ABSTRACT

Systems and methods are described that enable patching of security vulnerabilities in binary files. The detection and patching of vulnerable binary files is automatic, reliable, regression free, and comprehensive across networks on an unlimited scale. These advantages can be realized in various ways including, for example, by leveraging current anti-virus infrastructure that is widely deployed across the Internet. Reliable discovery of vulnerable binary files (e.g., in operating systems, application programs, etc.) is achieved through the use of binary signatures that have been associated with discovered security vulnerabilities. A divergence of security patches away from conventional service packs provides for the possibility of production of regression-free fixes for security vulnerabilities in binary files.

Figure 1