《小小忍者》主从、单机备份机制制作全流程 “Little Ninjia”Master-Slave Backup System Setting Process

1. **主从备份**master-slave backup

环境：主机A（192.168.0.1）、从机B（192.168.0.2）——2台机器mysql 安装请按照给出的配置文档安装，尽量保持一致）；且主、从机均处于未对外服务状态！Environment: MasterA(192.168.0.1),Slave B(192.168.0.2)—install mysql according to the configuration,try to keep configuration of two machines the same); Both master and slave are under state of keep close to public!

1. 在主机上执行以下语句——Execute below script on master--

      GRANT REPLICATION SLAVE ON \*.\* TO 'username'@'192.168.0.2' IDENTIFIED BY pass;

flush privileges;

      上面语句中的username是单独处理主从操作的数据库用户，请自己修改合适的名字；pass处请填写此用户密码，记得用单引号引起来！“username” in this script is date base user which handle master and slave operation, please modify appropriate name; Fill in password of this user at “pass”, remember to quote it with single quotes!

1. 在主机的my.ini中添加以下参数——add below parameters to “my.ini” of master

log-bin=mysql-bin

max\_binlog\_size=1024M

expire\_logs\_days=1

binlog\_format=mixed

server-id       = 1

binlog-do-db    = webgamedb

binlog-do-db    = bi

binlog-do-db    = logdb

    binlog-ignore-db=mysql

       第二句是binlog的文件最大大小、第三句是binlog过期时间、第四句是主从模式、第六七八句是参加主从备份的库名。这些均为主从参数中关键、核心和可变动的部分，可视具体情况修改参数。The second parameter is the maximum size of binlog file,the third parameter is binlog expiration time,the forth parameter is master-slave mode,the 6th -8th parameters are library names which participate master-slave backup. These parameters are key,core and variable parts, can be modified in accordance with specific.

       在从机的my.ini中添加以下参数——add below parameters to “my.ini” of slave

        log-bin=mysql-bin

max\_binlog\_size=1024M

expire\_logs\_days=1

binlog\_format=mixed

server-id       = 2

master-host     = 192.168.0.1

master-user     = username

master-pass     = pass

master-port     = 3306

master-connect-retry=60

binlog-do-db    = webgamedb

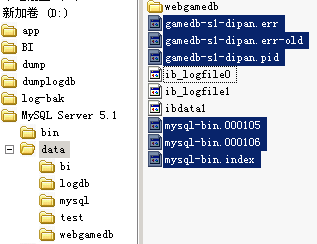
binlog-do-db    = bi

binlog-do-db    = logdb

replicate-ignore-db=mysql

      从机参数跟主机参数类似，但要注意添加主从管理账号及密码，还有主机地址。parameters of slave are similar with master’s, but need to add master-slave manage account，password and master’s address.

1. 将主机中需要参与主从备份的库进行备份，并导入从机中，库名保持一致，范例中是webgamedb、bi、logdb这3个库。（导数据时最好用命令行模式！）Backup librarys in master which need to participate master-slave backup, and import them into slave, keep the name same, in the instance, there are 3 librarys:webgamedb,bi and logbd.(better use command line mode while importing)
2. 停止主从机mysql服务。Stop mysql server of master and slave.
3. 在mysql安装目录中将data目录中除了ib\_logfile0、ib\_logfile1、ibdata1之外的单个文件全部删除，如下图under mysql install directory/data,delete all single files except “ib-logfile0,ib-logfile1 and ibdata1”,all the picture below:



主、从机均要执行删除操作，若无其他文件可不执行。Both master and slave need to do this operation, unless there are no other files.

   F、分别重启主、从机msyql服务。然后在从机上执行以下语句——restart msyql server of master and slave respectively.And then execute script below on slave--

      Show slave status；

      主从状态参数很多，这里就不一一解释，需要研究的可以参考msyql官方网站。我们主要看slave\_IO\_Running和Slave\_SQL\_Running这两个参数。There are many master-slave state parameters,you can reference official website of msyql.What we need to focus is “slave IO\_Running” and “Slave\_SQL\_Running”.

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1. **单机备份**。Onemachine Backup

Mysql支持多种单机备份方式，但由于我们使用免费版本故得不到这些便利，就需要我们根据具体情况来调用mysqldump命令来实现“定时完整且有时间日期格式的单机自动备份”，鉴于服务器过多，我们甚至考虑了远程批量备份。以下为单机备份模板——Mysql support various onemachine backup ways,but as we use free edition,we cannot enjoy these convenience. So we need to call mysqldump order to realize onemachine automatic backup timing, complete and with time data format. Below is onemachine backup script--

@echo off

::set zip\_patch=D:\dump-zip

set zonename=**ninja1**

set dump\_patch=**D:\dump**

::set dump\_bak=D:\dump-bak

::cp  %dump\_patch%\\* %dump\_bak%

del /q /s D:\dump\**error.txt**

D:\"MySQL Server 5.1"\bin\mysqldump -u**root** –p**123456** --max\_allowed\_packet=1G -l -F -R webgamedb --log-error=D:\dump\error.txt > D:\dump\%zonename%\_webgamedb.sql

set /p mysqldump=< D:\dump\error.txt

if "%mysqldump%" equ "" (echo mysqldump is complete) else (echo mysqldump is error)

::zip -mj %dump\_patch%\%zonename%\_dump\_"%date:~0,4%%date:~5,2%%date:~8,2%%time:~0,2%%time:~3,2%%time:~6,2%".zip %dump\_patch%\\*.sql

"C:\Program Files (x86)\WinRAR\**WinRAR.exe**"  a -agYYYYMMDDHHMMSS -m3 -df -ep -ibck -t  %dump\_patch%\%zonename%\_dump\_.rar %dump\_patch%\\*.sql

::forfiles /p %dump\_patch% /s /m \*.rar /d -20 /c "cmd /c del @file"

::pause

 以上脚本中请注意加粗的部分。Zonename是区号、备份路径是D盘下dump目录、此目录中需要有一个没有任何内容的error.txt文件、请修改上文中root和123456、选择使用winrar压缩或者zip均可，请注意软件安装路径！Please pay attention about the overstriking parts. Zonename is area code,backup patch is D/dump, there shall be a file error.txt which have no content,please modify “root”and “123456”,both winrar and zip are fine, please attention software install patch!

 将上面脚本放入dump路径下的一个bat文件中，如图put this script in a bat file under dump patch, as the picture below:

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然后使用windows的计划任务定期调用此bat即可，当然在正式调用前不妨先双击一下此bat文件，看其运行是否正常。Call this bat at regular intervals by using Task Scheduler of windows,of course,you can check this function by double-click this bat file.

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## 3.双机互做主从：Two machines backup each other

环境：主机A（192.168.10.1）、主机B（192.168.10.2）——2台机器mysql 安装请按照给出的配置文档安装，尽量保持一致）；且主、从机均处于未对外服务状态！Environment: MasterA(192.168.0.1),Slave B(192.168.0.2)—install mysql according to the configuration,try to keep configuration of two machines the same); Both master and slave are under state of not in server to public!

### 概述：Overview

**a.**主机A、B分别安装mysql默认实例（3306端口），主机A、B分别根据默认实例安装配置mysql\_3307(可以自定义名称)实例,并分别修改主机A、B的mysql\_3307实例中的my.ini中的端口号及路径。Install mysql default instance(port 3306) on Host A and B, install configuration according default instance mysql-3307 (can set a name) on Host A and B, and modify port number and patch of my.ini in mysql-3307 respectively.

**b.** 分别修改主机A、B的mysql\_3307实例中的my.ini中主从参数。Modify master-slave parameters in my.ini of mysql-3307 respectively.

**C.**主机A的mysql默认实例与 主机B的mysql\_3307实例做主从，主机B的mysql默认实例与主机A的mysql\_3307实例做主从。

**d**．分别在主机A、B上做mysql\_3307实例的备份。

### 详细步骤in detail procedure

1.Mysql默认实例安装步骤参见配置文档安装，下面介绍mysql\_3307实例的安装配置：the install of Mysql instance reference configuration document, below is the install configuration of mtsql-3307 instance

a.停止3306的mysql服务 stop mysql server of 3306

b.拷贝D:\MySQL Server 5.1文件夹，并改为D:\MySQL Server 5.1\_3307 copy folder D:\MySQL Server 5.1, and change name to D:\MySQL Server 5.1\_3307

c.修改D:\MySQL Server 5.1\_3307\my.ini文件，去掉主从参数并修改以下参数Modify file D:\MySQL Server 5.1\_3307\my.ini, delete master-slave parameter and modify parameters below:

[client]

port=3307

[mysqld]

port=3307

basedir="D:/MySQL Server 5.1\_3307/"

datadir="D:/MySQL Server 5.1\_3307/Data/"

d.安装mysql\_3307服务install mysql-3307 server

"D:\MySQL Server 5.1\_3307\bin\mysqld" --install MySQL\_3307 --defaults-file="D:\MySQL Server 5.1\_3307\my.ini"

e.启动mysql\_3307服务。Start mysql-3307 server

2. 主从配置：master-slave configuration

**主机A(192.168.10.1)mysql默认实例为主，主机B(192.168.10.2)mysql\_3307实例为从。Host A(192.168.10.1)mysql default instance is master, Host B(192.168.10.2)mysql-3307 instance is slave.**

**a.**在主机A(192.168.10.1)mysql默认实例（端口3306）上执行以下语句——execute below script on Host A(192.168.10.1)mysql default instance(port 3306)

      GRANT REPLICATION SLAVE ON \*.\* TO 'username'@'192.168.10.2' IDENTIFIED BY pass;

flush privileges;

      上面语句中的username是单独处理主从操作的数据库用户，请自己修改合适的名字；pass处请填写此用户密码，记得用单引号引起来！“username” in this script is date base user which handle master and slave operation, please modify appropriate name; fill in password of this user at “pass”, remember to quote it with single quotes!

**b.**在主机A(192.168.10.1)mysql默认实例的my.ini中添加以下参数——add below parameter in my.ini of Host A(192.168.10.1)mysql default instance

log-bin=mysql-bin

max\_binlog\_size=1024M

expire\_logs\_days=1

binlog\_format=mixed

server-id       = 1

binlog-do-db    = webgamedb

binlog-do-db    = bi

binlog-do-db    = logdb

    binlog-ignore-db=mysql

       第二句是binlog的文件最大大小、第三句是binlog过期时间、第四句是主从模式、第六七八句是参加主从备份的库名。这些均为主从参数中关键、核心和可变动的部分，可视具体情况修改参数。The second parameter is the maximum size of binlog file,the third parameter is binlog expiration time,the forth parameter is master-slave mode,the 6th -8th parameters are library names which participate master-slave backup. These parameters are key,core and variable parts, can be modified in accordance with specific.

       在从机(主机B的mysql\_3307实例)的my.ini中添加以下参数——add below parameters in my.ini of slave(Host B mysql-3307)

         Log-bin=mysql-bin

max\_binlog\_size=1024M

expire\_logs\_days=1

binlog\_format=mixed

server-id       = 2

master-host     = 192.168.10.1

master-user     = username

master-pass     = pass

master-port     = 3306

master-connect-retry=60

binlog-do-db    = webgamedb

binlog-do-db    = bi

binlog-do-db    = logdb

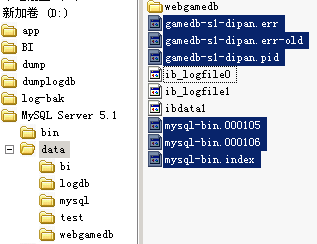
replicate-ignore-db=mysql

      从机参数跟主机参数类似，但要注意添加主从管理账号及密码，还有主机地址。parameters of slave are similar with master’s, but need to add master-slave manage account，password and master’s address.

**c.**将主机中需要参与主从备份的库进行备份，并导入从机中，库名保持一致，范例中是webgamedb、bi、logdb这3个库。（导数据时最好用命令行模式！）Backup librarys in master which need to participate master-slave backup, and import them into slave, keep the name same, in the instance, there are 3 librarys:webgamedb,bi and logbd.(better use command line mode while importing)

**d.**停止主从机mysql服务。Stop mysql server of master and slave.

**e.**在mysql安装目录中将data目录中除了ib\_logfile0、ib\_logfile1、ibdata1之外的单个文件全部删除，如下图under mysql install directory/data,delete all single files except “ib-logfile0,ib-logfile1 and ibdata1”,all the picture below:



主、从机均要执行删除操作，若无其他文件可不执行。从机是在D:\MySQL Server 5.1\_3307目录下。Both master and slave need to do this operation, unless there are no other files. Slave directory is D:\MySQL Server 5.1\_3307

**F、**分别重启主、从机msyql服务。然后在从机上执行以下语句——restart msyql server of master and slave respective.And then execute script below on slave--

      Show slave status；

      主从状态参数很多，这里就不一一解释，需要研究的可以参考msyql官方网站。我们主要看slave\_IO\_Running和Slave\_SQL\_Running这两个参数。There are many master-slave state parameters,you can reference official website of msyql.What we need to focus is slave IO\_Running and Slave\_SQL\_Running.

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**主机B(192.168.10.2) mysql默认实例为主，主机A(192.168.10.1)mysql\_3307实例为从。 Host B(192.168.10.2) mysql default instance is master, Host A(192.168.10.1)mysql-3307 instance is slave.**

**a.**在主机B(192.168.10.2) mysql默认实例（端口3306）上执行以下语句——

Execute script blow on Host B (192.168.10.2)mysql default instance(port 3306)：

      GRANT REPLICATION SLAVE ON \*.\* TO 'username'@'192.168.10.1' IDENTIFIED BY pass;

flush privileges;

      上面语句中的username是单独处理主从操作的数据库用户，请自己修改合适的名字；pass处请填写此用户密码，记得用单引号引起来！

“username” in this script is date base user which handle master and slave operation, please modify appropriate name; fill in password of this user at “pass”, remember to quote it with single quotes!

**b.**在主机B(192.168.10.2) mysql默认实例的my.ini中添加以下参数——add below parameters in my.ini of Host B(192.168.10.2)mysql default instance

log-bin=mysql-bin

max\_binlog\_size=1024M

expire\_logs\_days=1

binlog\_format=mixed

server-id       = 1

binlog-do-db    = webgamedb

binlog-do-db    = bi

binlog-do-db    = logdb

    binlog-ignore-db=mysql

       第二句是binlog的文件最大大小、第三句是binlog过期时间、第四句是主从模式、第六七八句是参加主从备份的库名。这些均为主从参数中关键、核心和可变动的部分，可视具体情况修改参数。The second parameter is the maximum size of binlog file,the third parameter is binlog expiration time,the forth parameter is master-slave mode,the 6th -8th parameters are library names which participate master-slave backup. These parameters are key,core and variable parts, can be modified in accordance with specific.

       在从机—(主机A的mysql\_3307实例)的my.ini中添加以下参数——add below parameters in my.ini of slave –(Host A mysql-3307 instance)--

        log-bin=mysql-bin

max\_binlog\_size=1024M

expire\_logs\_days=1

binlog\_format=mixed

server-id       = 2

master-host     = 192.168.10.2

master-user     = username

master-pass     = pass

master-port     = 3306

master-connect-retry=60

binlog-do-db    = webgamedb

binlog-do-db    = bi

binlog-do-db    = logdb

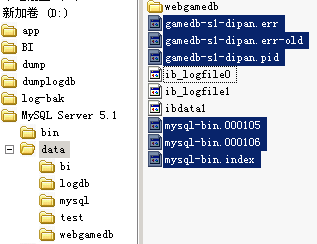
replicate-ignore-db=mysql

      从机参数跟主机参数类似，但要注意添加主从管理账号及密码，还有主机地址。parameters of slave are similar with master’s, but need to add master-slave manage account，password and master’s address.

**c.**将主机中需要参与主从备份的库进行备份，并导入从机中，库名保持一致，范例中是webgamedb、bi、logdb这3个库。（导数据时最好用命令行模式！）Backup librarys in master which need to participate master-slave backup, and import them into slave, keep the name same, in the instance, there are 3 librarys:webgamedb,bi and logbd.(better use command line mode while importing)

**d.**停止主从机mysql服务。Stop mysql server of master and slave.

**e.**在mysql安装目录中将data目录中除了ib\_logfile0、ib\_logfile1、ibdata1之外的单个文件全部删除，如下图under mysql install directory/data,delete all single files except “ib-logfile0,ib-logfile1 and ibdata1”,all the picture below:



主、从机均要执行删除操作，若无其他文件可不执行。从机是在D:\MySQL Server 5.1\_3307目录下。Both master and slave need to do this operation, unless there are no other files. Slave directory is D:\MySQL Server 5.1\_3307

**F、**分别重启主、从机msyql服务。然后在从机上执行以下语句——restart msyql server of master and slave respective.And then execute script below on slave--

      Show slave status；

      主从状态参数很多，这里就不一一解释，需要研究的可以参考msyql官方网站。我们主要看slave\_IO\_Running和Slave\_SQL\_Running这两个参数。There are many master-slave state parameters,you can reference official website of msyql.What we need to focus is slave IO\_Running and Slave\_SQL\_Running.

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# 备份Back Up

**主机A(192.168.10.1)mysql默认实例为主，主机B(192.168.10.2)mysql\_3307实例为从。Host A(192.168.10.1)mysql default instance is master, Host B(192.168.10.2)mysql-3307 instance is slave.**

Mysql支持多种单机备份方式，但由于我们使用免费版本故得不到这些便利，就需要我们根据具体情况来调用mysqldump命令来实现“定时完整且有时间日期格式的单机自动备份”。以下为webgamedb和logdb备份脚本——Mysql support various onemachine backup ways,but as we use free edition,we cannot enjoy these convenience. So we need to call mysqldump order to realize onemachine automatic backup timing, complete and with time data format. Below is webgamebd and logbd backup script--

**Webgamedb：**

@echo off

::set zip\_patch=D:\dump-zip

set zonename=**ninja1**

set dump\_patch=**D:\dump**

::set dump\_bak=D:\dump-bak

::cp  %dump\_patch%\\* %dump\_bak%

del /q /s D:\dump\**error.txt**

D:\"MySQL Server 5.1"\bin\mysqldump -uusername –p**password** --max\_allowed\_packet=1G -l -F -R webgamedb --log-error=D:\dump\error.txt > D:\dump\%zonename%\_webgamedb.sql

set /p mysqldump=< D:\dump\error.txt

if "%mysqldump%" equ "" (echo mysqldump is complete) else (echo mysqldump is error)

::zip -mj %dump\_patch%\%zonename%\_dump\_"%date:~0,4%%date:~5,2%%date:~8,2%%time:~0,2%%time:~3,2%%time:~6,2%".zip %dump\_patch%\\*.sql

"C:\Program Files (x86)\WinRAR\**WinRAR.exe**"  a -agYYYYMMDDHHMMSS -m3 -df -ep -ibck -t  %dump\_patch%\%zonename%\_dump\_.rar %dump\_patch%\\*.sql

::forfiles /p %dump\_patch% /s /m \*.rar /d -20 /c "cmd /c del @file"

::pause

**Logdb：**

@echo off

::set zip\_patch=D:\dump-zip

set zonename=ninja1

set dump\_patch=D:\dumplogdb

::set dump\_bak=D:\dump-bak

::cp %dump\_patch%\\* %dump\_bak%

D:\"MySQL Server 5.1"\bin\mysqldump -uusername -ppassword -l -F -R logdb > D:\dumplogdb\%zonename%\_logdb.sql

::zip -mj %dump\_patch%\%zonename%\_dumplogdb\_"%date:~0,4%%date:~5,2%%date:~8,2%%time:~0,2%%time:~3,2%%time:~6,2%".zip %dump\_patch%\\*.sql

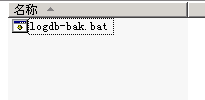
"C:\Program Files (x86)\WinRAR\WinRAR.exe" a -agYYYYMMDDHHMMSS -m3 -df -ep -ibck -t %dump\_patch%\%zonename%\_dumplogdb\_.rar %dump\_patch%\\*.sql

forfiles /p %dump\_patch% /s /m \*.rar /d -14 /c "cmd /c del @file"

::pause

 以上脚本中请注意加粗的部分。Zonename是区号、备份路径是D盘下dump目录、此目录中需要有一个没有任何内容的error.txt文件、请修改上文中username和password、选择使用winrar压缩或者zip均可，请注意软件安装路径！Please pay attention about the overstriking parts. Zonename is area code,backup patch is D/dump, there shall be a file error.txt which have no content,please modify “username”and “password”,both winrar and zip are fine, please attention software install patch!

 将上面脚本分别放入dump、dumplogdb路径下的一个bat文件中，如图Put this script in a bat file under dump and dumplogdb ,as the picture below:

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然后在**主机B(192.168.10.2)**,d:\dump\_3307下创建game-bak.bat,脚本如下：And then found game-bak.bat under Host B(192.168.10.2), d:\dump\_3307

@echo off

::set zip\_patch=D:\dump-zip

set zonename=ninja1

set dump\_patch=D:\dump\_3307

::set dump\_bak=D:\dump-bak

::cp %dump\_patch%\\* %dump\_bak%

del /q /s D:\dump\_3307\error.txt

D:\"MySQL Server 5.1\_3307"\bin\mysqldump -uusername -ppassword -P 3307 --max\_allowed\_packet=1G -l -F -R webgamedb --log-error=D:\dump\_3307\error.txt > D:\dump\_3307\%zonename%\_webgamedb.sql

set /p mysqldump=< D:\dump\_3307\error.txt

if "%mysqldump%" equ "" (echo mysqldump is complete) else (echo mysqldump is error)

::zip -mj %dump\_patch%\%zonename%\_dump\_"%date:~0,4%%date:~5,2%%date:~8,2%%time:~0,2%%time:~3,2%%time:~6,2%".zip %dump\_patch%\\*.sql

"C:\Program Files (x86)\WinRAR\WinRAR.exe" a -agYYYYMMDDHHMMSS -m3 -df -ep -ibck -t %dump\_patch%\%zonename%\_dump\_.rar %dump\_patch%\\*.sql

forfiles /p %dump\_patch% /s /m \*.rar /d -10 /c "cmd /c del @file"

::pause

然后使用windows的计划任务定期调用此bat即可，当然在正式调用前不妨先双击一下此bat文件，看其运行是否正常。Call this bat at regular intervals by using Task Scheduler of windows,of course,you can check this function by double-click this bat file.



最后在**主机B(192.168.10.2)**,d:\dumplogdb\_3307下创建lodb-bak.bat,脚本如下：At last, found lodb-back.bat under Host B (192.168.10.2), d:\dumplogdb\_3307, below is the script:

@echo off

::set zip\_patch=D:\dump-zip

set zonename=ninja1

set dump\_patch=D:\dumplogdb\_3307

::set dump\_bak=D:\dump-bak

::cp %dump\_patch%\\* %dump\_bak%

D:\"MySQL Server 5.1\_3307"\bin\mysqldump –uusername -ppassword -P 3307 -l -F -R logdb > D:\dumplogdb\_3307\%zonename%\_logdb.sql

::zip -mj %dump\_patch%\%zonename%\_dumplogdb\_"%date:~0,4%%date:~5,2%%date:~8,2%%time:~0,2%%time:~3,2%%time:~6,2%".zip %dump\_patch%\\*.sql

"C:\Program Files (x86)\WinRAR\WinRAR.exe" a -agYYYYMMDDHHMMSS -m3 -df -ep -ibck -t %dump\_patch%\%zonename%\_dumplogdb\_.rar %dump\_patch%\\*.sql

forfiles /p %dump\_patch% /s /m \*.rar /d -14 /c "cmd /c del @file"

::pause

然后使用windows的计划任务定期调用此bat即可，当然在正式调用前不妨先双击一下此bat文件，看其运行是否正常。Call this bat at regular intervals by using Task Scheduler of windows,of course,you can check this function by double-click this bat file.



**主机B(192.168.10.2) mysql默认实例为主，主机A(192.168.10.1)mysql\_3307实例为从。**

步骤参照上面所述。Host B(192.168.10.2)mysql default instance is master, Host A(192.168.10.1)mysql-3307 instance is slave.