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Subject: Firewall

Posted by [rcraig114](#) on Mon, 03 Feb 2014 01:23:50 GMT

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I followed one of the recommended firewall guides that involves creating a "firewall" service instead of just plain ole IPTABLES. It works great, but there are a few customizations that I am having trouble with. Below is my code, sanitized of course. My first goal is to allow access to the Host Node via port 22 (secure shell). The only way I can figure out how to get it working right now is to add the IP I am coming from in the DMZ section. How can I add a statement (and where do I add it) to permit secure shell from a single host? Any help is appreciated.

```
#!/bin/sh
# firewall    Start iptables firewall
# chkconfig: 2345 97 87
# description: Starts, stops and saves iptables firewall
# This script sets up the firewall for the INPUT chain (which is for
# the HN itself) and then processes the config files under
# /etc/firewall.d to set up additional rules in the FORWARD chain
# to allow access to containers' services.

. /etc/init.d/functions

# the IP block allocated to this server
SEGMENT="63.141.X.X/X"
# the IP used by the hosting server itself
THISHOST="63.141.X.X"
# services that should be allowed to the HN;
# services for containers are configured in /etc/firewall.d/*
OKPORTS="53 22 3000 80"
# hosts allowed full access through the firewall,
# to all containers and to this server
DMZS="192.168.4.0/24 70.122.X.X 208.110.X.X 10.0.0.1 10.1.1.1 10.254.254.0/30"

purge() {
    echo -n "Firewall: Purging and allowing all traffic"
    iptables -P OUTPUT ACCEPT
    iptables -P FORWARD ACCEPT
    iptables -P INPUT ACCEPT
    iptables -F
    success ; echo
}

setup() {
    echo -n "Firewall: Setting default policies to DROP"
    iptables -P INPUT DROP
    iptables -P FORWARD DROP
    iptables -I INPUT -j ACCEPT -m state --state ESTABLISHED,RELATED
    iptables -I FORWARD -j ACCEPT -m state --state ESTABLISHED,RELATED
```

```

iptables -I INPUT -j ACCEPT -i lo
iptables -I FORWARD -j ACCEPT --source $SEGMENT
success ; echo

echo "Firewall: Allowing access to HN"
for port in $OKPORTS ; do
    echo -n "    port $port"
    iptables -I INPUT -j ACCEPT -s $SEGMENT -d $THISHOST --protocol tcp --destination-port
$port
    iptables -I INPUT -j ACCEPT -s $SEGMENT -d $THISHOST --protocol udp --destination-port
$port
    success ; echo
done
for ip in $DMZS ; do
    echo -n "    DMZ $ip"
    iptables -I INPUT -i eth0 -j ACCEPT -s $ip
    iptables -I FORWARD -i eth0 -j ACCEPT -s $ip
    success ; echo
done

CTSETUPS=`echo /etc/firewall.d/*`
if [ "$CTSETUPS" != "/etc/firewall.d/*" ] ; then
echo "Firewall: Setting up container firewalls"
for i in $CTSETUPS ; do
    . $i
    echo -n "    $CTNAME CT$CTID"
    if [ -n "$BANNED" ] ; then
        for source in $BANNED ; do iptables -I FORWARD -j DROP --destination $CTIP --source
$source ; done
    fi
    if [ -n "$OPENPORTS" ] ; then
        for port in $OPENPORTS ; do iptables -I FORWARD -j ACCEPT --protocol tcp --destination
$CTIP --destination-port $port ; done
        for port in $OPENPORTS ; do iptables -I FORWARD -j ACCEPT --protocol udp --destination
$CTIP --destination-port $port ; done
        for port in $OPENPORTS ; do iptables -I FORWARD -j ACCEPT --protocol udp --destination
$CTIP --destination-port 5060:5080 ; done
        for port in $OPENPORTS ; do iptables -I FORWARD -j ACCEPT --protocol udp --destination
$CTIP --destination-port 10000:20000 ; done
    fi
    if [ -n "$DMZS" ] ; then
        for source in $DMZS ; do iptables -I FORWARD -j ACCEPT --protocol tcp --destination $CTIP
--source $source ; done
        for source in $DMZS ; do iptables -I FORWARD -j ACCEPT --protocol udp --destination $CTIP
--source $source ; done
    fi
    [ $? -eq 0 ] && success || failure
    echo

```

```
done
fi
}

case "$1" in
start)
echo "Starting firewall..."
purge
setup
;;
stop)
echo "Stopping firewall..."
purge
;;
restart)
$0 stop
$0 start
;;
status)
iptables -n -L
;;
*)
echo "Usage: $0 <start|stop|restart|status>"
;;
```

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Subject: Re: Firewall

Posted by [rcraig114](#) on Mon, 03 Feb 2014 23:42:31 GMT

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OK, I've been able to figure out how to add individual rules. I just insert them at the bottom if need be or even in the beginning. My next problem is NAT. In order to conserve IP space, I created a container with a private IP address. The configuration for NAT is fairly straight forward,

```
iptables -t nat -A POSTROUTING -s 10.254.253.0/24 -o eth0 -j SNAT --to 63.141.X.X
iptables -A INPUT -s 10.254.253.0/24 -j ACCEPT
iptables -A FORWARD -d 10.254.253.0/24 -j ACCEPT
```

And it works just fine. However, I've tried a million different ways of integrating it into my above firewall config and it doesn't work. Anyone have any suggestions? Or does anyone have a different way of doing a firewall for the VZ host?

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