


THE URGENCY OF LIMITING THE UTILIZATION OF CONSUMER IP ADDRESSES BY COMPANIES AS PERSONAL DATA OBJECTS IN THE STUDY OF POSITIVE LAW IN INDONESIA

Mahima Umaela Firdhausya  ORCID Link:
Universitas Negeri Semarang, Semarang, Indonesia
umaelafirdhausya@students.unnes.ac.id

Muhammad Hilmi Naufal Aflah
Universitas Negeri Semarang, Semarang, Indonesia
capasalfao65@students.unnes.ac.id

Anisa Tussaleha
Universitas Negeri Semarang, Semarang, Indonesia
annisatussaleha@students.unnes.ac.id

Tegar Islami Putra
Universitas Negeri Semarang, Semarang, Indonesia
tegarislami44@students.unnes.ac.id

Eko Mukminto
Universitas Negeri Semarang, Semarang, Indonesia
ekomukminto@mail.unnes.ac.id

Abstract

The era of the digital revolution moves very quickly following the times with various consequences in it. The issuance of Law Number 27 of 2022 concerning Personal Data Protection is one of the government's responses to the times, especially to see the importance of paying attention to personal data management. In this regulation, it provides the nomenclature of IP Address as one of the types of personal data combined as explained in



Article 4 paragraph (3). This article aims to analyze how the form of consumer IP Address utilization by e-commerce service provider companies in Indonesia based on applicable positive law. The method used in writing this article is a qualitative method using a conceptual approach. The findings of this research are the known forms of consumer IP Address utilization by companies are to analyze consumer behavior on application services, conduct experience personalization, perform bandwidth management, and manage transaction security. The urgency of limiting the utilization of consumer IP addresses by companies as personal data objects is a form of privacy protection, providing data security, and complying with applicable laws in Indonesia.

KEYWORDS

URGENCY; IP ADDRESS; COMPANY; PERSONAL DATA; LAW; INDONESIA

Introduction

The digital revolution has changed the consumption landscape. Consumers are now connected to cyberspace through various devices, leaving a trail of activity in the form of digital data. One such trail that is often overlooked but holds potential risks is the internet protocol address (IP Address). It acts like a digital fingerprint, unique to each device and potentially revealing geographic location, internet browsing history, and even consumer behavior patterns.¹ The development of information and communication technology continues to take place and develop so fast and increasingly sophisticated that it has become one of the emergence of the digitalization era.²

¹ Tegar Islami Putra and Nurul Fibrianti, "Threats and Legal Protection of Personal Data Combined in E-Commerce Transactions Based on Personal Data Protection Law in Indonesia," *Lambung Mangkurat Law Journal* 9, no. 1 (2024): 64–74, <https://doi.org/10.32801/lamlaj.v9i1.438>.

² Waspiah Waspiah et al., "Model Pelindungan Hukum Data Pribadi Di Era Digital Guna Menjamin Hak Warga Negara Atas Pelindungan Data Pribadi," *Syntax Literate ; Jurnal Ilmiah Indonesia* 8, no. 9 (2023): 5165–79, <https://doi.org/10.36418/syntax-literate.v8i9.13662>.

In this hyper-connected era, giant companies with data analytics capabilities are leveraging IP addresses for ad personalization, marketing targeting, and even consumer behavior surveillance. This practice, while offering benefits to consumers in the form of more relevant online experiences, also triggers concerns related to consumer privacy. Another concern in this regard is the utilization of consumer IP Addresses without consent and transparency, which may violate legal provisions, both in the context of consumer protection and personal data law.

Consumer protection in Indonesia is regulated in the Consumer Protection Law (UU). The Consumer Protection Law guarantees consumers' rights to personal data protection, including the right to know, control, and delete their personal data. In addition to the Consumer Protection Law, the utilization of personal data is also regulated in Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Electronic Information and Transactions (ITE Law). The ITE Law requires electronic system operators (PSE) to take steps to secure the personal data they manage. Other rules in Indonesia related to data are implicitly regulated in Government Regulation Number 71 of 2019 concerning the Implementation of Electronic Systems and Transactions (PP PSTE) which regulates electronic systems and transactions. In addition, the latest regulation, Law No. 27 of 2022 on Personal Data Protection, regulates the protection of a person's personal data, namely information related to a person's personal identity, both general and specific, which can be used to identify that person.

Nonetheless, Indonesia's positive legal arrangements around IP Addresses remain unclear. The Consumer Protection Law does not specifically define IP Address as personal data. The ITE Law and PP PSTE only mention IP Address in general as one type of personal data. In Article 4 paragraph (1) of the Personal Data Protection Law, personal data is classified into specific and general personal data. Then in paragraph (3), it is explained that one of the general personal data is personal data that is combined to identify a person. In the explanation of the paragraph, the

combined personal data includes cellular phone numbers and IP addresses. In this regulation, it is not explained in more depth regarding the form of protection and what kind of protection limits are given to consumer IP Address data when used by companies.

Similar research has been conducted by Meriza Elpha Darnia who discussed the Protection of Consumer Identity Data Based on Law Number 27 of 2022 concerning Personal Data Protection in the Scientific Journal of Wahana Pendidikan. The results showed that the government and authorities have made policies to protect consumer security rights in online transactions written in Article 28G Paragraph (1) of the 1945 Law, guaranteeing the protection of personal identity data. And Law Number 27 of 2022 concerning Personal Data Protection has been passed by the President of Indonesia as a form of policy to protect the personal data of the Indonesian people.³

Another similar research was conducted by Tia Deja Pohan in the Journal of Business and Management Research on the Legal Protection of Consumer Personal Data in the E Commerce Platform. The results show that Article 26 of the Electronic Information and Transaction Law (ITE Law) regulates provisions regarding the protection of personal data which are further regulated in the Personal Data Protection Law. It is important for the government to guarantee consumer rights in e-commerce in Indonesia considering the seriousness of personal data issues that need to be addressed immediately.⁴

From the research as described above, none of the research specifically discusses the Urgency of Limiting the Utilization of Consumer IP Addresses by Companies as Personal Data Objects in the Study of Positive Law in

³ Meriza Elpha Darnia et al., "Perlindungan Data Identitas Konsumen Berdasarkan Undang-Undang Nomor 27 Tahun 2022 Tentang Perlindungan Data Pribadi," *Jurnal Ilmiah Wahana Pendidikan* 10, no. 9 (2024): 405–12, <https://doi.org/10.5281/zenodo.11180095>.

⁴ Tia Deja Pohan and Muhammad Irwan Padli Nasution, "Perlindungan Hukum Hukum Data Pribadi Konsumen Dalam Platform E-Commerce," *SAMMAJIVA: Jurnal Penelitian Bisnis Dan Manajemen* 1, no. 3 (2023): 42–48, <https://doi.org/10.32505/jurisprudensi.v15i1.5478>.

Indonesia. So that this research becomes important to discuss. The formulation of this research problem is (1) How is the utilization of consumer IP addresses by companies as personal data objects?; and (2) How is the urgency of limiting the utilization of consumer IP addresses by companies as personal data objects in positive legal studies in Indonesia? So in this case the researcher feels it is important to analyze this matter.

Methods

Research is an activity carried out by humans to add, improve, and develop knowledge. Research begins when someone attempts to solve a problem systematically, using certain scientific methods and techniques. Thus, scientific activity is an attempt to analyze and build, methodologically, systematically, and consistently.⁵ According to Peter Mahmud Marzuki "The approaches used in legal research are statute approach, case approach, conceptual approach, historical approach, comparative approach.⁶ In this case, the researcher will use a conceptual approach in the execution of authorship.

The research methodology that researchers use in writing this research is qualitative research. Where it can be simply understood that research whose findings are not obtained through statistical procedures and more on how researchers understand and interpret the meaning of events, interactions, and subject behavior in certain situations.⁷ In this case, the researcher has a focus on normative juridical research, measuring the interaction of legal relationships with social values, attitudes, behavior so as to support legal and social systems, while providing a means of social control and an instrument of social change.⁸

⁵ S Soekanto and S Mamudji, *Metode Penelitian Normatif* (Jakarta: Rajawali Press, 1995): 47.

⁶ P. M Marzuki, *Penelitian Hukum Edisi Revisi* (Bandung: PT. Kharisma Putra Utama, 2015): 33.

⁷ F. R Fiantika et al., (2022). *Metodologi Penelitian Kualitatif. Get Press.* (Get Press, 2022): 56.

⁸ Macaulay et al., *Law & Society* (New York: WW Norton & Company, Inc, 1995): 77.

Result and Discussion

1. Utilization of Consumer IP Address by the Company as a Personal Data Object

The utilization of consumer IP addresses by e-commerce service providers is an important aspect in improving the effectiveness and efficiency of business operations. IP addresses can be used for various purposes, including consumer behavior analysis, user experience personalization, and transaction security management. First, e-commerce service providers utilize IP addresses to analyze consumer behavior on the platform, e.g. on E-Commerce service applications. By tracking IP addresses, companies can collect data on the geographic location of users, which allows them to better understand the demographics of their market. This data can be used to customize product offerings and marketing strategies, thereby increasing the relevance of advertisements and promotions offered to consumers. For example, this analysis can help in determining the best time to send out offers or promotions based on the shopping habits of consumers in a particular region.⁹

Secondly, IP addresses also play a role in personalizing the user experience. With the information obtained from IP addresses, e-commerce providers can serve more relevant and interesting content to users. This includes product recommendations that are customized according to preferences and previous shopping habits.^{10 11} Research shows that personalization can increase customer satisfaction and loyalty, which in

⁹ A Saputra, "Analisis Pengaruh Penerapan E-Commerce Dan Kualitas Pelayanan Terhadap Kepuasan Konsumen," *JURNAL MANAJEMEN BISNIS STIE IBBI* 27, no. 1 (2018): 53–61, <https://doi.org/10.31227/osf.io/27frd>.

¹⁰ R Ramdani et al., "Kepuasan Mahasiswa Universitas Bumigora Terhadap Pelayanan E-Commerce.," *Income : Digital Business Journal* 1, no. 2 (2023): 105–14, <https://doi.org/10.30812/income.v1i2.3210>.

¹¹ Y. D Handarkho et al., "Penerapan Strategi E-Business Untuk Meningkatkan Keunggulan Kompetitif Dari Usaha Mikro Kecil Menengah Di Indonesia (Studi Kasus Trooper Electronic Yogyakarta). , 8(4).," *Jurnal Buana Informatika* 8, no. 4 (2017): 123–39, <https://doi.org/10.24002/jbi.v8i4.1444>.

turn can increase sales.¹² Different IP Addresses make each consumer have characteristics that can be distinguished from one another. Where each computer, cellphone, or other device will appear a different series of numbers when connected to the internet, it will even be able to see every purchase history or search made by consumers in each device used. With this IP Address, it is also possible to know each device address used only with the network settings used, so that we can find out the intended device when exchanging information.

Third, the use of IP addresses in bandwidth management is also important. This management is usually done through various techniques such as Quality of Service (QoS) and load balancing to ensure that all users get a good experience without interruption. E-commerce service providers need to ensure that they have enough bandwidth capacity to handle high visitor numbers, especially during promotional periods or new product launches. By monitoring bandwidth usage based on IP addresses, they can optimize their network infrastructure to provide a better user experience. Different IP Addresses make each consumer distinguishable from each other. Where each computer, cellphone, or other device will generate a different number sequence when connected to the internet, it will even be able to see every purchase history or search made by consumers on each device used.¹³ With this IP Address, we can also know each device address used only with the network settings used, so that we can find out the intended device when exchanging information. We can find the IP Address on a web server that will provide information requested by any computer or hardware when there is a request from anywhere. Including requests desired by consumers. The web server will later respond according to what consumers want. From the web server, the IP Address will be found which can be seen in the logs of the web server computer. By knowing the existing

¹² N. A Sande and D Samanhudi, "Analisis Tingkat Kualitas Layanan E-Commerce Xyz Menggunakan Metode e-Service Quality," *Juminten* 3, no. 1 (2022): 37–48, <https://doi.org/10.33005/juminten.v3i1.365>.

¹³ Haryadi, "Consumer Protection of Personal Data in the Era of the Industrial Revolution."

personal data, the company will be easier later in providing services for consumers.

Fourth, managing transaction security is another aspect where IP addresses play an important role. E-commerce service providers use IP addresses to detect suspicious activity and prevent fraud. By monitoring the IP addresses used to conduct transactions, companies can identify unusual patterns and take steps to protect consumer data.^{14 15} This is especially important given the increasing cases of data leakage and online fraud that can harm both consumers and service providers.¹⁶

Overall, the utilization of consumer IP addresses by e-commerce service providers not only increases operational efficiency but also contributes to improved user experience and transaction security. By utilizing the data obtained from IP addresses, companies can better meet the needs and expectations of consumers, which ultimately leads to increased customer satisfaction and loyalty.¹⁷

2. Urgensi batasan pemanfaatan IP Address konsumen oleh perusahaan sebagai objek data pribadi dalam kajian hukum positif di Indonesia

Personal data protection initially did not have a specific regulation in Indonesia, but there was a regulation governing consumer protection, namely Law Number 8 of 1999. In 2022, the Government of Indonesia has passed Law No. 27

¹⁴ Negara et al., "Analisis Konsumsi Bandwidth Pada Komunikasi Address Resolution Protocol Dalam Jaringan."

¹⁵ K Nursalin, A Kristiawan, and K. I Tjiptodjojo, "Peranan Online Trust Dan Online Service Quality Terhadap Perceived Value Social Commerce Ozzie Motor," *Jurnal Ilmiah Manajemen Bisnis Dan Inovasi Universitas Sam Ratulangi* 10, no. 1 (2023): 283–97, <https://doi.org/10.35794/jmbi.v9i3.43963>.

¹⁶ A Sekar Mawar Firdausi and Shely Rizki Hardiana, "Pengaruh Aktivitas E-Commerce Dan Iklan Pada Niat Pembelian Daring: Studi Pada Pengguna Situs Web Layanan Perjalanan," *Revenue: Lentera Bisnis Manajemen* 1, no. 1 (2023): 32–39, <https://doi.org/10.59422/lbm.v1i01.52>.

¹⁷ A. A Salameh et al., "Relationships between System Quality, Service Quality, and Customer Satisfaction. *Journal of Systems and Information Technology*" 20, no. 1 (2018): 73–102, <https://doi.org/10.1108/jsit-03-2017-0016>.

of 2022 on PDP (Personal Data Protection). The PDP Law was born based on the need to protect and safeguard personal data in the digital era.¹⁸ The world has now entered the Zettabyte era, IP (Internet Protocol) based international communication traffic in the last three years has increased rapidly.¹⁹ The PDP Law regulates personal data, one of which is the IP Address, in this regulation making the IP Address an object of personal data that needs to be protected.²⁰ Article 4 paragraph (3) letter f explains that IP Address and cellular phone number are personal data that is general in nature and is a combination of personal data to identify a person. IP Address is a series of numbers that indicate the identity of a device when connected to the internet or other network infrastructure.²¹

The importance of protecting IP addresses to prevent potential cybercrime. Awareness of the importance of protecting IP addresses is an effective measure to protect data from attacks and breaches.²² Therefore, companies and authorized institutions need to have an effective cybersecurity strategy in place. One of the steps that can be taken is to protect IP addresses to prevent potential cybercrime. In the increasingly advanced digital era, IP Address (Internet Protocol Address) has a crucial role in the identification and communication between devices connected to the internet.²³ Through awareness of IP Address security, companies can reduce the risk of cybercrime that can harm sensitive data and information. For companies, maintaining the confidentiality of IP addresses also means protecting users'

¹⁸ Erna Priliyasi, "PERLINDUNGAN DATA PRIBADI KONSUMEN DALAM TRANSAKSI E-COMMERCE MENURUT PERATURAN PERUNDANG-UNDANGAN DI INDONESIA," *Jurnal Rechts Vinding* 12, no. 2 (2023): 261–79.

¹⁹ Tegar Islami Putra and Nurul Fibrianti, "Threats and Legal Protection of Personal Data Combined in E-Commerce Transactions Based on Personal Data Protection Law in Indonesia," *Lamlaj* 9, no. 1 (2024): 64–74, <https://doi.org/10.32801/lamlaj.v9i1.438>.

²⁰ Ibid.

²¹ Eko Angga Sucipto dan Wasis Haryono, "Implementasi Kinerja Routing Dinamis Pada Topologi Star Dalam Manajemen Jaringan Lan (Local Area Network) Di PT. Super Air Jet," *Jurnal Penelitian Ilmu computer* 1, tidak. 4 (2023): 17.

²² Satrio Adhi Imam Mustaqim, "Menjaga IP Address Demi Cegah Kejahatan Siber", *Arkatama.id*, terakhir dimodifikasi 2023, <https://arkatama.id/menjaga-ip-address-demi-cegah-kejahatan-siber/>.

²³ Lintasarta Cloudeka, "8 Fungsi IP Address yang Perlu Diketahui", terakhir dimodifikasi 2023, <https://www.cloudeka.id/id/berita/web-dev/fungsi-ip-address/>.

personal data and confidential company information from unauthorized access. By implementing proper security policies and closely monitoring IP Address usage, companies can reduce potential security threats and maintain the integrity of the data they store.

Based on Law No. 27 of 2022 on Personal Data Protection, IP Address is one type of personal data. However, IP Address is not explicitly regulated as personal data in the PDP Law, only mentioned in several articles. Law No. 18 of 2008 Jo Law No. 19 of 2016 concerning ITE, contained in Article 26 of Law No. 19 of 2016 states that "Unless otherwise provided by law, the use of any information through electronic media concerning a person's personal data must be carried out with the consent of the person concerned", the meaning of the phrase contained in Article 26 of the ITE Law, implies that each individual has full rights over his or her data, so if you want to use personal data, it must be with the consent of the person concerned (data owner).²⁴

The protection of individual privacy is one of the main reasons for restricting the use of IP addresses as personal data, which is the first urgency for restriction. IP addresses can reveal sensitive information about a user's location and online activities. Without clear restrictions, companies can use this data for unethical purposes, such as tracking consumer behavior without permission. Research shows that consumers have a right to know how their personal data is being used and protected, so transparency in data collection and utilization is crucial.²⁵

Currently, cell phone numbers and IP addresses are personal data that do not have special regulations regarding the form and mechanism of protection.²⁶ The protection of IP Addresses in Indonesia currently still relies on the protection of personal data in general. The protection is regulated in several regulations,

²⁴ Undang-Undang Nomor 19 Tahun 2016.

²⁵ Dedon Dianta, "Urgensi Penegakan Hukum E-Commerce Di Indonesia: Sebuah Tinjauan Yuridis," *Arus Jurnal Sosial Dan Humaniora* 3, no. 1 (2023): 1–14, <https://doi.org/10.57250/ajsh.v3i1.173>.

²⁶ Putra and Fibrianti, "Threats and Legal Protection of Personal Data Combined in E-Commerce Transactions Based on Personal Data Protection Law in Indonesia." Putra and Fibrianti.

including Law Number 27 of 2022 concerning Personal Data Protection, In the Law, what is meant by protection is all efforts made to protect personal data in a series of personal data processing to guarantee the constitutional rights of the personal data subject.

The Organization for Economic and Cooperation Development (OECD), an international organization engaged in economic cooperation and development, issued a guideline on the basic principles of personal data protection which is the basis for formulating personal data protection rules, one of which is the use limitation principle.²⁷

Data security is a crucial aspect of IP address utilization. Misuse of personal data, including IP addresses, can lead to identity theft and online fraud, which is the second urgency of limiting the utilization of personal data. Therefore, strict regulations are needed to protect consumers from these potential risks. Research shows that companies should be responsible for managing personal data and ensuring that it does not fall into the wrong hands. With clear restrictions in place, it is expected to reduce the risk of data misuse and increase consumer confidence in e-commerce services.²⁸

The principle of restriction of use is a traditional pillar of data protection regulations, and with regard to consumer data protection, the so-called "notice and consent" model (i.e., informed, freely given, and specific consent) is one of the most frequently used mechanisms to legitimize data processing.²⁹ These principles must be applied by personal data managers in managing personal data. Personal data managers in the PDP Law include every person, public bodies, and international organizations. In this case, the company is one of the managers of personal data

²⁷ Muhammad Saiful Rizal, "Perbandingan Perlindungan Data Pribadi Indonesia Dan Malaysia," *Jurnal Cakrawala Hukum* 10, no. 2 (2019).

²⁸ R Ramadhan, J Latuny, and S. J Litolily, "Perancangan Pengamanan Server Apache Menggunakan Firewall Iptables Dan Fail2ban.," *Jurnal ISOMETRI* 1, no. 1 (2022): 9–15, <https://doi.org/10.30598/isometri.2022.1.1.9-15>.

²⁹ Norjihan Abdul Ghani, Suraya Hamid, and Nur Izura Udzir, "Big Data and Data Protection : Issues with Purpose Limitation Principle," *International Journal of Advances in Soft Computing & Its Applications* 8, no. 3 (2016).

including the IP Address of its consumers.³⁰ Companies can use IP Address to recognize each individual consumer, means of marketing objects, tracking security for consumers, and providing services for consumers according to the desired demand as described in the sub-discussion above. However, in utilizing the IP Address, companies must still pay attention to the limitations specified in the applicable rules.

Regulation of the Minister of Communication and Informatics No. 20/2016 stipulates several obligations for personal data managers, namely parties that collect, process, store, and manage personal data. The management of personal data must be in accordance with the principles of the applicable rules, meet the requirements regarding the storage and use of personal data, provide notification to consumers in the event of a security breach that results in unauthorized access, use or disclosure of personal data, Personal data managers must obtain permission or consent from consumers before using personal data for marketing purposes and transfer to third parties unless there are legal provisions that allow the use of personal data without permission, personal data managers are obliged to delete consumers' personal data if the purpose of collecting such data has been achieved or the personal data is no longer needed for legitimate purposes.³¹

Protection of consumer personal data in electronic system providers is carried out by creating a code of conduct in the form of self-regulation (internal policy).³² This is the mandate of Article 5 paragraph (2) of Kominfo Regulation 20/2016, which states that "Every Electronic System Operator must develop internal rules for the protection of Personal Data as a form of preventive action to avoid failures in the protection of Personal Data it manages."³³ Self-regulation is created with the

³⁰ Tim Hukumonline, "Aturan Wajib Bagi Pengendali Data Pribadi Dalam UU PDP," hukumonline.com, 2022.

³¹ Erna Priliyasi, "PERLINDUNGAN DATA PRIBADI KONSUMEN DALAM TRANSAKSI-E-COMMERCE MENURUT PERATURAN PERUNDANG-UNDANGAN DI INDONESIA," *Jurnal Rechtsvinding Media Pembinaan Hukum Nasional* 12, no. 2 (2023): 261–79.

³² Priliyasi.

³³ Josephine, Sinta Dewi Rosadi, and Sudaryat, "PERLINDUNGAN KONSUMEN DARING DAN TANGGUNG JAWAB PERUSAHAAN MARKETPLACE ATAS DATA PRIVASI KONSUMEN," *Suara Keadilan* 21, no. 1 (2020): 97–112.

aim of reducing as much as possible their risk in the face of events and challenges, legal and criminal liability for possible events in the interaction between companies and consumers.³⁴

In terms of utilizing IP Address as a means of marketing objects, where the company utilizes the IP Address of its consumers to promote the company, this needs to be restricted where the company needs to ask for the consent of the IP Address owner to carry out the promotion, because the information will be useful in making strategic marketing and even the personal information has been considered as a company asset that can be traded.³⁵ As personal data managed by a personal data controller, namely a certain company, it is an obligation for a Data Protection Officer to be able to understand in a basic and general way the IP Address as one type of personal data. The appointment of a Data Protection Officer based on professionalism has consequences in the form of a requirement for a Data Protection Officer to be able to know and understand all personal data objects managed by the company/personal data controller.

The urgency of limiting the use of consumer IP addresses by companies as personal data objects in Indonesia can be seen from several aspects related to privacy protection, data security, and compliance with the law. In the context of positive law, this is becoming increasingly important along with the increasing use of information technology and e-commerce.

Compliance with the law is also an important reason to limit the utilization of IP addresses. In Indonesia, although there is no law that specifically regulates the protection of personal data, the development of existing laws shows the need to create clear regulations. This then becomes the third urgency for limiting the collection of personal data. With limits in place, companies can more easily

³⁴ Hadi Tahan Nazif and Mohammadreza Alipoor, "The Legal Position and Effects of Self-Regulation of Digital Platforms," *Modern Technologies Law* 3, no. 6 (2022): 127–41, <https://doi.org/10.22133/MTLJ.2022.366647.1131>.

³⁵ Josephine, *Loc.Cit.*

understand their legal responsibilities in the management of personal data, including IP addresses. This will also help create a fairer business environment.³⁶

Conclusion

There are several forms of consumer IP Address utilization carried out by companies, especially E-Commerce service providers in Indonesia. In general, this utilization is carried out to analyze consumer behavior on certain platforms used by related parties, personalize consumer experience to present content that is relevant to consumers, bandwidth management, In the scope of positive law in Indonesia, further utilization restrictions are needed on the use of IP Address. As IP Address is one type of personal data that is given a nomenclature based on Law Number 27 of 2022. Limitation of the utilization of consumer IP Address by companies as personal data objects is important to do, given its urgency as a form of privacy protection, providing data security, and a form of complying with applicable law in Indonesia.

References

- Darnia, Meriza Elpha, Mitha Amelia, Indri Wulandari, Tya Ariani, Oktavia Anggraini, and M Fadila. "Perlindungan Data Identitas Konsumen Berdasarkan Undang-Undang Nomor 27 Tahun 2022 Tentang Perlindungan Data Pribadi." *Jurnal Ilmiah Wahana Pendidikan* 10, no. 9 (2024): 405–12. <https://doi.org/10.5281/zenodo.11180095>.
- Dianta, Dedon. "Urgensi Penegakan Hukum E-Commerce Di Indonesia: Sebuah Tinjauan Yuridis." *Arus Jurnal Sosial Dan Humaniora* 3, no. 1 (2023): 1–14. <https://doi.org/10.57250/ajsh.v3i1.173>.
- Fiantika, F. R, M Wasil, S Jumiayati, L Honesti, S Wahyuni, and E Mouw. (2022). *Metodologi Penelitian Kualitatif*. Get Press. Get Press, 2022.

³⁶ Dianta, *Loc.Cit.*

- Ghani, Norjihan Abdul, Suraya Hamid, and Nur Izura Udzir. "Big Data and Data Protection: Issues with Purpose Limitation Principle." *International Journal of Advances in Soft Computing & Its Applications* 8, no. 3 (2016).
- Handarkho, Y. D, T. R Suryanto, F. K. S. Dewi, and E Julianto. "Penerapan Strategi E-Business Untuk Meningkatkan Keunggulan Kompetitif Dari Usaha Mikro Kecil Menengah Di Indonesia (Studi Kasus Trooper Electronic Yogyakarta). , 8(4)." *Jurnal Buana Informatika* 8, no. 4 (2017): 123–39. <https://doi.org/10.24002/jbi.v8i4.1444>.
- Haryadi, Wida Ramona. "Consumer Protection of Personal Data in the Era of the Industrial Revolution." *Journal of Legal and Cultural Analytics (JLCA)* 3, no. 1 (2024): 89–104. <https://doi.org/10.55927/jlca.v3i1.8150>.
- Josephine, Sinta Dewi Rosadi, and Sudaryat. "PERLINDUNGAN KONSUMEN DARING DAN TANGGUNG JAWAB PERUSAHAAN MARKETPLACE ATAS DATA PRIVASI KONSUMEN." *Suara Keadilan* 21, no. 1 (2020): 97–112.
- Macaulay, Stewart, Lawrence M. Friedman, and John Stookey. *Law & Society*. New York: WW Norton & Company, Inc, 1995.
- Marzuki, P. M. *Penelitian Hukum Edisi Revisi*. Bandung: PT. Kharisma Putra Utama, 2015.
- Nazif, Hadi Tahan, and Mohammadreza Alipoor. "The Legal Position and Effects of Self-Regulation of Digital Platforms." *Modern Technologies Law* 3, no. 6 (2022): 127–41. <https://doi.org/10.22133/MTLJ.2022.366647.1131>.
- Negara, I. G. A. S, A. S Nastiti, R. M Negara, and R Tulloh. "Analisis Konsumsi Bandwidth Pada Komunikasi Address Resolution Protocol Dalam Jaringan." *Jurnal Nasional Teknik Elektro Dan Teknologi Informasi (JNTETI)* 5, no. 4 (2016): 212–31. <https://doi.org/10.22146/jnteti.v5i4.272>.
- Ningsih, N. "Penerapan Konsep Gamification Pada Aplikasi E-Commerce

- Untuk Umkm Makanan.” *JSAI (Journal Scientific and Applied Informatics)* 4, no. 1 (2021): 53–63.
<https://doi.org/10.36085/jsai.v4i1.1329>.
- Nurmiati, Evy. “Analisis Dan Perancangan Web Server Pada Handphone.” *Studia Informatika: Jurnal Sistem Informasi* 5, no. 2 (2012): 1–17.
- Nursalin, K, A Kristiawan, and K. I Tjiptodjojo. “Peranan Online Trust Dan Online Service Quality Terhadap Perceived Value Social Commerce Ozzie Motor.” *Jurnal Ilmiah Manajemen Bisnis Dan Inovasi Universitas Sam Ratulangi* 10, no. 1 (2023): 283–97.
<https://doi.org/10.35794/jmbi.v9i3.43963>.
- Pohan, Tia Deja, and Muhammad Irwan Padli Nasution. “Perlindungan Hukum Hukum Data Pribadi Konsumen Dalam Platform E-Commerce.” *SAMMAJIVA: Jurnal Penelitian Bisnis Dan Manajemen* 1, no. 3 (2023): 42–48.
<https://doi.org/10.32505/jurisprudensi.v15i1.5478>.
- Priliasari, Erna. “PERLINDUNGAN DATA PRIBADI KONSUMEN DALAM TRANSAKSIE-COMMERCE MENURUT PERATURAN PERUNDANG-UNDANGAN DI INDONESIA.” *Jurnal Rechtsvinding Media Pembinaan Hukum Nasional* 12, no. 2 (2023): 261–79.
- Putra, Tegar Islami, and Nurul Fibrianti. “Threats and Legal Protection of Personal Data Combined in E-Commerce Transactions Based on Personal Data Protection Law in Indonesia.” *Lambung Mangkurat Law Journal* 9, no. 1 (2024): 64–74.
<https://doi.org/10.32801/lamlaj.v9i1.438>.
- Rakanita, A. M. “Pemanfaatan E-Commerce Dalam Meningkatkan Daya Saing Umkm Di Desa Karang Sari Kecamatan Karangtengah Kabupaten Demak.” *Jurnal Ekbis* 20, no. 2 (2019): 1280.
<https://doi.org/10.30736/ekbis.v20i2.237>.
- Ramadhan, R, J Latuny, and S. J Litolily. “Perancangan Pengamanan Server Apache Menggunakan Firewall Iptables Dan Fail2ban.” *Jurnal ISOMETRI* 1, no. 1 (2022): 9–15.

- <https://doi.org/10.30598/isometri.2022.1.1.9-15>.
- Ramdani, R, R Alpriansah, R Komala, and L. Mulawarman. "Kepuasan Mahasiswa Universitas Bumigora Terhadap Pelayanan E-Commerce." *Income : Digital Business Journal* 1, no. 2 (2023): 105–14. <https://doi.org/10.30812/income.vii2.3210>.
- Rizal, Muhammad Saiful. "Perbandingan Perlindungan Data Pribadi Indonesia Dan Malaysia." *Jurnal Cakrawala Hukum* 10, no. 2 (2019).
- Salameh, A. A, H Ahmad, F Zulhumadi, and F. M Abubakar. "Relationships between System Quality, Service Quality, and Customer Satisfaction. *Journal of Systems and Information Technology*" 20, no. 1 (2018): 73–102. <https://doi.org/10.1108/jsit-03-2017-0016>.
- Sande, N. A, and D Samanhudi. "Analisis Tingkat Kualitas Layanan E-Commerce Xyz Menggunakan Metode e-Service Quality." *Juminten* 3, no. 1 (2022): 37–48. <https://doi.org/10.33005/juminten.v3i1.365>.
- Saputra, A. "Analisis Pengaruh Penerapan E-Commerce Dan Kualitas Pelayanan Terhadap Kepuasan Konsumen." *JURNAL MANAJEMEN BISNIS STIE IBBI* 27, no. 1 (2018): 53–61. <https://doi.org/10.31227/osf.io/27frd>.
- Sekar Mawar Firdausi, A, and Shely Rizki Hardiana. "Pengaruh Aktivitas E-Commerce Dan Iklan Pada Niat Pembelian Daring: Studi Pada Pengguna Situs Web Layanan Perjalanan." *Revenue: Lentera Bisnis Manajemen* 1, no. 1 (2023): 32–39. <https://doi.org/10.59422/lbm.vii01.52>.
- Soekanto, S, and S Mamudji. *Metode Penelitian Normatif*. Jakarta: Rajawali Press, 1995.
- Tim Hukumonline. "Aturan Wajib Bagi Pengendali Data Pribadi Dalam UU PDP." hukumonline.com, 2022.
- Waspiah, Waspiah, Noveria Sekar S, Ammirah Lies S, Tegar Islami Putra, Setyaning Wida N, and Salisa Widyaning K. "Model Pelindungan Hukum Data Pribadi Di Era Digital Guna Menjamin Hak Warga Negara Atas Pelindungan Data Pribadi." *Syntax Literate ; Jurnal Ilmiah*

Indonesia 8, no. 9 (2023): 5165–79. <https://doi.org/10.36418/syntax-literate.v8i9.13662>.

DECLARATION OF CONFLICTING INTERESTS

There is no conflicting interests in this article.

FUNDING INFORMATION

-

ACKNOWLEDGMENT

None.

HISTORY OF ARTICLE

Submitted : January 21, 2024

Revised : March 28, 2024

Accepted : April 25, 2024

Published : May 25, 2024