

Re: Effective bandwidth reduction over WAN

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Date: Tue, 02 Aug 2005 21:43:01 +0100

To: e.meijer@verizon.net

Eric Meijer wrote:

> *To SSH mailing list:*

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> *I have a somewhat unusual question. I do not know if this issue is
> truly a bug or just a feature of the protocol.*

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> *I have two sites that are distantly connected to each other via a DS3
> WAN. When we tried to replace FTP with SCP or SFTP we ran into
> throughput problems. We then set up a test in our lab to see if we
> could isolate the factor that was impacting throughput. This test setup
> was composed of two nodes hooked up through a WAN emulator. They were
> connected using Gigabit Ethernet, but the rate was throttled back to 45
> mbps (DS3 rate). All of the testing used an MTU of 1500 and files sizes
> of 10 MB, 100Mb, 1 GB, and 5 GB. We ran FTP tests with the same setup
> for a baseline. For SCP and SFTP we tried each of the three encryption
> algorithms (3-des, arcfour, & blowfish). We then varied the WAN
> latency. We are using the latest version of the Portable SSP for
> Solaris. The OS is Solaris 8.*

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> *The results were*

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> *0 latency FTP – Ave. 39.5 mbps SCP – Ave. 39.4 mbps SFTP –
> Ave. 38.8 mbps*

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> *60 millisec FTP – Ave. 37.7 mbps SCP – Ave. 2.9 mbps SFTP –
> Ave. 2.9 mbps*

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SecurityFocus Secure Shell: Re: Effective bandwidth reduction over WAN

- > *100 millisec FTP – Ave. 33.0 mbps SCP – Ave. 2.0 mbps SFTP –*
- > *Ave. 1.8 mbps*
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- > *Can anyone tell me why the throughput of SCP and SFTP drop so*
- > *drastically when we try to use SSP protocols over a WAN?*
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- >
- > *Eric Meijer*
- >

I don't know the answer to the question, but the problem rings a bell.
Have you considered testing rsync-over-ssh under the same conditions?
IIRC, one of the rsync design objectives was maintaining good throughput
over high latency connections.