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(57) Abstract :
The invention discloses a cloud-supported framework for secure blockchain transaction validation comprising blockchain nodes (101), cloud-assisted validation servers (102), cryptographic proof generator (103), consensus management layer (104), and secure API interface (105). The system enables hybrid validation, where lightweight tasks are executed on blockchain nodes while computationally intensive processes are securely offloaded to cloud servers. Cryptographic proof ensures transparency and prevents manipulation by cloud servers. The framework improves scalability, reduces energy consumption, lowers latency, and enhances security, making it ideal for enterprise-grade blockchain applications.

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