

Model teknologi Blockchain untuk peningkatan kinerja organisasi Sekretariat Dewan Pertimbangan Presiden = Blockchain technology model to enhance the Organizational Performance of the Secretariat of the Presidential Advisory Council

Fikroh Amali Fahmi Addiani, author

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Abstrak

ABSTRAK

Dengan posisi strategis Sekretariat Dewan Pertimbangan Presiden dalam pemberian dukungan teknis dan administrasi kepada Dewan Pertimbangan Presiden dalam menjalankan tugas memberikan nasihat dan pertimbangan kepada Presiden, perlindungan terhadap aset data dan informasi Dewan Pertimbangan Presiden yang bersifat rahasia dan terbatas, dari berbagai bentuk ancaman dan risiko keamanan, kerahasiaan, keutuhan, dan ketersediaan data dan informasi sangat penting. Penyimpanan data dengan sistem komputasi awan (cloud storage) memiliki beberapa risiko diantaranya risiko dari sisi keamanan data, integritas data, dan ketersediaan data. Teknologi Blockchain menawarkan sistem penyimpanan data yang terdesentralisasi, cepat, aman, transparan, dan terekam. Penelitian ini dilakukan guna merancang model teknologi blockchain sebagai solusi permasalahan pada sistem penyimpanan data sehingga dapat meningkatkan kinerja organisasi Sekretariat Dewan Pertimbangan Presiden.

Metode yang digunakan dalam penelitian ini adalah dengan studi kasus, survei responden dan studi literatur. Analisis statistik dan analisis risiko digunakan untuk mengetahui tingkat risiko pada sistem penyimpanan data di Sekretariat Dewan Pertimbangan Presiden yang berpengaruh pada kinerja organisasi, untuk kemudian dirumuskan respons preventif dan korektif atas risiko yang paling dominan. Dari penelitian diketahui bahwa risiko yang paling dominan adalah pencurian data, kerusakan data akibat virus atau penyerangan sistem, data tidak dapat disimpan karena keterbatasan ruang simpan, kehilangan data akibat kerusakan sistem dan sistem tidak menyediakan backup data, setiap pengguna dapat masuk ke sistem tanpa hak akses (username dan password), dan tidak ada jaminan dari sistem jika ada ancaman keamanan. Berdasarkan hasil rumusan respons risiko tersebut, sebagai hasil akhir penelitian ini, dibuat suatu rancangan model sistem penyimpanan data berbasis risiko dengan platform teknologi blockchain yang sesuai untuk Sekretariat Dewan Pertimbangan Presiden sehingga dapat meningkatkan kinerja organisasi Sekretariat Dewan Pertimbangan Presiden.

ABSTRACT

With the strategic position of the Secretariat of the Presidential Advisory

Council in providing technical and administrative support to the Presidential Advisory Council in providing advise and consideration to the President, protection of confidential and limited data and information assets of the Presidential Advisory Council from various security threats and risks, confidentiality, integrity, and the availability of data and information is very important. Data storage with a cloud computing system (cloud storage) has several risks including risks of data security, data integrity, and data availability. Blockchain technology offers a decentralized, fast, secure, transparent and recorded data storage

system. This research was conducted to determine the appropriate blockchain technology model for the Presidential Advisory Council Secretariat as a solution to the problems in the data storage system, to enhance the performance of the Presidential Advisory Council Secretariat organization.

The method used in this research is case studies, survey respondents and literature studies. Statistical analysis and risk analysis are used to determine the level of risk in the data storage system at the Secretariat of the Presidential Advisory Council that affects the performance of the organization, to then formulate a preventive and corrective response to the most dominant risk. From the research it is known that the most dominant risk is data theft, data damage due to viruses or system attacks, data cannot be stored due to limited storage space, data loss due to system damage and the system does not provide backup data, each user can enter the system without access rights (username and password), and there is no guarantee from the system if there is a security threat. Based on the results of the risk response formulation, as the final result of the study, a risk-based data storage system model was created with a blockchain technology platform that is appropriate for the Secretariat of the Presidential Advisory Council to improve the Secretariat of the Presidential Advisory Council performance.