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5. Audit Store User Story: As an auditor, I want to view immutable logs of all key compliance actions and decisions for any entity, so I can satisfy internal and external regulatory reviews. Acceptance Criteria: Every critical action (screen, block, override, release, rule edit) is logged with user, timestamp, entity, and context. Logs are tamper-evident and accessible by permissioned users. One-click export of filtered or full logs for audits. Real-time monitoring dashboard available for managers

Here is a detailed, industry-standard breakdown for your Audit Store story, designed for high-assurance compliance platforms.

### Audit Store – Detailed User Story

**Title:** Immutable, Permissioned Audit Logging and Monitoring

#### Description

As an auditor, I want to view, search, and export immutable logs of all important compliance actions and decisions on any business entity (orders, rules, partners, licenses), so that I can satisfy rigorous internal controls and external regulatory reviews. [\[1\]](#) [\[2\]](#) [\[3\]](#)

#### Functional Requirements (Expanded)

- **Comprehensive, Automatic Event Logging**
  - Every critical workflow action is logged: screening, block, override, release, rule edit, manual review, integration sync, and external API calls. [\[2\]](#) [\[1\]](#)
  - Each log entry includes: event type, affected entity (with unique ID/ref), user/actor (system or person), source IP, timestamp (in UTC, ISO 8601), action details, and contextual snapshot (e.g., input parameters, result, exception info).
- **Tamper-evident, Immutable Storage**
  - Logs are stored in an append-only, write-once data store (e.g., blockchain, WORM storage, or cryptographically hashed chained records) to ensure audit integrity. [\[4\]](#) [\[5\]](#) [\[2\]](#)
  - Any attempt to modify or delete logs triggers an alert and creates a separate, permanent error log event.
- **Access Control and Permissions**

- Fine-grained, role-based access: only authorized users with “Audit View” permissions (e.g., auditors, compliance managers) can view sensitive logs.
- Log access attempts (success, failure, export, or search) are themselves logged and auditable for full traceability.<sup>[1]</sup>
- **Intuitive Search, Filtering, and Export**
  - Users can easily search/filter logs by event type, entity, user, date/time, or status using intuitive forms or tags.
  - Supports partial, fuzzy, and advanced (logic) queries for multi-parametric reviews.
  - One-click export of filtered result set or full logs to PDF or CSV, with audit trail of export actions.
- **Real-Time Monitoring Dashboard**
  - Visual, real-time dashboard surfaces audit metrics: compliance alert rates, override frequencies, top actors, rule change statistics, recurring issues.
  - Drill-down capability: select a metric to see underlying logs/events.
  - Configurable, time-window summary views and exportable visualizations.
- **Compliance Alignment**
  - Log retention policies enforced per-regulation (e.g., 6+ years for HIPAA, 1–3 years for SOX, PCI DSS, ISO/SOC2).<sup>[4]</sup>
  - Chain-of-custody integrity for legal admissibility: logs digitally signed or hashed; integrity can be verified independently.
  - Supports both internal and external audit workflows—organizations can delegate temporary read access for auditors, with full tracking.

## Non-Functional Requirements

- Log events must be written asynchronously and not impact application latency (target write latency: <150ms per event).<sup>[6] [7]</sup>
- The system must support storage and instant retrieval of logs scaling to millions of events across multi-year retention.
- Log queries and exports must honor access control and never leak data; encrypted at rest and in transit.
- GDPR/compliance: Support log redaction and metadata-only logs for sensitive data in strict jurisdictions.<sup>[4]</sup>

## Example Scenarios

- An external regulator requests “all override actions by user X on license Y since Jan 1, 2025.” Auditor searches, reviews, exports logs, and shares the encrypted export with the regulator. All export actions are also logged.
- Compliance manager reviews daily dashboard—sees a spike in order blocks—drills into detailed logs to find it's due to a recent rule change, then links to that rule's edit history for further forensic review.
- IT security officer is alerted to a failed attempt to tamper with log storage. The event is flagged, and forensics team accesses immutable error logs.

This approach guarantees legal-grade audit trails, maximizes compliance confidence, makes investigations efficient, and aligns with the latest industry guidance on logging, forensics, and regulatory readiness.<sup>[3] [5] [2] [1] [4]</sup>

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