Why ICP Canisters and Motoko Backends Excel in Cybersecurity

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in cyber security Innovations today

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we're diving into the fascinating world

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of Internet computer protocol or ICP and

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exploring how ICP canisters and backends

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can excel in cyber security stay tuned

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to discover why deploying a Matco

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backend on the ICP blockchain offers

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Superior security compared to

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traditional cloud-based databases first

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let's talk about orthogonal persistence

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one of icp's handout features unlike

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traditional databases that require

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explicit commands to save and restore

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data ICP canisters automatically

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preserve their state this is done using

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web assembly memory and globals ensuring

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that the entire state is restored before

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and saved after each message this

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seamless process reduces the risk of

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human error and enhances data protection

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orthogonal persistence means your data

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is always safe secure and ready for the

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next operation without manual interven

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vention it's like having a super

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efficient self-maintaining database that

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never forgets next let's look at stable

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storage icp's persistence model allows

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canisters to save longli data in a

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dedicated stable memory unlike regular

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canister memory stable memory is

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retained across upgrades this feature

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ensures that your data remains intact

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and secure even when you're updating

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your

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application stable storage means you can

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upgrade your canisters without fear of

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data loss your application remains res

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resilient and your user's data stays

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protected security best practices are

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crucial for any application and ICP

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provides comprehensive guidelines to

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ensure your development is secure by

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following these best practices you can

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protect your application from potential

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intrusions these practices include

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regular code audits using secure coding

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standards and staying updated with the

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latest security recommendations from the

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ICP Community another significant

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advantage of ICP is its support for end

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to and encryption this ensures that data

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transmitted between users and the

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application is encrypted safeguarding it

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from unauthorized access end-to-end

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encryption provides an additional layer

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of security making sure that your data

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remains confidential and tamperproof at

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the core of ICP is blockchain technology

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known for its inherent security

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blockchain's decentralized nature and

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use of cryptographic techniques make it

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highly resistant to intrusions and

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attacks by leveraging blockchain your

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application benefits from a robust

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security framework that protects against

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data breaches and cyber threats to sum

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it up deploying a Matco backend on the

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ICP blockchain offers several security

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advantages orthogonal persistence

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ensures automatic error-free data

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preservation stable storage protects

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data during upgrades security best

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practices guide you in developing secure

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applications endtoend encryption

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safeguards data in transit blockchain

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technology provides a decentralized

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secure Foundation thank you for watching

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