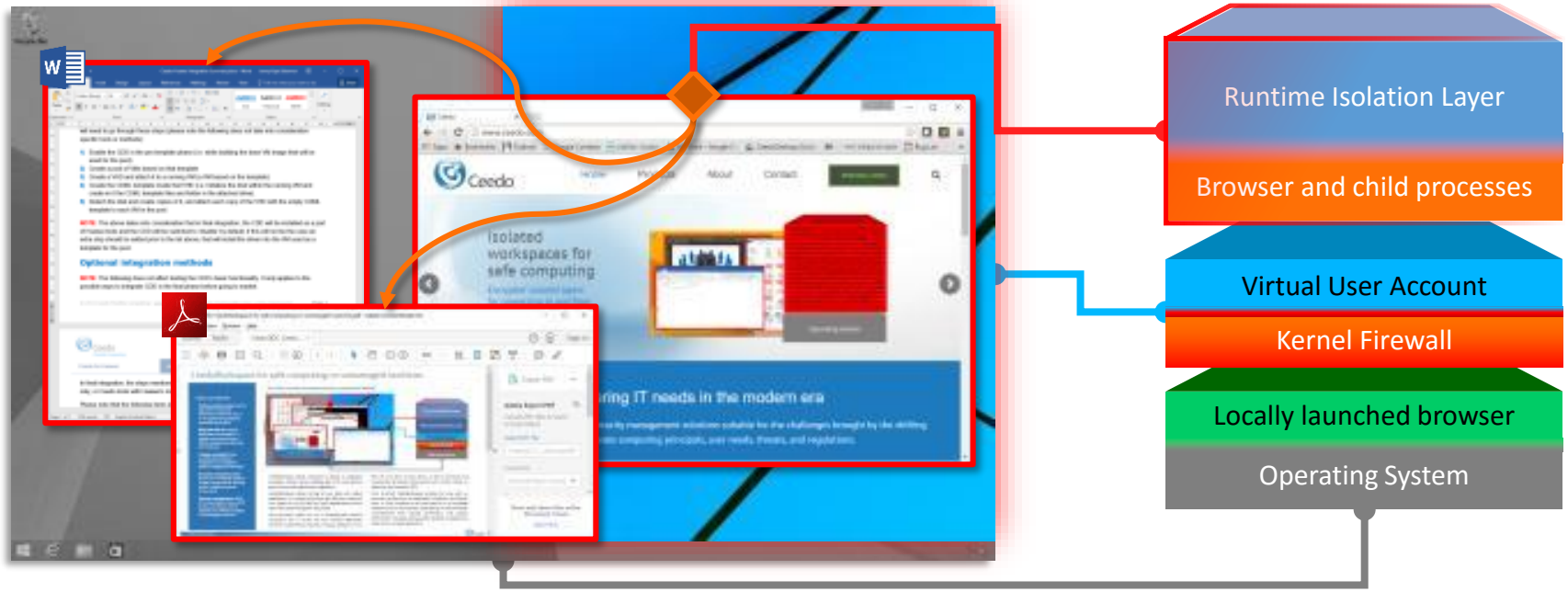
Safe Browsing with Ceedo's Kernel Firewall

Protect host machines and data behind a multi-tiered security architecture utilizing local kernel virtualization, without VMs or remote servers.



Features and Benefits

Protect against zero-day attacks: Ceedo employs non-signature-based technologies aimed at confining unknown malware and containing unknown exploits.

Easy and safe: Mixed kernel and user-mode protective virtualization technologies replacing the need for VMs, remote servers, and traditional sandboxing solutions.

Process enforcement: Deny unauthorized software from running during virtualization.

Separate NTFS and security permissions: Each virtual process runs under a separate user account with its own security permissions.

Seamless user experience: Designated applications can be virtualized on the fly, and retain interoperability with other software components without breaching the isolation layer.

Ceedo provides browsers and any applications with a kernel-level isolation wrapper that completely contains all read, write and execution transactions within the confines of a fortified workspace, protected and insulated by multiple virtualization engines.

With Ceedo, when a user tries to launch any browser, an automatic system mounts a Virtual Hard Disk (VHD) file as a RAM disk, which is hidden from the system, and launches the browser locally, contained behind our Kernel Firewall that captures all kernel transactions that the browser, or any application it has launched, tries to execute, and redirects them into the RAM VHD.

Apart from isolating applications behind a kernel firewall inside a RAM-mounted VHD, any application launched by Ceedo works under a separate user account with its own security permissions. The user account has a one time random password, and is created prior to the workspace launching, and destroyed right after the virtual environment closes.

Additionally, Ceedo's solution can deny processes from running both inside and outside of the sandbox. Process white/blacklist enforcement can be configured based on digital signatures (or lack thereof), MD5 hashes, parent user account, or just by name.

The unique mix of technologies used by Ceedo ensure that your machines are protected from zero-day attacks and data leaks, behind a sealed environment that is protected by multiple security mechanisms and cutting-edge technologies, making resource hungry virtual machines, restrictive and expensive remote servers, and other cumbersome solutions – a thing of the past.

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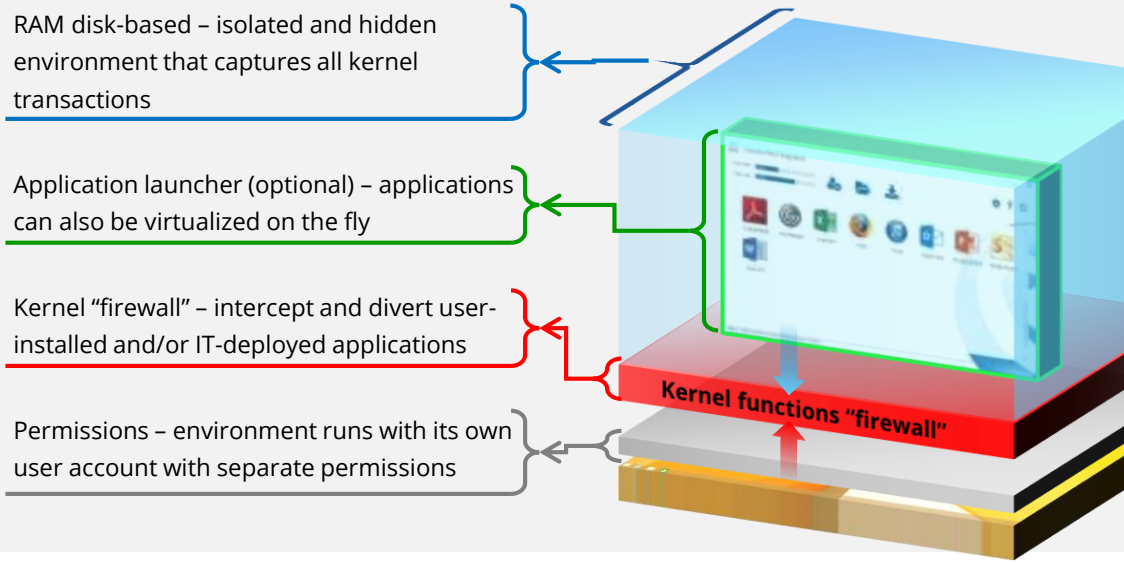
Kernel Firewall

One of the major components underlying Ceedo's comprehensive security solution is a kernel-level isolation mechanisms that utilizes a smart set of drivers that behave in a firewall-like manner – intercepting at runtime all kernel transactions that originate from processes that were virtualized within the workspace.

Just as a traditional network firewall intercepts all communication between applications and the network, the Kernel Firewall intercepts all communications between applications and the kernel, but instead of just blocking them, it manipulates them at runtime. For instance, read and execute transactions fall through to the host to provide a seamless user experience, while all write, delete, and settings operations are redirected to be executed within a hidden VHD volume that is mounted via Ceedo's internal disk management system and communicated with over Ceedo's proprietary interface.

The driver's capture and redirect functions ensure that any data a virtualized process tries to delete, encrypt or write, both in the file system and the registry, stay tightly contained within the environment, including transactions initiated by child processes of a browser. For instance, downloading a document and opening it in MS Word will run an isolated instance of MS Word, ensuring that users enjoy a normal user experience, without posing any threat to the underlying machine and data.



Contact Information

Ceedo Technologies (2005), Ltd.
HQ Address: 45 Ha-Melakha St, Suite 331.
Netanya, Israel
Tel: +972-7-322-322-00
Fax: +972-7-322-322-32

For more information

www.ceedo.com
/user/CeedoLtd
@CeedoLtd
/company/ceedo_72780

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