Data Catalog

1. Log Entry Information

- **Timestamp**: Date and time of the log entry.

- **Log Level**: Log severity level (INFO, WARN, ERROR, DEBUG).

- **Request ID**: Unique identifier for the request.

- **Session ID**: Unique identifier for the user session.

- **User ID**: Unique identifier for the user.

- **Action**: Type of action performed (login, logout, view_page, click_button, submit_form).

- **HTTP Method**: HTTP method used for the action.

- **URL**: URL accessed or endpoint targeted.

- **Referrer URL**: URL of the referring page.

- **IP Address**: IP address of the user.

- **User Agent**: Information about the user's browser or client.

- **Response Time**: Time taken for the action to complete.

- **Product ID**: Identifier for a product.

- **Cart Size**: Number of items in the user's cart.

- **Checkout Status**: Status of the checkout process.

- **Token**: Authentication token.

- **Authentication Method**: Method used for authentication (OAuth, JWT, Basic).

- **Authentication Level**: User's authentication level (user, admin).

- **Correlation ID**: Identifier to correlate multiple log entries.

- **Server IP**: IP address of the server.

- **Port Number**: Port number used for communication.

- **Protocol**: Communication protocol used (HTTP, HTTPS).

- **Status Code**: HTTP status code indicating the success or failure of the action.

- **Status and Detail**: Detailed information about the status.

2. Anomalies (if present)

- **Spike Response Time**: Abnormally high response time.

- **Unusual Action**: Unexpected or unusual action.

- **High Cart Size**: Unusually large cart size.

- **System Error**: Simulated system error.

3. Latency Breakdown

- **Database Query Time**: Time taken for database queries.

- **Server Processing Time**: Time taken for server-side processing.

- **Network Latency**: Time taken for network communication.

- **Total Response Time**: Sum of database query time, server processing time, and network latency.

4. Network Information

- **Server IP**: IP address of the server.

- **Port Number**: Port number used for communication.

- **Protocol**: Communication protocol used (HTTP, HTTPS).

5. Application-Specific Data

- **Product ID**: Identifier for a product.

- **Cart Size**: Number of items in the user's cart.

- **Checkout Status**: Status of the checkout process.

6. Authentication Details

- **Token**: Authentication token.

- **Authentication Method**: Method used for authentication (OAuth, JWT, Basic).

- **Authentication Level**: User's authentication level (user, admin).

7. Other Information

- **Log Level**: Log severity level (INFO, WARN, ERROR, DEBUG).

- **Referrer URL**: URL of the referring page.

- **User Agent**: Information about the user's browser or client.

This data catalog outlines the key information present in the log entries, including details about user actions, authentication, anomalies, and network information. Adjustments can be made based on specific analysis or reporting requirements.

Fields Necessary for Performance Analysis:

1. **Log Entry Information:**

   Timestamp, Log Level, Request ID, User ID, Action, HTTP Method, URL, IP Address, Response Time, Status Code, Status and Detail

2. **Latency Breakdown:**

   Database Query Time, Server Processing Time, Network Latency, Total Response Time

3. **Network Information:**

   Server IP, Port Number, Protocol

4. **Authentication Details:**

   Token, Authentication Method, Authentication Leve

Fields Necessary for User Behavior Analysis:

1. **Log Entry Information:**

   Timestamp, User ID, Action, HTTP Method, URL, Referrer URL, IP Address, User Agent, Response Time

2. **Session Information:**

   Session ID, Duration of Session

Fields Necessary for Error and Anomaly Detection:

1. **Log Entry Information:**

   Timestamp, Log Level, Request ID, User ID, Action, HTTP Method, URL, IP Address, Response Time, Status Code, Status and Detail

2. **Anomalies (if present):**

   Spike Response Time, Unusual Action, High Cart Size, System Error

Fields Necessary for Security Audit:

1. **Log Entry Information:**

   Timestamp, User ID, Action, HTTP Method, URL, IP Address, Response Time, Status Code, Status and Detail

2. **Authentication Details:**

   Token, Authentication Method, Authentication Level

Fields Necessary for System State Monitoring:

1. **Log Entry Information:**

   Timestamp, Log Level, Request ID, User ID, Action, HTTP Method, URL, IP Address, Response Time, Status Code, Status and Detail

2. **Real-time Dashboard Metrics:**

   Response Time, Error Rates, User Load

Fields Necessary for E-commerce Insights:

1. **Log Entry Information:**

   Timestamp, User ID, Action, HTTP Method, URL, IP Address, Response Time

2. **Application-Specific Data:**

   Product ID, Cart Size, Checkout Status

Fields Necessary for API Usage Tracking:

1. **Log Entry Information:**

   Timestamp, User ID, Action, HTTP Method, URL, IP Address, Response Time, Status Code, Status and Detail

2. **API Calls:**

    API Endpoint, Frequency of Calls

Fields Necessary for Load Balancing and Scaling Decisions:

1. **Log Entry Information:**

   Timestamp, Log Level, Request ID, User ID, Action, HTTP Method, URL, IP Address, Response Time, Status Code, Status and Detail

2. **Real-time Metrics:**

   Traffic Patterns, Resource Utilization, Server Load