Use Case Scenario

Scenario: Generate Graph

Scenario Description: Generating graph's purpose is to create a visual representation of a vector by allowing the user to establish relationships between nodes and create new nodes to capture activities that are not associated with significant log entries. An analyst or lead analyst wants to generate a graph.

Precondition: No concurrent activities are taking place while exporting a graph: Logs are cleansed, validated, and ingested. Activities are correlated to response and vectors are managed. Nodes and connectors have relationships and the Vector DB version is managed. Sync is verified. The graph is idle.

Postcondition: On successful completion, the graph is idle. QGraphViz generated and displayed the graph for the analyst or lead analyst to view.The analyst is able to export the graph.

Actors: Analyst/Lead Analyst, QGraphViz.

Flow of events:
1. The analyst requests to create a graph.
2. The system opens QGraphViz with a default graph based on the selected vector.
3. The analyst creates, deletes, or edits nodes to capture activities that are not associated with significant log entries (**ALT 1**)
4. The system displays the internally updated nodes.
5. The analyst creates relationships between nodes.(**ALT 2**) (**ALT 3**)
6. The system displays the internally updated relationships. (**ALT 4**)
7. The analyst clicks on the export graph button.
8. The system displays export formats for the analyst to pick from.
9. The analyst selects an export format.
10. The system displays a directory for the analyst to pick where the graph should be saved.
11. The analyst selects where he/she would like to save it. (**ALT 5**)
12. The system graph saves the graph in a selected directory (with the correct format that was picked by the analyst).
13. End of scenario.

ALT 1: The analyst does not want to make changes to the default graph.
ALT 1-1: The analyst does not make changes to the default graph.
ALT 1-2: The scenario continues at step 5.
ALT 1-3: End of ALT scenario.

ALT 2: The analyst makes an illegal action in the graph.
ALT 2-1: QGraphViz displays an error message to the analyst.

ALT 2-2: The analyst accepts the message.
ALT 2-3: The Scenario continues at step 5.
ALT 2-4: End of ALT scenario

ALT 3: The analyst does not want to create new relationships that are not part of the default graph.
ALT 3-1: The analyst does not want to make changes to the default relationships in the graph.
ALT 3-2: The Scenario continues at step 7.
ALT 3-3: End of ALT scenario.

ALT 4: The system displays a message to the user showing changes in the Vector DB.
ALT 4-1: The analyst clicks on the accept message
ALT 4-2: The system proceeds to rebase the current graph from the incoming changes.
ALT 4-3: The scenario continues at step 6.
ALT 4-4: End of ALT scenario.

ALT 5: The analyst selects an invalid location (e.g. protected) for saving the exported graph.
ALT 5-1: The system displays an error message with a brief description.
ALT 5-2: The analyst selects a different location.
ALT 5-3: The scenario continues at step 11.
ALT 5-4: End of ALT scenario.