

Although computer viruses cause tremendous economic loss, defence mechanisms fail to adapt to their rapid evolution. Previous immunization strategies have been characterized as being static and centralized, which has made virus containment difficult or even impossible. We suggest, instead, to propagate the immunization agent as an epidemic. The main problem with epidemic vaccine propagation is that it is bound to lag behind the virus. We suggest giving the vaccine an advantage over the virus by allowing it to leapfrog through a separate, overlapping, partially correlated network. This enables the antivirus to contain the epidemic efficiently. We systemize this concept with a 'honey-pot' architecture that achieves both early virus discovery and rapid antivirus dissemination. We present analytic, as well as simulation, results for a set of realistic topologies that illustrate the effectiveness of this approach.