RACK2CLOUD

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Disconnected Cloud Sovereignty Audit Framework | Rack2Cloud

Purpose: This audit framework evaluates control-plane independence, identity sovereignty, cryptographic resilience, and operational survivability during extended internet isolation.

1. Control Plane Locality Audit

- □ Can new infrastructure be deployed during full internet isolation?
- □ Can automation pipelines execute locally without public APIs?
- □ Can credentials and secrets be rotated without external reachability?
- □ Can RBAC changes be approved and enforced locally?
- □ Can backups be restored without public endpoints?
- □ Can failed nodes be rebuilt from local artifacts?

2. Identity Independence Audit

- □ Is the identity authority fully local?
- □ Do OIDC token refreshes require public endpoints?
- □ Can federation survive 30+ days offline?
- □ Are signing keys locally controlled and HSM-backed?
- □ Is RBAC policy data stored locally?

3. Cryptographic Sovereignty Audit

- □ Is there an independent internal CA chain?
- □ Can certificates be renewed offline?
- □ Are CRLs distributed internally?
- □ Does key rotation require public KMS endpoints?
- □ Can trust remain valid after 30+ days of isolation?

4. Time Authority Audit

- □ Is there an internal NTP hierarchy?
- □ Are multiple stratum levels configured?
- □ Is there an independent trusted time source?
- □ Has clock drift tolerance been tested under isolation?

5. Supply Chain Audit

- □ Is there a local artifact registry?
- □ Are container images and packages mirrored internally?
- □ Is there an offline vulnerability database mirror?
- □ Can patching occur without public pulls?
- □ Are artifacts cryptographically verified internally?

6. 30-Day Isolation Simulation

- □ Day 1: Internet loss – what fails immediately?
- □ Day 7: Certificate nearing expiry – what breaks?
- □ Day 15: Token refresh cycle – what depends on external identity?
- □ Day 30: Patch release required – can it be applied offline?
- □ Day 45: Hardware replacement – can a node be rebuilt locally?

Scoring Guidance

Score 1 point per fully sovereign capability. 0–5 = External Dependency Environment; 6–15 = Partial Sovereignty; 16–25 = Control Plane Autonomous; 26+ = Cryptographically Sovereign Architecture.