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(57) Abstract :

A dynamic system designed for secure mobile hotspot access employs a Credential Lifecycle Engine featuring a Trigger Monitor that detects time-based, context-sensitive, or access events, which in turn activates a Credential Generation Unit that produces randomized new credentials and a Credential State Manager that archives credential metadata while invalidating previous credentials. The system integrates a Trusted Device Management Module with a Trusted Device Identification Unit and Trust Record Store to manage approved devices, and a Secure Credential Distribution Module utilizing an Out-of-Band Delivery Mechanism and Delivery Integrity Manager to securely transmit the updated credentials. Coordination is maintained by a Hotspot Orchestration Layer and an Access Governance and Authorization Module that verifies credentials and notifies hotspot owners of unauthorized access attempts.

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