Abstract

An embedded web server, in general, controls the use of system resources by running the web server within tightly controlled limits, so that bugs will not compromise the system operations. In this paper we discuss on such an embedded web server which is to be secured from the root, by the use of a portable-runtime layer. Such a layer permits the portability of maximum codes. This portable-runtime layer is also called cross-platform layer. The embedded web server has also been hardened against several common DoS attacks. In the proposed embedded web server, the memory has been configured to a predefined limit, so that it rejects very large requests or URLs that are too long. The application program sends the result as web pages, using common gateway interface (CGI) protocol. This system was tested successfully on Linux / Fedora to carry out the diagnosis of the cardiac arrest.

References

- Andreas Ekstrand, Jones Ludvigsson, ‘Generic web server in Embedded control
Applications of Extendable Embedded Web Servers in Medical Diagnosing

- American Heart Association’s Heart Attack, stroke and Cardiac Arrest Warning Signs, Available: http://www.heart.org/HEARTORG/Conditions/HeartAttack/WarningSignsofaHeartAttack/Warning-Signs-of-a-Heart-Attack_UCM_002039_Article.jsp#

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