Linux 部署Smartbi Proxy 高可用

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Smartbi Proxy负载均衡服务，为产品提供负载均衡和代理服务。

Keepalived的作用是检测服务器的状态，如果有一台web服务器宕机，或工作出现故障，Keepalived将检测到，并将有故障的服务器从系统中剔除，同时使用其他服务器代替该服务器的工作，当服务器工作正常后Keepalived自动将服务器加入到服务器群中，这些工作全部自动完成，不需要人工干涉，需要人工做的只是修复故障的服务器。

服务准备：

	IP地址	角色
服务器1	192.168.137.111	smartbi-proxy，keepalived
服务器2	192.168.137.112	smartbi-proxy，keepalived
虚拟IP(VIP)	192.168.137.155	

1、安装Smartbi Proxy

参考 Linux Tocmat部署Smartbi Proxy 在两台服务器上部署好Smartbi Proxy，并确保能正常访问。

2、安装keepalived

1.环境准备

安装需要基础环境

```
yum install -y gcc gcc-c++ make openssl-devel
```

2.安装keepalived（服务器均需执行）

上传Keepalived安装包到服务器，并解压到指定目录

```
tar -zxvf keepalived-1.3.6.tar.gz -C /opt
```

进入解压目录，执行脚本安装Keepalived

```
cd /opt/keepalived-1.3.6/
./configure --prefix=/opt/keepalived
make && make install
```

拷贝执行文件

```
cp /opt/keepalived/sbin/keepalived /usr/sbin/
```

将keepalived文件拷贝到etc/init.d目录，加入开机启动项

```
cp /opt/keepalived-1.3.6/keepalived/etc/init.d/keepalived /etc/init.d/keepalived
```

将keepalived配置文件拷贝到etc下

```
cp /opt/keepalived/etc/sysconfig/keepalived /etc/sysconfig/
```

创建keepalived文件夹

```
mkdir /etc/keepalived
```

将keepalived配置文件拷贝到etc下

```
cp /opt/keepalived/etc/keepalived/keepalived.conf /etc/keepalived/keepalived.conf
```

添加可执行权限

```
chmod +x /etc/init.d/keepalived
```

加入开机启动

```
chkconfig --add keepalived
chkconfig keepalived on
systemctl enable keepalived
```

3.修改Keepalived配置文件

1.服务器192.168.137.111相关配置：

```
vi /etc/keepalived/keepalived.conf
```

修改配置参考如下

```
! Configuration File for keepalived

global_defs {
   router_id master        #ID
}

vrrp_script chk_proxy {
    script "/etc/keepalived/proxy_check.sh"    #smartbi proxy
    interval 2             #
    weight -20             #-20
}

vrrp_instance smartbi_proxy {
    state MASTER           #
    interface ens33        #ifconfig IP
    virtual_router_id 51   #id
    priority 100           #master
    advert_int 1
    authentication {
        auth_type PASS
        auth_pass 1111
    }
    track_script {
        chk_proxy          #smartbi proxy
    }
    virtual_ipaddress {
        192.168.137.155    #VIP IP
    }
}
```

创建监控脚本

```
vi /etc/keepalived/proxy_check.sh
```

脚本参考如下：

```
#!/bin/bash
count=$(ps -ef | grep tomcat | egrep -cv "grep|$$")
if [ "$count" -eq 0 ];then
   systemctl stop keepalived
fi
```

脚本添加执行权限

```
chmod +x /etc/keepalived/proxy_check.sh
```

2..服务器192.168.137.112相关配置：

```
vi /etc/keepalived/keepalived.conf
```

修改配置参考如下

```
! Configuration File for keepalived

global_defs {
   router_id slave1        #ID
}

vrrp_script chk_proxy {
    script "/etc/keepalived/proxy_check.sh"    #smartbi proxy
    interval 2             #
    weight -20             #-20
}

vrrp_instance smartbi_proxy {
    state BACKUP           #
    interface ens33        #ifconfig IP
    virtual_router_id 51   #id
    priority 90           #
    advert_int 1
    authentication {
        auth_type PASS
        auth_pass 1111
    }
    track_script {
        chk_proxy          #smartbi proxy
    }
    virtual_ipaddress {
        192.168.137.155    #VIP IP
    }
}
```

创建监控脚本

```
vi /etc/keepalived/proxy_check.sh
```

脚本参考如下：

```
#!/bin/bash
count=$(ps -ef | grep tomcat | egrep -cv "grep|$$")
if [ "$count" -eq 0 ];then
   systemctl stop keepalived
fi
```

脚本添加执行权限

```
chmod +x /etc/keepalived/proxy_check.sh
```

4. 启动Keepalived

登陆两台服务器分别启动Keepalived

```
systemctl start keepalived
```

查看Keepalived运行状态

```
systemctl status keepalived
```

5. 检测Keepalived

1. 服务器1中Keepalived配置文件中权重高，所以该服务器成为Keepalived主服务器，拥有VIP地址，通过VIP地址能访问smartbi Proxy。

```
[root@smartbi-2 ~]# ip add
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 00:0c:29:4c:b3:62 brd ff:ff:ff:ff:ff:ff
    inet 192.168.137.111/24 brd 192.168.137.255 scope global noprefixroute dynamic ens33
       valid_lft 4393811sec preferred_lft 4393811sec
    inet 192.168.137.155/32 scope global ens33
       valid_lft forever preferred_lft forever
    inet6 fe80::4522:63f1:e71a:44f5/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
    inet6 fe80::2353:4fcc:dc22:4da8/64 scope link tentative noprefixroute dadfailed
       valid_lft forever preferred_lft forever
```

2. 停止服务器1的smartbi proxy服务，脚本会关闭Keepalived并释放VIP，服务器2将自动获取VIP地址，通过VIP地址依旧能访问smartbi Proxy。

3. 重新启动服务器1的smartbi proxy，Keepalived服务，服务器1根据Keepalived配置文件配置，会重新抢占VIP地址。

4. 关闭两台服务器的smartbi proxy服务，Keepalived主动关闭，无法通过VIP地址访问服务。