Re: NFS Problems/Questions

Source: http://unix.derkeiler.com/Mailing−Lists/FreeBSD/questions/2007−06/msg01617.html

- *From*: Michael Smith <mksmith@xxxxxxxxxx>
- *Date*: Sat, 23 Jun 2007 12:46:27 −0700

Hello Jason:

On Jun 23, 2007, at 9:34 AM, Jason Morgan wrote:

> I've been having some trouble with NFS performance for some time and
> now that class is out, I've had a bit of time to investigate but I'm
> stuck. Below are the details of my investigation. Hopefully, someone
> here can give me some advice.
>
> The basic problem is that my NFS performance is very slow. Right now,
> I am connecting two workstations to a NFS server, which has my home
> directory, etc, mounted. They are connected over a gigabit network
> (right now with mtu set to 7000, which is supported by all hardware −−
> changing it to 1500 has no effect on performance, which is
> strange). Each system is running 6.2−RELEASE or −STABLE. Each system
> is also using the following network card:
>
> # ifconfig sk0
> sk0: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 7000
> options=b<RXCSUM,TXCSUM,VLAN_MTU>
> inet 10.0.0.2 netmask 0xffffff00 broadcast 10.0.0.255
> ether 00:17:9a:bb:05:87
> media: Ethernet autoselect (1000baseTX <full− duplex,flag0,flag1>)
> status: active
>
> # dmesg | grep sk
> skc0: <D−Link DGE−530T Gigabit Ethernet> port 0xec00−0xecff mem
> 0xfdff8000−0xfdffbfff irq 18 at device 10.0 on pci0
> skc0: DGE−530T Gigabit Ethernet Adapter rev. (0x9)
> sk0: <Marvell Semiconductor, Inc. Yukon> on skc0
> sk0: Ethernet address: 00:17:9a:XX:XX:XX
>
> ## Server /etc/rc.conf settings
>
> rpcbind_enable="YES"
> rpc_lockd_enable="YES"
> rpc_statd_enable="YES"
> nfs_server_enable="YES"

nfs_server_flags="−u −t −n 12"
nfs_bufpackets="32"
mountd_flags="−r"

Client /etc/rc.conf settings

nfs_client_enable="YES"
nfs_bufpackets="32"
nfsiod_enable="YES"
nfsiod_flags="−n 6"
rpc_lockd_enable="YES"
rpc_statd_enable="YES"
rpcbind_enable="YES"

/etc/exports

/usr −alldirs,maproot=root client1 client2

For performance benchmarking, I am using dd. Locally from the server, this is a representative result when writing a 1GB file:

Local write test (for an upper−bound on what to expect).

dd if=/dev/zero of=./nfs.dat bs=1024k count=1000
1000+0 records in
1000+0 records out
1048576000 bytes transferred in 19.580184 secs (53552919 bytes/sec)

Connecting from a client (both clients get approximately the s