(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/12/2021

(21) Application No.202131056646 A
(43) Publication Date : 07/01/2022

(54) Title of the invention : A NOVEL APPROACH TO LOAD BALANCING AND CLOUD COMPUTING SECURITY USING SSL IN IAAS ENVIRONMENT

(51) International classification :G06F0009500000, H04L0029080000, H04L0029060000, G06F0021550000, G06F0016245500
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Cloud computing service providers (CCSP) are constantly at risk of suffering from performance loss. Cloud computing infrastructure allows users to rent computing resources at a fraction of the cost it would have otherwise taken to procure setup and maintain costly hardware and software systems. However, for a cloud computing service to stay relevant and enjoy the goodwill of its consumers, it needs to push the envelope of performance without sacrificing data security or vice versa. While Secure Socket Layer and related securityalgorithms have now come a long way since it was first introduced by Netscape very early on in the Internet age, there is a drawback that researchers have found associated with it. Performance degradation is a clear and present threat that cloud computing service providers are keen to avoid. In this paper, we present a proposed solution that is novel in its approach as we consider an existing commercial offering from F5, Inc., a renowned network equipment manufacturer, and incorporate its product – BIG-IP, into an experimental framework that promises to offer high availability, redundancy, load balancing and secure data channel simultaneously.

No. of Pages : 23 No. of Claims : 1