Epics and user stories

Epic One: PCAP Ingestion

User stories

1. As a **user** I want to upload a PCAP file so that I can analyse my network traffic.
2. As a **user** I want to know if the analysis is still in progress, so I am aware the app is working.
3. As a **user** I want to be told if the PCAP file is corrupted or invalid so that the analysis fails safely.
4. As a **user** I want to be able to re-upload a new file so that I can analyse multiple datasets.

Epic Two: Data extraction and processing

User stories

1. As a **user** I want network traffic to be grouped into flows so that I can understand patterns.
2. As a **user** I want to view flow metrics so that I can interpret users' network behaviour.
3. As a **user** I want to be notified if my PCAP file contains no valid IP packet data.
4. As a **user** I want the system to be able to process large files without freezing.

Epic Three: Dashboard UI

User stories

1. As a **user** I want a simple workflow so that I can easily analyse my data without advanced technical knowledge
2. As a **user** I want a clean and intuitive interface so that I can use the tool with minimal training
3. As a **user** I want the UI to function without crashing or freezing so that I can use the UI without hindrance.

Epic Four: Data visualisation

User stories

1. As a **user** I want to be able to view interactive charts that show traffic size and flow statistics over time so that I can visually understand the data.

2. As a **user** I want to be able to filter the dashboard by protocol, time, and classification so that I can view specific activities.
3. As a **user** I want short descriptions for each chart so that I can understand what the data represents and means.
4. As a **user** I want summarised statistics so that I can make quick insights.

Epic Five: Documentation

User stories

1. As a **user** I want straightforward documentation so that I can understand how to get started.
2. As a **user** I want straightforward documentation of key network concepts so that I can understand the data and what it means

Epic Six: Code Maintainability

User stories

1. As a **develope**r I want the code to be modular so that I can update individual components without breaking others.

Epic Seven: Performance and Error Handling

User stories

1. As a **developer** I want data extraction and validation to be efficient so that large PCAP files do not incur long delays.
2. As a **developer** I want the dashboard application to display a readable, user-friendly error if the application crashes.
3. As a **developer** I want to conduct tests for each pipeline stage so that changes can be validated.