

STATISTICAL ANALYSIS OF THE “.UZ” DOMAIN OF THE INTERNET NETWORK

Gafurov Sh. A.

Independent researcher of Tashkent University of Information Technologies named after Muhammad al-Khwarizmi

Abstract:

In this article The .UZ domain located on the Internet of the Republic of Uzbekistan, the number of domains in the .UZ domain, their activity levels, statistics of protection with SSL certificate, domain growth dynamics and analysis of cyber attacks are given.

Keywords: .UZ domain, Internet network, ssl certificate, cyber attacks, web resources, national segment.

It is not a secret to anyone today that digital technology tools are the main driver of the reforms implemented in our republic, regardless of which sector they belong to. In addition to the conveniences created on the basis of digitalization of all areas in the industry, he demanded to increase the relevance of the issues of information security in the existing information systems and resources of the state and economic management bodies. As a result of the use of information related to the economic and political sectors of the world community based on digital technologies, the aggravation of geopolitical conflicts, which are causing serious changes in the modern landscape of information security on a global scale, shows that the websites of state and non-state organizations and their As the online services provided through the Internet have become one of the main arenas of political-military conflicts in the global cyberspace, it requires to be considered as a global factor affecting the state of cyber security of the important information infrastructure in the national segment of the Internet network of our republic.

It is possible to create in the information infrastructure of the state and economic administration and local government bodies, which are registered in the national domain zone “.UZ” of the Internet network and operate in various fields of industry. In addition to identifying and eliminating modern threats and risks related to information security, as well as maintaining the usability of the official websites of organizations on the Internet, the issues of ensuring the performance of information users at the level of demand are also of particular importance. Statistics from recent years show that as of December 2022, more than 110,000 website domains were connected in the ".UZ" segment of the Internet network of the Republic of Uzbekistan, of which 38 are active domains. It was more than 000.

Domain names of the national “.UZ” segment of the Internet network

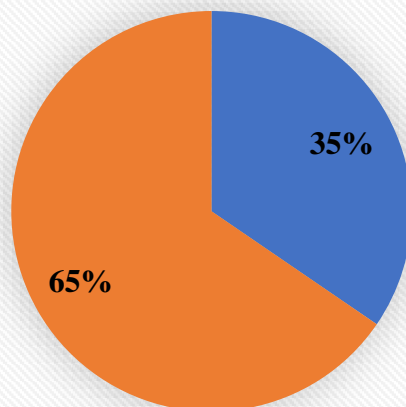


Figure 1. Domains located in the national “.UZ” segment of the Internet network

National “.UZ” of the Internet network protection of active domains in the segment

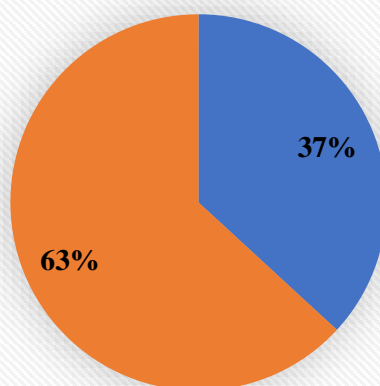


Figure 2. Protection of active domains in the national “.UZ” segment of the Internet network

In addition, more than 14,000 active domains are secure, i.e. protected by SSL certificate, and the rest are unprotected domains . Based on these statistics, it can be said that almost 65 percent of website domains in the national “.UZ” segment of the Internet are inactive domains, and only 37 percent of active domains are protected by SSL certificates.

As of December 2023, more than 125,000 website domains were connected in the “.UZ” segment of the Internet network of the Republic of Uzbekistan, of which more than 53,570 were active domains. In addition, more than 33,130 active domains are secure, i.e. protected by SSL certificate, and the rest are unprotected domains.

Table 1. Dynamics of domains in the national “.UZ” segment of the Internet network

No	Calendar year	The total number of domains in the “.UZ” segment	Number of active domains	Number of inactive domains	Number of active domains protected by an SSL certificate	Number of active domains not protected by an SSL certificate
1.	2020	86 679	30,000	56 679	12,500	17,500
2.	2021	100,015	38,000	62 015	14 014	23 986
3.	2022	110,000	38,000	72,000	14 014	23 986
4.	2023	125,000	53 570	71 430	33 130	20 440
5.	2024	129,000	70,000	57 100	44 100	25,900

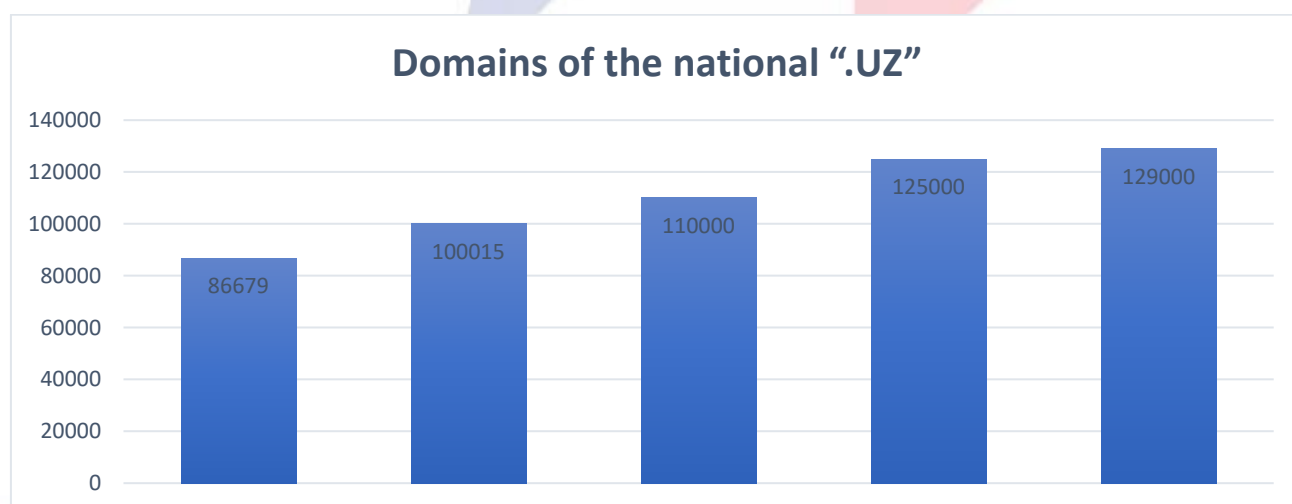


Figure 3. Dynamics of domains in the national “.UZ” segment of the Internet network

As of the end of the 1st quarter of 2024, more than 129,000 website domains were connected in the “.UZ” segment of the Internet network of the Republic of Uzbekistan, of which more than 70,000 were active domains. In addition, more than 44,100 active domains are secure, that is, protected by an SSL certificate, and the rest are unsecured domains.

As of December 2023, a total of 158 (32% less than in 2022) cyber security incidents were detected during the continuous monitoring of web resources in the national segment of the Internet. 38 of them corresponded to the web resources of state bodies. But the number of cyberattacks on web resources was 4,433,789 in 2022, and 11,020,235 in 2023.

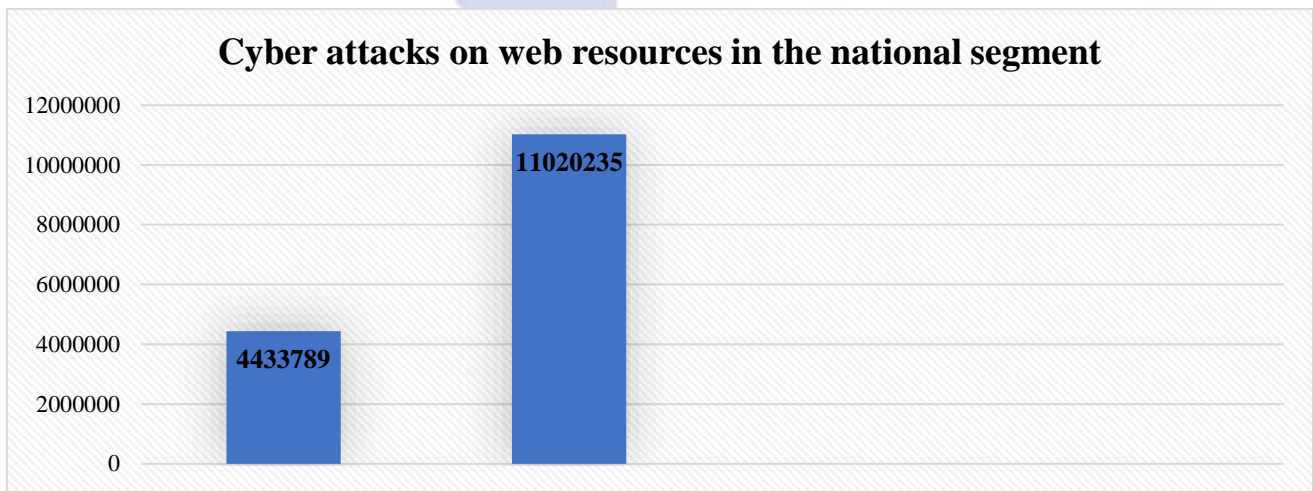


Figure 4. Cyber attacks on web resources in the national segment

In 2022, the majority of cyberattacks detected and blocked in the national segment of the Internet network were carried out from the territory of Hong Kong, the United States, Russia, India and other countries. Most cyber attacks have been observed from IP addresses.

References:

1. SD Cakmakci, H. Hutschenreuter, C. Maeder, and T. Kemmerich, "A Framework for Intelligent DDoS Attack Detection and Response Using SIEM and Ontology," 2021 IEEE Int. Conf. Commun. Work. ICC Work. 2021 - Proc., pp. 7–12 .
2. CM Ahmed, MR Gauthama Raman, and A. P. Mathur, "Challenges in Machine Learning based approaches for Real-Time Anomaly Detection in Industrial Control Systems," CPSS 2020 - Proc. 6th ACM Cyber-Physical Syst. Secure. Work. Co-located with AsiaCCS 2020, pp. 23–29 .
3. B.A. A. Al'Aziz, P. Sukarno, and A. A. Wardana, "Blacklisted IP distribution system to handle DDoS attacks on IPS Snort based on Blockchain," Proceeding - 6th Inf. Technol. Int. Semin. ITIS 2020, pp. 41–45
4. M. Abualkibash, "Machine Learning in Network Security Using KNIME Analytics," Int. J. Netw. Secure. Its Appl., vol. 11, no. 5, pp. 1–14, Sep. 2019.
5. M. Arafat, A. Jain, and Y. Wu, "Analysis of intrusion detection dataset NSL-KDD using KNIME analytics," Proc. 13th Int. Conf. Cyber Warf. Secure. ICCWS 2018, vol. 2018-March, pp. 573–583, 2018.