

Re: Non-hard drive partitions on locked down server?

Source: <http://www.derkeiler.com/Newsgroups/comp.os.linux.security/2005-03/0055.html>

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Date: 03/08/05

Date: Tue, 08 Mar 2005 07:44:44 +0100

Jem Berkes wrote:

> *I am working on setting up a server that will be locked away in a
> physically inaccessible place, and am trying to take some precautionary
> measures to minimize downtime. The server doesn't have to do much, really
> just a log in server for ssh/ssl/vnc gateway purposes. Minor storage.*

>

> *I want to have no hard drives on this system.*

>

Hmm. Hard drives are still the most durable and reliable option from the ones you describe.

> *The bulk of the filesystem can be loaded off of CD-ROMs. This is of course
> read-only and physically unalterable. A reboot would restore the system
> state. Persistent intruders would be (nearly) impossible.*

>

Depending upon the amount of reads/laser head repositionings and spin up/downs, your cd drives might wear out rather quick. Combined with a possible problem with dust in that location, I would not give your cdrom drive(s) much more then a few months of lifetime.

> *Does anyone have any experience using something like a USB flash drive for
> non-volatile storage on such a setup? I know I could use RAM drives but I
> need persistent storage (log files, home directories) and don't care much
> about speed at all. The disk access will be minor.*

>

Even flash drives have limitations in rewriteability. Most are specified for 100000 rewrites, which may be soon exhausted for constantly changing directory entries or atimes. Unlike packet writing there is no scheme to shift physical areas for such entries on the flashdisk. At least you will have to make heavy use of ram cache and the "noatime" option. Having said that, there are a lot of embedded linux devices (routers and such) working from flash memory.

> *As I understand it, many USB flash drives insist on carrying FAT file
> systems. If that is the case then how can I go about introducing multiple*

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> *filesystem mount points within a SINGLE physical flash drive?*

>

Never noticed that. A flash drive should be transparent enough to allow multiple partitions and filesystems on it.

> *Would it work to, within a single FAT partition for the flash drive,
> create multiple files to use as loopback mounts? I presume this will
> safely offer all the UNIX permissions I need once those loopbacks are
> mounted.*

>

It is not necessary at all. Now, you would have to put your fstab on some unchangeable (cd or whatever) boot media.

> *Or any other ideas for how to do persistent r/w storage without using a
> hard drive? I also don't have any network storage, must be local.*

>

You can put it all on one or two usb sticks (might need a 1GB version to store logfiles, but I would at least use a remote syslog server) and get one of these low-power boards but make sure they boot from usb, and use the noatime and plenty of ram, with write cache to minimize actual write-to-flash cycles. Low-power boards may even be powered by DC from a buffer accumulator-electronic transformer combination.

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Longhorn error#4711: TCPA / NGSCP VIOLATION: Microsoft optical mouse
detected penguin patterns on mousepad. Partition scan in progress
to remove offending incompatible products. Reactivate MS software.
Linux woodpecker.homnet.at 2.6.11-mm1[LinuxCounter#295241,ICQ#4918962]
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