

## Re: [opensuse] OpenSuse 10.2 – Fortran compilation very slow through NFS network with a 64bit server and 32bit clients.

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*Source:* <http://linux.derkeiler.com/Mailing-Lists/SuSE/2007-12/msg02035.html>

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- *From:* Linda Walsh <[suse@xxxxxxxx](mailto:suse@xxxxxxxx)>
  - *Date:* Wed, 19 Dec 2007 12:48:04 -0800
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M Harris wrote:

On Wednesday 19 December 2007 09:44, Dave Howorth wrote:

but  
ordering of packets over the network isn't a problem. And yes, either  
TCP or UDP can be used.

Thanks. You can tell how long its been since I even tried it... back not many years ago only  
udp worked. tcp will keep the packets ordered. And thanks for the link.

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UDP is stateless (no connection needed) -- but it is a reliable  
transport for NFS since NFS keeps track of the packet ordering and the  
packets which are 'outstanding'.

TCP is preferred and is the default when it is available.

Where TCP gets important is when NFS run between two  
machines on a \*high\* speed network (1G or greater). The reason being  
is that NFS uses a 16-bit counter to order packets. On a high  
speed network, it's possible too many packets (>65535) can be sent'  
out in a short time and NFS can get 'confused' and lose a bunch of  
packets. This is why "tcp" is the default and preferred transport. TCP  
is available with versions 3 & 4 of NFS (both supported by most modern  
kernels). A big change in 10.3 (I think), is that 10.3 appears to  
prefer NFS4 if available over NFS3. NFS "sessions" will use the maximum  
supported.

However, regarding this:

Perhaps things would improve using "async", that's a difference with local  
filesystems that run "async" by default. But the man page says  
it can be dangerous.

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VERY!

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It depends on the environment, but in a local area network, "async" is usually preferred. "Async" causes \*great\* speed increases when used with NFS that cannot be attained with a 'synchronous' mount. Few 'end users' need 'sync' on NFS mounts.

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