_Pos: 118675
               Relay_Log_File: slave-relay.000002
                Relay_Log_Pos: 530
        Relay_Master_Log_File: master-bin.000014
             Slave_IO_Running: Yes
            Slave_SQL_Running: Yes
              Replicate_Do_DB:
          Replicate_Ignore_DB:
           Replicate_Do_Table:
```

```
              Replicate_Ignore_Table:
           Replicate_Wild_Do_Table:
       Replicate_Wild_Ignore_Table:
                       Last_Errno: 0
                       Last_Error:
                    Skip_Counter: 0
             Exec_Master_Log_Pos: 118675
                 Relay_Log_Space: 820
                 Until_Condition: None
                  Until_Log_File:
                   Until_Log_Pos: 0
               Master_SSL_Allowed: No
               Master_SSL_CA_File:
               Master_SSL_CA_Path:
                  Master_SSL_Cert:
                Master_SSL_Cipher:
                   Master_SSL_Key:
            Seconds_Behind_Master: 0
Master_SSL_Verify_Server_Cert: No
                   Last_IO_Errno: 0
                    Last_IO_Error:
                  Last_SQL_Errno: 0
                   Last_SQL_Error:
     Replicate_Ignore_Server_Ids:
                 Master_Server_Id: 100
```

mysqlj：
MariaDB [(none)]> create database test1;
Query OK, 1 row affected (0.02 sec)

mysql2：
MariaDB [(none)]> show databases;
```
+--------------------+
| Database           |
+--------------------+
| information_schema |
| jsp                |
| mysql              |
| performance_schema |
| php                |
| test               |
| test1              |
+--------------------+
```
7 rows in set (0.06 sec)

<mark>第十步：读写分离</mark>

pproxy：172.25.254.22

[root@pproxy ~]# ls
anaconda-ks.cfg   mysql-proxy-0.8.5-linux-glibc2.3-x86-64bit.tar.gz

[root@pproxy ~]# mkdir /mysql-proxy
[root@pproxy ~]# tar -xf mysql-proxy-0.8.5-linux-glibc2.3-x86-64bit.tar.gz
[root@pproxy ~]# mv mysql-proxy-0.8.5-linux-glibc2.3-x86-32bit/* /mysql-proxy

```
[root@pproxy mysql-proxy]# cat /mysql-proxy/mysql-proxy.cnf
[mysql-proxy]
proxy-address=172.25.254.22:4040
user=root
admin-username=proxy
admin-password=proxy
admin-lua-script=/mysql-proxy/lib/mysql-proxy/lua/admin.lua
proxy-read-only-backend-addresses=172.25.254.21:3306
proxy-backend-addresses=172.25.254.19:3306
proxy-lua-script=/mysql-proxy/share/doc/mysql-proxy/rw-splitting.lua
log-file=/var/tmp/mysql-proxy.log
daemon=true
keepalive=true


[root@pproxy mysql-proxy]# vim share/doc/mysql-proxy/rw-splitting.lua

if not proxy.global.config.rwsplit then
      proxy.global.config.rwsplit = {
            min_idle_connections = 1,
            max_idle_connections = 1,

            is_debug = false
      }
end


[root@pproxy mysql-proxy]# chmod 660 /mysql-proxy/mysql-proxy.cnf

[root@pproxy mysql-proxy]# bin/mysql-proxy --defaults-file=/mysql-proxy/mysql-proxy.cnf

[root@pproxy mysql-proxy]#  netstat -tnpl |grep :4040
tcp      0      0 172.25.254.22:4040      0.0.0.0:*            LISTEN      3216/mysql-proxy

mysqlj：
MariaDB [(none)]> grant all on *.* to 'proxy'@'%' identified by 'proxy';
Query OK, 0 rows affected (0.03 sec)

MariaDB [(none)]> flush privileges;
Query OK, 0 rows affected (0.02 sec)


测试读写分离

使用客户端连接 mysql-proxy
mysql -u proxy -h 172.25.254.22 -P 4040 -pproxy

[root@localhost Desktop]# mysql -u proxy -h 172.25.254.22 -P 4040 -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 34
Server version: 5.5.44-MariaDB-log MariaDB Server

Copyright (c) 2000, 2015, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> show databases;
+--------------------+
| Database           |
```

```
+--------------------+
| information_schema |
| dabing             |
| jsp                |
| mysql              |
| performance_schema |
| php                |
| test               |
| test1              |
+--------------------+
8 rows in set (0.11 sec)
```

停掉slave主从同步后，创建数据显示成功，但查看则新创建的数据没有显示出来，则表明读写分离成功。

```
MariaDB [(none)]> create database test2;
Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| dabing             |
| jsp                |
| mysql              |
| performance_schema |
| php                |
| test               |
| test1              |
+--------------------+
8 rows in set (0.11 sec)

MariaDB [(none)]> create database test3;
Query OK, 1 row affected (0.03 sec)

MariaDB [(none)]> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| dabing             |
| jsp                |
| mysql              |
| performance_schema |
| php                |
| test               |
| test1              |
+--------------------+
8 rows in set (0.11 sec)
```