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By Anton Yudhana

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Rusydi Umar[1], Anton Yudhana[2], Muhammad Nur Faiz[3]
[1]Department of Informatics Engineering, Universitas Ahmad Dahlan, Indonesia
[2]Department of Electrical Engineering, Universitas Ahmad Dahlan, Indonesia
[3]Department of Information Technology, Universitas Ahmad Dahlan, Indonesia

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ABSTRACT

In today's digital era almost every aspect of life requires the internet, one way to access the internet is through a web browser. For security reasons, one developed is private mode. Unfortunately, some users using this feature do it for cybercrime. The use of this feature is to minimize the discovery of digital evidence. The standard investigative techniques of NIST need to be developed to uncover an ever-varied cybercrime. Live Forensics is an investigative development model for obtaining evidence of computer usage. This research provides a solution in forensic investigation effectively and efficiently by using live forensics. This paper proposes a framework for web browser analysis. Live Forensics allows investigators to obtain data from RAM that contains computer usage sessions.

Corresponding Author:

Muhammad Nur Faiz,
Department of Information Technology,
Universitas Ahmad Dahlan,
Jl. Prof. Dr. Soepomo, Janturan, Yogyakarta, Indonesia, 55164
Email: hafarafaiz@gmail.com

1. INTRODUCTION

At the beginning of the creation Internet, various applications were created including social networks and "worm" programs, as well as Viruses [1]. Web browser is an application to access the Internet. Web browser allows users to search information, do email transactions, to communicate with instant messenger or social network, shop via e-commerce website [2]. Commonly used web browsers, including Mozilla Firefox, Google Chrome, Opera and Apple Safari offer portable browsers that can be launched from removable devices. When removable devices are released, it is believed that traces of browsing activity will be erased, so a personal portable version of the web browser offers better privacy [3]. Use of web browsers worldwide by [4] shown in Figure 1.

Web browser features are always evolving which impact on user privacy including feature options to surf the Internet in-privately. this feature is also tasked with removing the information at the end of the session [2]. The forensics artefacts left by the web browser after the end of this session is not just a list of web visits, cookies, and downloads. These artefacts also contain the sites the user visits, the time and frequency of access, and also the search engine keywords used. When conducting a digital investigation of a system, investigators may collect evidence of the artefacts [5] [6]. Portable web browsers, web browsers tend to store large amounts of data about user surfing activities, username keywords, downloads, temp files, cache, form data and other browser-specific data on the user's hard disk. Based on this, the forensics examiner can collect artefacts to reconstruct the user's web activity time. Forensics tools web browser are the best source for forensics experts to find artefacts from web browsers if there are allegations regarding illegal Internet activity [7]. The role of artefacts (e.g. metadata) in forensics analysis is the loss of artefacts when

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