

## Re: The effects of WITNESS and INVARIANTS

**Source:** <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/performance/2004-02/0051.html>

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**From:** Robert Watson ([rwatson\\_at\\_FreeBSD.ORG](mailto:rwatson_at_FreeBSD.ORG))

**Date:** 02/24/04

Date: Tue, 24 Feb 2004 14:28:43 -0500 (EST)

To: Willem Jan Withagen <[wjw@withagen.nl](mailto:wjw@withagen.nl)>

On Tue, 24 Feb 2004, Willem Jan Withagen wrote:

- > *Just out of curiosity, and 'cause I've got some idle boxes, I started*
- > *to do some (NFS-)performance testing. There is still a long way to go,*
- > *but I've but a first obvious result online running on the local server*
- > *disk.*
- >
- > *It makes the claims of the effects of WITNESS and INVARIANTS very*
- > *obvious. Look especially at the graph for "Sequential block read".*
- >
- > *You might want to have a look at:*
- > *<http://withagen.dyndns.org/FreeBSD/nfs-performance/index.html>. Note*
- > *that no NFS data is included. I have some Bonnie-NFS data, but need to*
- > *write accompanying test and conclusions for it.*
- >
- > *Suggestions are more than welcomed.*

My primary suggestion is "Turn off WITNESS and INVARIANTS when benchmarking or for production systems". We turn them off in releases, and once 5.x becomes 5-stable, we'll turn it off by default also. However, they're invaluable tools when debugging the development system, so we have them on in the development branch by default. I would encourage people to generally run with them turned on unless performance of a system requires them to be off, as it really helps the debugging process, as well as helping to identify locking problems as the system evolves.

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