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# Blockchain Security for 5G Network using Internet of Things Devices

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## Abstract

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## Abstract

Network of vehicles using Internet of Things (IoT) frameworks have efficient characteristics of modern intelligent transportation system with a few challenges in vehicular ad-hoc networks (VANETs). However, its security framework is required to manage trust management by preserving user privacy. Wireless mobile communication ( 5G ) system is regarded as an outstanding technology that provide ultra-reliable with limited latency wireless communication services. By extension, integrating Software Defined Network (SDN) with 5G-VANET enhances global information gathering and network control. Therefore, real-time IoT application for monitoring transport services is efficiently supported. These ensures vehicular security on this framework. This paper provides a technical solution to a self-confidential framework for a smart transport system. This process exploiting IoT for vehicle communication by incorporating SDN and 5G technology. Due to some

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features of blockchain , this framework has been implemented to provide various alternative support for vehicular smart services. This involves real-time access to cloud to stream video information and protection management to vehicular network . The implemented framework presents a promising technique and reliable vehicular IoT environment while ensuring user privacy. Results of simulation presents that vehicular nodes/messages (malicious) and overhead is detected and the impact on network performance are satisfactory when deployed in large-scale network scenarios. © 2022 IEEE.

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- 1 Yang, X., Yang, X., Yi, X., Khalil, I., Zhou, X., He, D., Nepal, S.  
Blockchain-based secure and lightweight authentication for internet of things (2021) *IEEE Internet of Things Journal*. Cited 21 times.

---

- 2 Khan, P.W., Byun, Y.  
A blockchain-based secure image encryption scheme for the industrial internet of things ([Open Access](#))  
  
(2020) *Entropy*, 22 (2), art. no. 175. Cited 58 times.  
[https://res.mdpi.com/d\\_attachment/entropy/entropy-22-00175/article\\_deploy/entropy-22-00175-v4.pdf](https://res.mdpi.com/d_attachment/entropy/entropy-22-00175/article_deploy/entropy-22-00175-v4.pdf)  
doi: 10.3390/e22020175  
  
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---

- 3 Xie, L., Ding, Y., Yang, H., Wang, X.  
Blockchain-based secure and trustworthy internet of things in SDN-enabled 5G-VANETs ([Open Access](#))  
  
(2019) *IEEE Access*, 7, art. no. 8701642, pp. 56656-56666. Cited 137 times.  
<http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=6287639>  
doi: 10.1109/ACCESS.2019.2913682  
  
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---

- 4 Pohrmen, F.H., Das, R.K., Saha, G.  
Blockchain-based security aspects in heterogeneous Internet-of-Things networks: A survey  
  
(2019) *Transactions on Emerging Telecommunications Technologies*, 30 (10), art. no. e3741. Cited 39 times.  
[http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)2161-3915](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)2161-3915)  
doi: 10.1002/ett.3741  
  
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---

- 5 Islam, A., Young Shin, S.  
A blockchain-based secure healthcare scheme with the assistance of unmanned aerial vehicle in Internet of Things  
  
(2020) *Computers and Electrical Engineering*, 84, art. no. 106627. Cited 56 times.  
<https://www.journals.elsevier.com/computers-and-electrical-engineering>  
doi: 10.1016/j.compeleceng.2020.106627  
  
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- 6 Ferrag, M.A., Shu, L.  
The Performance Evaluation of Blockchain-Based Security and Privacy Systems for the Internet of Things: A Tutorial

(2021) *IEEE Internet of Things Journal*, 8 (24), pp. 17236-17260. Cited 38 times.

<http://ieeexplore.ieee.org/servlet/opac?punumber=6488907>

doi: 10.1109/JIOT.2021.3078072

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---

- 7 Islam, A., Shin, S.Y.  
BUAV: A blockchain based secure UAV-Assisted data acquisition scheme in Internet of Things ([Open Access](#))

(2019) *Journal of Communications and Networks*, 21 (5), art. no. 8896190, pp. 491-502. Cited 55 times.

<http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=5449605>

doi: 10.1109/JCN.2019.000050

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---

- 8 Lee, B., Lee, J.-H.  
Blockchain-based secure firmware update for embedded devices in an Internet of Things environment

(2017) *Journal of Supercomputing*, 73 (3), pp. 1152-1167. Cited 194 times.

<http://www.springerlink.com/content/0920-8542>

doi: 10.1007/s11227-016-1870-0

[View at Publisher](#)

---

- 9 Yazdinejad, A., Parizi, R.M., Dehghantanha, A., Karimipour, H., Srivastava, G., Aledhari, M.  
Enabling Drones in the Internet of Things with Decentralized Blockchain-Based Security

(2021) *IEEE Internet of Things Journal*, 8 (8), art. no. 9163144, pp. 6406-6415. Cited 38 times.

<http://ieeexplore.ieee.org/servlet/opac?punumber=6488907>

doi: 10.1109/JIOT.2020.3015382

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