

पेटेंट कार्यालय  
शासकीय जर्नल

**OFFICIAL JOURNAL  
OF  
THE PATENT OFFICE**

---

---

निर्गमन सं. 42/2025  
ISSUE NO. 42/2025

शुक्रवार  
**FRIDAY**

दिनांक: 17/10/2025  
DATE: 17/10/2025

---

---

पेटेंट कार्यालय का एक प्रकाशन  
PUBLICATION OF THE PATENT OFFICE

(54) Title of the invention : Dynamic Resource Isolation and Malware Containment Mechanism in Containerized Cloud platforms

<p>(51) International classification</p> <p>(31) Priority Document No</p> <p>(32) Priority Date</p> <p>(33) Name of priority country</p> <p>(86) International Application No</p> <p style="padding-left: 20px;">Filing Date</p> <p>(87) International Publication No</p> <p>(61) Patent of Addition to Application Number</p> <p style="padding-left: 20px;">Filing Date</p> <p>(62) Divisional to Application Number</p> <p style="padding-left: 20px;">Filing Date</p>	<p>:H04L0009400000, G06F0009500000, G06N0020000000, G06F0021560000, G06F0009455000</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:</p> <p>:01/01/1900</p> <p>: NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p>	<p>(71)Name of Applicant :</p> <p><b>1)Mr. Samrat Krishna Gaddam</b> Address of Applicant :Assistant Professor, Department of Computer Science, Parvathaneni Brahmayya Siddhartha College of Arts and Science, Vijayawada, Andhra Pradesh - 520010 Andhra Pradesh India</p> <p><b>2)Mrs. A Renuka</b></p> <p><b>3)Dr. A. Srisaila</b></p> <p><b>4)Dr. T.Srinivasa Ravi Kiran</b></p> <p><b>5)Mrs. P Radharani</b></p> <p><b>6)Mr. D.V.V Brahmachari</b></p> <p><b>7)Mr. Ananda Babu Rudrubati</b></p> <p><b>8)Dr. Katakam Venkateswara Rao</b></p> <p><b>9)Dr. Ganji Ramanjaiah</b></p> <p>(72)Name of Inventor :</p> <p><b>1)Mr. Samrat Krishna Gaddam</b></p> <p><b>2)Mrs. A Renuka</b></p> <p><b>3)Dr. A. Srisaila</b></p> <p><b>4)Dr. T.Srinivasa Ravi Kiran</b></p> <p><b>5)Mrs. P Radharani</b></p> <p><b>6)Mr. D.V.V Brahmachari</b></p> <p><b>7)Mr. Ananda Babu Rudrubati</b></p> <p><b>8)Dr. Katakam Venkateswara Rao</b></p> <p><b>9)Dr. Ganji Ramanjaiah</b></p>
---	---	---

(57) Abstract :

The invention provides a dynamic resource isolation and malware containment mechanism tailored for containerized cloud platforms, addressing critical security challenges in multi-tenant and rapidly evolving environments. By continuously monitoring container resource usage, network traffic, and system behavior, the system leverages machine learning-based anomaly detection to identify malicious activities in real time. Upon detecting threats, it enforces automated containment actions such as resource throttling, privilege revocation, and network segmentation to isolate compromised containers, preventing lateral movement and minimizing service disruption. Integrated tightly with container orchestration frameworks, the invention dynamically adjusts security policies and supports multi-tenant risk management. It also offers forensic data capture and automated remediation workflows to facilitate rapid incident response and recovery. Designed for scalability and performance efficiency, the system enhances cloud-native security by providing adaptive, real-time protection against sophisticated malware threats within container ecosystems.

No. of Pages : 25 No. of Claims : 10