A Software Tool for Computer Forensic Investigation Using Client-Side Web History Visualization

Authors : Francisca Onaolapo Oladipo, Peter Afam Ugwu

Abstract : Records of user activities which are valuable for forensic investigation purposes are provided by web browsers - these records in most cases are not in visual formats that are easily understood, thereby requiring some extra processes. This paper describes the implementation of a software tool for client-side web history visualization providing suitable forensic evidence for investigative purposes. Visual C#, Perl and gnuplot were deployed on Windows Operating System (OS) environment to implement the system and the resulting tool parses and transforms a web browser history into a visual format that enables an investigator to quickly and efficiently explore, understand, and interpret the user online activities in the context of a specific investigation. The system was tested using two forensic cases: the client-side web history files generated by Mozilla Firefox browser was extracted using MozillaHistoryView utility, then parsed and visualized using bar and stacked column charts. From the visual representation, results of user web activities across various productive and non-productive websites were obtained.

Keywords : history, forensics, visualization, web activities

Conference Title : ICCSE 2016 : International Conference on Computer Science and Engineering

Conference Location : Vancouver, Canada

Conference Dates : August 04-05, 2016