

ZZFS team says file syncs can be more personal

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(PhysOrg.com) -- Turn over tweaks, updates, and edits on your entire body of recent work, personal accounts, financial records, and legal communiqués to cloud services? Giants like Google might sport a smiley face if you do, but finding an alternative for home PC users has been a topic for researchers. A combined team from Carnegie Mellon and Microsoft Labs in Cambridge, England, have developed ZZFS, a system in prototype of software and hardware that would allow users to access files remotely, even when that home PC is sleeping.

A user could use the Windows Explorer file browser to see all the files and folders on other computers with ZZFS installed. Data on one computer would be visible and accessible from any of the others. The file syncing system is viewed as an alternative to trusting a third party with files.

Whether using Microsoft Office or iTunes, this idea has files opened normally once retrieved over the Internet. Michelle Mazurek of Carnegie Mellon University presented the prototype at the Usenix File and Storage Technology conference in San Jose earlier this month, where sessions and presentations were all about storage-system research and newer directions. The title of the paper, “ZZFS: A hybrid device and cloud file system for spontaneous users”

According to a [report](#) from *Technology Review*, the USB device Somniloquy is used along with the software to process network traffic autonomously. As the name suggests, the hardware device connects to

the Internet, can awaken a PC from sleep mode, retrieve data and then power it back down. It has enough gigabytes of storage to cache the [files](#).

According to the authors of the study, “Somniloquy is more appropriate than Wake-onLAN (WoL) for mobile storage devices, because it operates through firewalls and NAT boxes, and it handles mobility across subnets.”

The authors note that “Good execution of data placement, caching and consistency policies across a user’s personal devices has always been hard. Unpredictable networks, capricious user behavior with leaving devices on or off and non-uniform energy-saving policies constantly interfere with the good intentions of a storage system’s policies.”

Their goal has been to find a way to better manage the “uncertainties.” They refer to their system as a distributed device and cloud file system for file access.

More information: research.microsoft.com/pubs/15111/ZZFSfinalpaper.pdf

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