PICK Tool

Test plan

Version 2.1

5/8/2020

**Document Control**

**Approval**

The Guidance Team and the customer shall approve this document.

**Document Change Control**

|  |  |
| --- | --- |
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**Distribution List**

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**Change Summary**

The following table details changes made between versions of this document

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Modifier | Description |
| 1.0 | 4/15/2020 | Team | Worked on Sections 1-4 |
| 2.0 | 4/27/2020 | Team | Finished the Final Test Plan Draft |
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Pfleeger, S. *Software Engineering, Theory and Practice*. Upper Saddle River, NJ: Prentice Hall, 1998, p. 365.

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# Introduction

## Purpose

The purpose of the Test Plan document is to provide detailed information on the testing approach and schedule conducted for the PMR Insight Collective Knowledge Tool (PICK) system. The purpose of this document is to verify the functionality of the PICK system according to the requirements specified by the client, using a system test plan that describes the system from the customer’s point of view.

## Scope

The project software version encompassed by the test plan will be PICK version 1.0, which represents the latest released version.

## System Overview

The Lethality, Survivability, and HSI Directorate (LSH) recognizes the complexity and the time it takes to analyze the applicable logs, observation notes, and other artifacts gathered from an adversarial assessment from the red, blue, and white teams and generate a report that represents the events that took place during the adversarial assessment. They want a system that would aid their analysts in correlating red team’s activities to blue team’s responses and represent the events that took place during an adversarial assessment graphical.

The testing approach that will be implemented is Black-box testing. This approach will examine the functionality of the PICK tool system without focusing on its internal structure. This method of test will be applied primarily to the acceptance level of software testing, also referred to as user acceptance testing.

## Suspension and Exit Criteria

The suspension and exit criteria implemented for the test plan will be applied as follows:

* + - Suspension criteria:
      * Critical tests fails - one or more test cases fail
      * Non-critical tests - 40 % or more
    - Exit criteria:
      * Critical tests must pass – 100% passing rate
      * Non-critical tests – at least 90% must pass

## Document Overview

The remainder of the Test Plan document is comprised of the following sections:

Section 2 – Test Items and Features, describes the test items and the features to be tested.

Section 3 – Testing Approach, describes the approach to be used to test the system.

This description includes specifying the types of tests to be performed.

Section 4 – Test, this area provides general notes concerning the test procedure.

Section 5 – User Interface Testing, this section focuses on the interaction between the user and the system.

Section 6 – Test Schedule, specifies the schedule for testing activities.

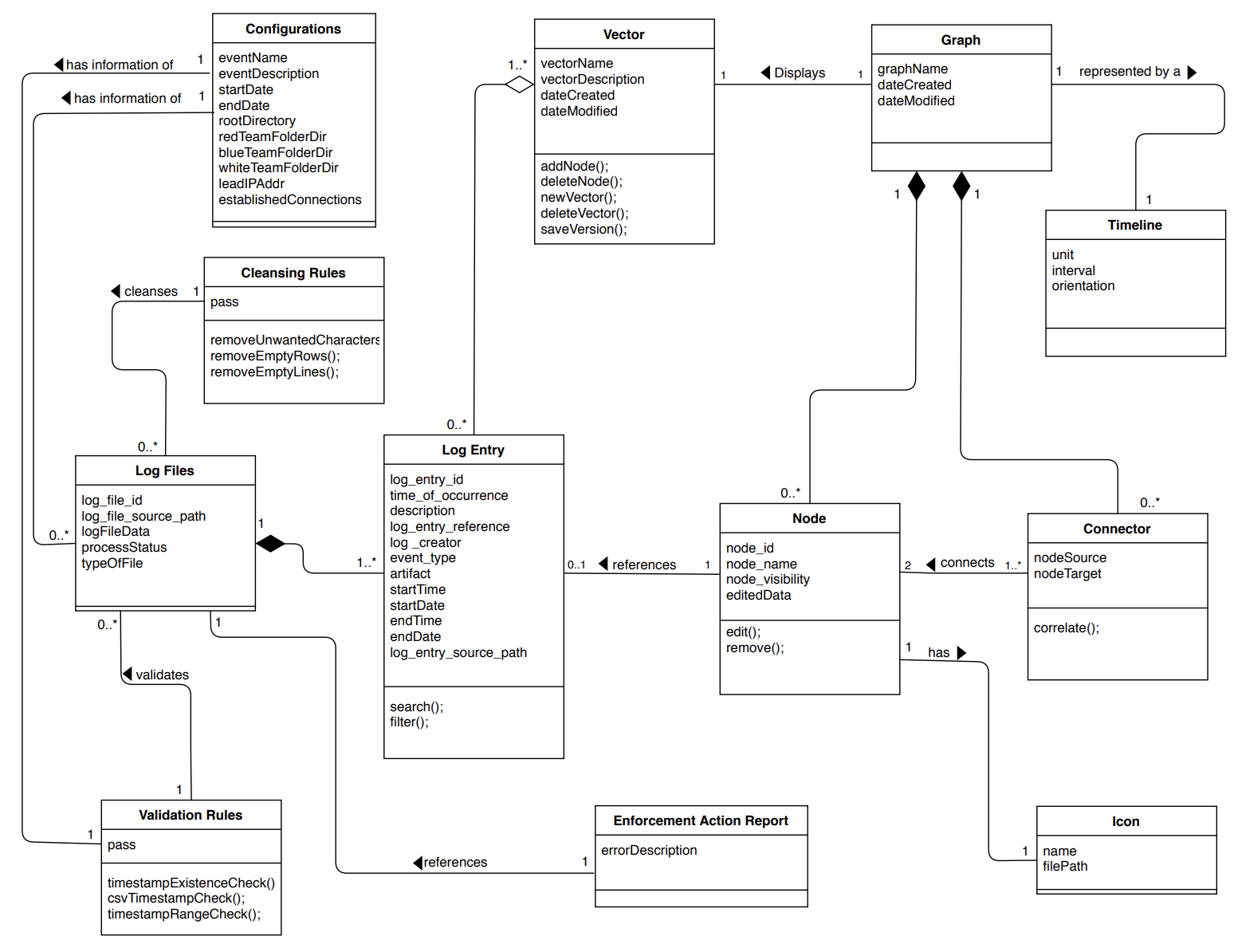
Section 7 – Other Sections, other sections that may appear in a test plan.

Section 8 – Appendix, might provide explicit directions for analysis of output.

## References

There are no references.

# Test Items and Features



*Figure 1. PICK Tool Class Diagram*

The test items such as classes to be tested are shown in Figure 1, which depicts the PMR Insight Collective Knowledge Tool Class Diagram. The features that will be tested are:

* Creating a new event
  + Configurations
* Adding the directories of each team (Red, Blue and White)
  + Configurations
* Verify that the user can start the ingestion of log files after providing directories
  + Configurations, Log Files, Cleansing Rules, Validation Rules
* Adding/Editing/Deleting icons
  + Icon
* Searching/filtering for significant log entries
  + Log Entry
* Associating log entries to vectors
  + Log Entry, Vector
* Creating a new Vector
  + Vector
* Adding a new node
  + Node, Vector, Graph
* Adding a relationship between nodes
  + Connector, Vector, Graph
* Removing a node
  + Node, Vector, Graph
* Removing a relationship between nodes
  + Connector, Vector, Graph
* Exporting Graph
  + Graph

# Testing Approach

The testing approach that will be implemented is Black-box testing. This approach will examine the functionality of the PICK system without focusing on its internal structure. This method of test will be applied primarily to the acceptance level of software testing, also referred to as user acceptance testing.

|  |  |  |
| --- | --- | --- |
| **Team Configuration Test Suite** | | |
| Description of Test Suite | This test suite tests the functionality of the Configurations window focusing on the Team Configuration tab. | |
| **Test Case Identifier** | **Objective** | **Criticality** |
| Team1 | Establish Connections | **Critical** |

|  |  |  |
| --- | --- | --- |
| **Event Configuration Test Suite** | | |
| Description of Test Suite | This test suite tests the functionality of the Configurations window focusing on the Event Configuration tab. | |
| **Test Case Identifier** | **Objective** | **Criticality** |
| Event1 | Create a new event with given criteria. | **Critical** |
| Event2 | Ingest log files within the given start and end timestamp range. | **Critical** |

|  |  |  |
| --- | --- | --- |
| **Directory Configuration Test Suite** | | |
| **Description of Test Suite** | This test suite tests the functionality of the Configurations window focusing on the Directory Configuration tab. | |
| **Test Case Identifier** | **Objective** | **Criticality** |
| Directory1 | Ingest files from the given directories. | **Critical** |

|  |  |  |
| --- | --- | --- |
| **Vector Configuration Test Suite** | | |
| **Description of Test Suite** | This test suite tests the functionality of the Configurations window focusing on the Vector Configuration tab. | |
| **Test Case Identifier** | **Objective** | **Criticality** |
| Vector1 | Create a new vector with name and description. | **Critical** |
| Vector2 | Edit vector. | **Critical** |

|  |  |  |
| --- | --- | --- |
| **Icon Test Suite** | | |
| **Description of Test Suite** | This test suite tests the functionality of the Configurations window focusing on the Icon Configuration tab. | |
| **Test Case Identifier** | **Objective** | **Criticality** |
| Icon1 | Add a new icon. | **Critical** |
| Icon2 | Delete an icon from the Icon Table. | **Critical** |

|  |  |  |
| --- | --- | --- |
| **Enforcement Action Report Test Suite** | | |
| **Description of Test Suite** | This test suite tests the functionality of the Enforcement Action Report. | |
| **Test Case Identifier** | **Objective** | **Criticality** |
| EAR1 | Find errors in log file | **Critical** |
| EAR2 | Cancel Ingestion of selected log file. | **Critical** |
| EAR3 | Validate selected log file | **Critical** |

|  |  |  |
| --- | --- | --- |
| **Search/Filter Suite** | | |
| **Description of Test Suite** | This test suite tests the functionality of the Search/Filter Log Entries Window. | |
| **Test Case Identifier** | **Objective** | **Criticality** |
| S/F1 | Search/Filter by given criteria | **Critical** |
| S/F2 | Associate selected log entry to vector | **Critical** |

|  |  |  |
| --- | --- | --- |
| **Graph Test Suite** | | |
| **Description of Test Suite** | This test suite tests the functionality of the Graph window where a user can edit the graph. | |
| **Test Case Identifier** | **Objective** | **Criticality** |
| Graph1 | Export the graph as an image file. | **Critical** |
| Graph2 | Create a new node | **Critical** |
| Graph3 | Remove a node | **Critical** |
| Graph4 | Add connector to parent and child node | **Critical** |
| Graph5 | Remove a connector |  |
| Graph6 | Edit an existing node | **Critical** |

# Team Configuration Test Suite

The purpose of this section is to:

* document test input, specific test procedures, and outcomes.
* establish test methods,
* explain the nature and extent of each test
  1. **Test Team1**

**Objective:** Establishing connections to lead IP address.

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Team1 | | | | **Current Status:** Fail | | |
| **Test title:** Establish connections to given lead IP address | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Event Configuration” window then clicking on the “Team Configuration” tab. | Initial Condition to allow analysts to enter the Lead IP Address. | | | Lead IP Address input box is empty.  Lead checkbox is unmarked.  “Connect” button is enabled. |  |
| 2 | Analyst enters their own Lead IP Address: “123.456.89.10” | Ensure the system receives a valid IP Address | | | Analyst is connected to the network as the Lead Analyst. |  |
| **Concluding Remarks:** The user can enter the Lead IP Address but the system will not actually connect. | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

# Event Configuration Test Suite

The purpose of this section is to:

* document test input, specific test procedures, and outcomes.
* establish test methods,
* explain the nature and extent of each test
  1. **Test Event1**

**Objective:** Create a new event

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Event1 | | | | **Current Status:** Passed | | |
| **Test title:** Create a new event with given criteria | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Event Configuration” window then clicking on the “Event Configuration” tab. | Initial Condition to allow analysts to create a new Event | | | Event Name input box is empty.  Event Description folder input box empty.  “Save Event” button is enabled. |  |
| 2 | Fill in the following fields as shown below and click on “Save Event”: | Ensure the system receives valid inputs for each field | | | A new Event will be created. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test Event2**

**Objective:** Ingest files within the given start and end timestamp range

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Event2 | | | | **Current Status:** Passed | | |
| **Test title:** Ingest files within the given start and end timestamp range | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Event Configuration” window then clicking on the “Event Configuration” tab. | Initial Condition to allow analysts to create a new Event | | | The Event Name input box is empty.  Event Description folder input box empty.  “Save Event” button is enabled. |  |
| 2 | Fill in the following date fields and click on “Save Event”: | Ensure the system receives valid timestamps for each field. | | | A new Event will be created within the given timestamps. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

# Directory Configuration Test Suite

The purpose of this section is to:

* document test input, specific test procedures, and outcomes.
* establish test methods,
* explain the nature and extent of each test
  1. **Test Directory1**

**Objective:** Obtaining Root Directory.

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Directory1 | | | | **Current Status:** Passed | | |
| **Test title:** Ingest Files from the directory. | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Event Configuration” window then clicking on the “Directory Configuration” tab. | Initial Condition to allow analysts to enter directories needed for the ingestion process. | | | Root directory input box is empty.  Red team folder input box empty.  Blue team input box is empty.  White team input box is empty.  “Start Ingestion” button is enabled. |  |
| 2 | Analyst clicks on the browse button, navigates to the directories folder and selects the root folder labeled “logFiles” (directories/logFiles) and clicks “Open”. | Ensure the system receives a valid folder containing directories for each team. | | | Root directory input box will contain “directories/logFiles” . |  |
| 3 | Analyst clicks on the browse button, navigates to the logFiles folder and selects the red team folder labeled “redTeam” (directories/logFiles/redTeam) and clicks “Open”. | Ensure the system receives a valid red team folder with log files that will be ingested. | | | Red team folder input box will contain “directories/logFiles/redTeam”. |  |
| 4 | Analyst clicks on the browse button, navigates to the logFiles folder and selects the blue team folder labeled “blueTeam” (directories/logFiles/blueTeam) and clicks “Open”. | Ensure the system receives a valid blue team folder with log files that will be ingested. | | | Blue team folder input box will contain “directories/logFiles/blueTeam”. |  |
| 5 | Analyst clicks on the browse button, navigates to the logFiles folder and selects the white team folder labeled “whiteTeam” (directories/logFiles/whiteTeam) and clicks “Open”. | Ensure the system receives a valid white team folder with log files that will be ingested. | | | White team folder input box will contain “directories/logFiles/whiteTeam”. |  |
| 6 | Analyst clicks “Start Ingestion” button. | Ensure that the ingestion process begins. | | | All folder directories are saved to MongoDB. The ingestion process of log files begins and displays the log files that passed ingestion as log entries in the search/filter window or displays the log files that failed ingestion in the enforcement action report. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

# Vector Configuration Test Suite

The purpose of this section is to:

* document test input, specific test procedures, and outcomes.
* establish test methods,
* explain the nature and extent of each test
  1. **Test Vector1**

**Objective:** Create a new vector

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Vector1 | | | | **Current Status:** Passed | | |
| **Test title:** Create a new vector with given name and description | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Event Configuration” button inside the Main Window, then clicking on the “Vector Configuration” tab. | Initial Condition to allow analysts to create Vectors needed for the ingestion process. | | | The Vector Name input box is empty.  The Vector Description input box is empty.  “Add Vector” button is enabled.  “Delete Vector” button is enabled. |  |
| 2 | Fill in the following input boxes as shown below and click on “Add Vector”: | Ensures the Vector Configuration fields are filled in. | | | A new Vector has been created. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test Vector2**

**Objective:** Edit an existing vector

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Vector 2 | | | | **Current Status:** Passed | | |
| **Test title:** Edit an existing vector | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Event Configuration” window (located inside the Main Window) then clicking on the “Vector Configuration” tab. | Initial Condition to allow analysts to create Vectors needed for the ingestion process. | | | The Vector Name input box is empty.  The Vector Description input box is empty.  “Add Vector” button is enabled.  “Delete Vector” button is enabled as shown in V1. |  |
| 2 | Select the following Vector as shown below and double click on the Vector name as shown in V2: | Ensures a valid Vector has been selected. | | | The Vector name field is ready to be edited. |  |
| 3 | In the double clicked Vector Name field, type “New Vector Name” as shown below. | Ensures a valid field is selected. | | | The Vector Name field has been successfully updated as shown below: |  |
| **Concluding Remarks:** The user can edit the vector but the changes won’t be updated in the database. | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

# Icon Test Suite

The purpose of this section is to:

* document test input, specific test procedures, and outcomes.
* establish test methods,
* explain the nature and extent of each test
  1. **Test Icon1**

**Objective:** Add a new icon

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Icon1 | | | | **Current Status:** Passed | | |
| **Test title:** Add a new icon | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Event Configuration” window (located in the main window) then click on the Icon configuration tab. | Initial condition to add all the different icons that will be used by the analysts when creating nodes with icons. | | | The input textbox will be empty, in which the analysts will select the directory path of the icons |  |
| 2 | Fill-in the Icon name of the icon and select the source path of the icon to be added | The analyst has to provide the name of the icon they want to add and the source path to save it in the database. | | | Once the icon name has been added and the source path has been selected, both the name and path will be displayed to inform the user that it has been saved in the system. | The analyst should select the folder icon button(marked with a red circle) to select the directory where the icon is currently saved. |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test Icon2**

**Objective:** Edit an existing icon

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Icon2 | | | | **Current Status:** PASS | | |
| **Test title:** Edit an existing icon | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “” button located inside the Main Window. | Initial Condition to allow Analysts to view the Enforcement Action Report window. | | | The icons listed in the table on the bottom half of the screen are enabled to be able to double click and edit. |  |
| 2 | The user will double click on the “Icon 1” field and delete the current text and type in “Icon Rename” and then press enter on the keyboard. | Ensures that the icon field that is being edited contains the new text. | | | The icon being edited will be updated and displayed with the new text “Icon Rename”. |  |
| **Concluding Remarks:** The user is able to edit an icon and its field directly from the icon table, although the new changes will not be updated in the database. | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

# Enforcement Action Report Test Suite

The purpose of this section is to:

* document test input, specific test procedures, and outcomes.
* establish test methods,
* explain the nature and extent of each test
  1. **Test EAR1**

**Objective:** Find errors in log files

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** EAR1 | | | | **Current Status:** Failed | | |
| **Test title:** Find errors in log files | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Enforcement Action Report” button located inside the Main Window. | Initial Condition to allow Analysts to view the Enforcement Action Report window. | | | The Enforcement Action Report window is now displayed as shown in EAR1.    EAR1 |  |
| 2 | Select the Log File 2 to view it’s error description. | Ensure the log file is valid. | | | Below the Enforcement Action Report, an Error description table will be displayed as shown in EAR2.    EAR2 |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test EAR2**

**Objective:** Cancel ingestion of selected log file

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** EAR2 | | | | **Current Status:** Failed | | |
| **Test title:** Cancel ingestion of selected log file | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Enforcement Action Report” button located inside the Main Window. | Initial Condition to allow Analysts to view the Enforcement Action Report window. | | | The Enforcement Action Report window is now displayed as shown in EAR1.    EAR1 |  |
| 2 | Select the Log File 2 to view it’s error description | Ensure the log file is valid. | | | Below the Enforcement Action Report, an Error description table will be displayed as shown in EAR2.    EAR2 |  |
| 3 | Click on “Cancel Selected Log File” Button. | Ensure that the ingestion process gets cancelled. | | | The PICK system has now cancelled the ingestion process for Log File 2. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test EAR3**

**Objective:** Validate and ingest selected log files

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** EAR3 | | | | **Current Status:** Failed | | |
| **Test title:** Validate and ingest selected log files | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Enforcement Action Report” button located inside the Main Window. | Initial Condition to allow Analysts to view the Enforcement Action Report window. | | | The Enforcement Action Report window is now displayed as shown in EAR1.    EAR1 |  |
| 2 | Select the Log File 2 to view it’s error description | Ensure the log file is valid. | | | Below the Enforcement Action Report, an Error description table will be displayed as shown in EAR2.    EAR2 |  |
| 3 | Click on “Validate Selected Log File” Button. | Ensure that Log File 2 has been validated. | | | The PICK system has now validated Log File 2 and will continue through the ingestion process. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

# Search/Filter Test Suite

The purpose of this section is to:

* document test input, specific test procedures, and outcomes.
* establish test methods,
* explain the nature and extent of each test
  1. **Test S/F1**

**Objective:** Search/Filter by given criteria

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** S/F1 | | | | **Current Status:** Failed | | |
| **Test title:** Search/Filter by given criteria | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Search/Filter” button in the Main Window. | Initial Condition to allow Analysts to view the Search/Filter window. | | | Log files that have been ingested into the system will be shown. |  |
| 2 | Fill in the following input boxes as shown below and click on “Apply Filter”: | Ensures the filter fields are filled in. | | | The log entries matching the filter criteria will be displayed to the right. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test S/F2**

**Objective:** Associate selected log entry to vector

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** S/F2 | | | | **Current Status:** Passed | | |
| **Test title:** Associate log entry to vector | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Search/Filter” button in the Main Window. | Initial Condition to allow Analysts to view the Search/Filter window. | | | Log files that have been ingested into the system will be shown. |  |
| 2 | A list of log entries should appear at the top right of the screen. If not, follow the steps described in test Directory1. | Ensures log entries are present in the Search/Filter window. | | | A list of log entries appears in a list at the top right of the screen. |  |
| 3 | The tester will select “Vector A” at the bottom half of the screen. If not, follow the steps described in Vector1. | Ensures there is a vector that can be associated to. | | | A list of log entries that have been associated to the vector are displayed in the bottom half of the window. If no log entries appear, then no log entries have been associated with this vector. |  |
| 4 | The tester will select a log entry they wish to associate and click on the “Associate to Vector” button. | This is the step that shows whether or not a log entry can successfully be associated to a given vector. | | | The selected log entry will display in the vector’s “associated vectors” list. If not, the test fails. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

# Graph Test Suite

The purpose of this section is to:

* document test input, specific test procedures, and outcomes.
* establish test methods,
* explain the nature and extent of each test
  1. **Test Graph1**

**Objective:** Export the graph as a CSV file

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Graph1 | | | | **Current Status:** Passed | | |
| **Test title:** Export graph as CSV file | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Manage Graph” button located inside the Main Window. | Initial Condition to allow analysts to view the Graph Window. | | | Graphical view is displayed empty.  Table view is displayed empty.  Relationship table is displayed empty. |  |
| 2 | Analyst selects the desired Vector from the “Vector” drop down box that is located on top of the Graphical View. | Ensure the “Vector” drop down box displays the available Vectors. | | | Graphical View will display the Nodes from the selected Vector.  Table view will display the Nodes associated with that Vector. |  |
| 3 | Click on the “Export” button. | Ensure the Save pop up window is displayed. | | | The Save pop up window is displayed and the Analyst is able to export to any location. |  |
| 4 | Give a name and location to the CSV file you would like to export. | Ensure valid location and name is given. | | | Graph has now been exported as a CSV file. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test Graph2**

**Objective:** Create a new node

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Graph2 | | | | **Current Status:** Passed | | |
| **Test title:** Create a new node | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Manage Graph” button located inside the Main Window. | Initial Condition to allow analysts to view the Graph Window. | | | Graphical view is displayed empty.  Table view is displayed empty.  Relationship table is displayed empty. |  |
| 2 | Analyst selects the desired Vector from the “Vector” drop down box that is located on top of the Graphical View. | Ensure the “Vector” drop down box displays the available Vectors. | | | Graphical View will display the Nodes from the selected Vector.  Table view will display the Nodes associated with that Vector. |  |
| 3 | Analyst clicks “Add Node” button. | Ensure the image below is displayed. | | | A pop up window will be displayed for the Analyst to add Node details. |  |
| 4 | Fill in the following entries as shown below: | Ensure the Node details are filled in. | | | A new Node with the entered details will be created and displayed in Graphical View and Table View. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test Graph3**

**Objective:** Remove an existing node

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Graph3 | | | | **Current Status:** Passed | | |
| **Test title:** Remove an existing node | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Manage Graph” button inside the Main Window. | Initial Condition to allow analysts to view the Graph Window. | | | Graphical view is displayed empty.  Table view is displayed empty.  Relationship table is displayed empty. |  |
| 2 | Analyst selects the desired Vector from the “Vector” drop down box that is located on top of the Graphical View. | Ensure the “Vector” drop down box displays the available Vectors. | | | Graphical View will display the Nodes from the selected Vector.  Table view will display the Nodes associated with that Vector. |  |
| 3 | Analyst clicks the “Rem Node” button. | Ensure the Remove Button is enabled. | | | The Remove Node button is now enabled and Analyst may now select the desired Node to remove from Graphical View. |  |
| 4 | Analyst selects the node labeled “Test” to be removed from the Graphical View. | Ensure the selected Node is valid. | | | The selected Node will be removed from the Graphical view and Table view. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test Graph4**

**Objective:** Add a relationship between parent and child node

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Graph4 | | | | **Current Status:** Passed | | |
| **Test title:** Add a relationship between parent and child node | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Manage Graph” button located inside the Main Window. | Initial Condition to allow analysts to view the Graph Window. | | | Graphical view is displayed empty.  Table view is displayed empty.  Relationship table is displayed empty. |  |
| 2 | Analyst selects the desired Vector from the “Vector” drop down box that is located on top of the Graphical View. | Ensure the “Vector” drop down box displays the available Vectors. | | | Graphical View will display the Nodes from the selected Vector.  Table view will display the Nodes associated with that Vector. |  |
| 3 | Analyst clicks the “Add Relationship” button. | Ensure the Add Relationship Button is enabled. | | | The Add Relationship button is now enabled and Analyst may now select the desired Nodes to connect in Graphical View. |  |
| 4 | Analyst selects the desired parent node labeled “Test” and drags their mouse to the child node labeled “Test2” in the Graphical View. | Ensure the selected Nodes are valid. | | | The selected Nodes will now be on a relationship and have their information displayed in the Relationship Table. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test Graph5**

**Objective:** Remove an existing relationship

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Graph5 | | | | **Current Status:** Passed | | |
| **Test title:** Remove a relationship | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Manage Graph” button located inside the Main Window. | Initial Condition to allow analysts to view the Graph Window. | | | Graphical view is displayed empty.  Table view is displayed empty.  Relationship table is displayed empty. |  |
| 2 | Analyst selects the desired Vector from the “Vector” drop down box that is located on top of the Graphical View. | Ensure the “Vector” drop down box displays the available Vectors. | | | Graphical View will display the Nodes from the selected Vector.  Table view will display the Nodes associated with that Vector. |  |
| 3 | Analyst clicks the “Rem Relationship” button. | Ensure the Remove Relationship Button is enabled. | | | The Remove Relationship button is now enabled and Analyst may now select the desired relationship to be removed in Graphical View. |  |
| 4 | Analyst selects the relationship between nodes “Test” and “Test2” in the Graphical View. | Ensure the selected relationship is valid. | | | The selected relationship will be removed and have their information displayed in the Relationship Table. |  |
| **Concluding Remarks:** | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

* 1. **Test Graph6**

**Objective:** Edit an existing node

**Notes**: PICK System must be running for testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test No.:** Graph6 | | | | **Current Status:** Passed | | |
| **Test title:** Edit an existing node | | | | | | |
| **Testing approach:** Acceptance Testing | | | | | | |
| **STEP** | **OPERATOR ACTION** | **PURPOSE** | | | **EXPECTED RESULTS** | **COMMENTS** |
| 1 | Begin testing by clicking on the “Manage Graph” button located inside the Main Window. | Initial Condition to allow analysts to view the Graph Window. | | | Graphical view is displayed empty.  Table view is displayed empty.  Relationship table is displayed empty. |  |
| 2 | Analyst selects the desired Vector from the “Vector” drop down box that is located on top of the Graphical View. | Ensure the “Vector” drop down box displays the available Vectors. | | | Graphical View will display the Nodes from the selected Vector.  Table view will display the Nodes associated with that Vector. |  |
| 3 | In Tabular View, double click on the “Log Creator” Node field to edit. | Ensure the field is valid and ready to be editable. | | | The log creator field is now ready to be edited. |  |
| 4 | Edit the “Log Creator” field from “White Team” to “Red Team” | Ensure the editing works. | | | The selected Node property will now be changed. |  |
| **Concluding Remarks:** The user can successfully edit any property of a node on the tabular view but the changes will not be reflected on the graph. | | | | | | |
| **Testing Team:**  Team 11 - V&V | | | **Date Completed:**  04/15/2020 | | | |

# Test Schedule

The table below shows the test schedule that Team 11 will be following for the test plan process. The start date for testing is 4/20/2020 and the target date to complete the tests is 4/27/2020. A team member will be responsible for conducting one of the tests as described in each test suite.

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Date** | **People** | **Description** |
| Team1 | 4/27/2020 | Jose Lujan | Establish connections to lead IP address |
| Event1 | 4/27/2020 | Michael Contreras | Create a new event |
| Event 2 | 4/27/2020 | Jose Lujan | Ingest files within the given start and end timestamp range |
| Directory1 | 4/27/2020 | Zayra Padilla | Ingest files from directory |
| Vector1 | 4/27/2020 | Erik Macik | Add a new vector |
| Vector2 | 4/27/2020 | Priscilla Mendoza | Edit an existing vector |
| Icon1 | 4/27/2020 | Zayra Padilla | Add a new icon |
| Icon2 | 4/27/2020 | Priscilla Mendoza | Delete an existing icon |
| EAR1 | 4/27/2020 | Jose Lujan | Find errors in log files |
| EAR2 | 4/27/2020 | Erik Macik | Cancel ingestion of selected log files |
| EAR3 | 4/27/2020 | Michael Contreras | Validate and ingest selected log files |
| S/F1 | 4/27/2020 | Jose Lujan | Search/Filter by given criteria |
| S/F2 | 4/27/2020 | Michael Contreras | Associate selected log entries to selected vector |
| Graph1 | 4/27/2020 | Priscilla Mendoza | Export the graph as a CSV file |
| Graph2 | 4/27/2020 | Zayra Padilla | Create a new node |
| Graph3 | 4/27/2020 | Erik Macik | Remove an existing node |
| Graph4 | 4/27/2020 | Jose Lujan | Add a relationship between parent and child node |
| Graph5 | 4/27/2020 | Michael Contreras | Edit an existing node |

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