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### **Less known Solaris Features: CacheFS - Part 2: Theory**

The history of CacheFSSun didn't introduced this feature for webserver. Long ago, admins didn't want to manage dozens of operating system installations. Instead of this they wanted to store all this data on a central fileserver (you know ... the network is the computer). Thus netbooting Solaris and SunOS was invented. But there was a problem: Swap via Network was a really bad idea that days (it was a bad idea in 10 MBit/s times and it's still a bad idea in 10 GBit/s times). Thus the diskless systems got a disk for a local swap. But there was another problem. All the users started to work at 9 o'clock ... they switched on their workstations ... and the load on the fileserver and the network got higher and higher. They had a local disk ... local installation again? No ... the central installation had it's advantages. Thus the idea of CacheFS was born.

CacheFS is a really old feature of Solaris/SunOS. It's first implementation dates back into the year 1991. I really think you can call this feature matured

CacheFS in theoryThe mechanism of CacheFS is pretty simple. As i told you before, CacheFS is somewhat similar to a caching web proxy. The CacheFS is a proxy to the original filesystem and caches files their way through CacheFS. The basic idea is to cache remote files locally on a harddisk, so you can deliver them without using the network when you access them the second time.

Of course the CacheFS has to handle changes to the original files. So CacheFS checks the metadata of the file before delivering the copy. If the metadata has changed, the CacheFS loads the original file from the server. When the metadata hasn't changed it delivers the copy from the cache.

The CacheFS isn't just usable for NFS, you could use it as well for caching optical media like CD or DVD.

Posted by Joerg Moellenkamp in English, Solaris at 10:21