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(54) Title: PAGE FAULT INJECTION IN VIRTUAL MACHINES TO CAUSE MAPPING OF SWAPPED-OUT MEMORY PAGES INTO VM] VIRTU ALIZED MEMORY

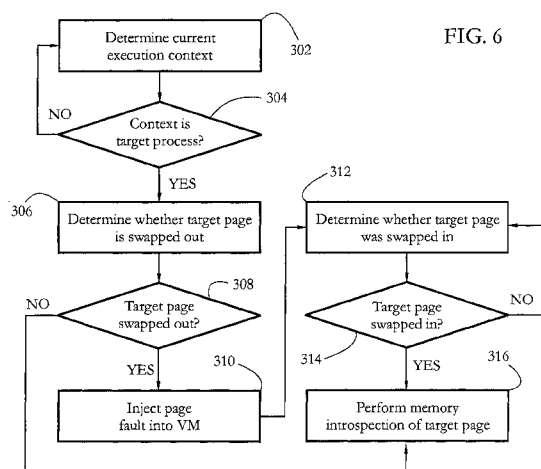


FIG. 6

(57) Abstract: Described systems and methods allow protecting a host system from malware using virtualization technology. In some embodiments, a memory introspection engine operates below a virtual machine (VM) executing on the host system. The engine is configured to analyze the content of a virtual memory page used by software executing within the VM, and/or to protect the respective content from unauthorized modification, for instance by malware. When the respective content is swapped out of memory, the memory introspection engine injects a page fault into the respective VM, to force a swap-in of the respective content.