**PreTech-NIDS User Acceptance Testing (UAT) Template**

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| **Test Information** |
| **Test Date:** |
| **Tester Name:** |
| **User Role:** |
| **Test Environment:** |

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| **Test Scenario 1: User Registration and Login** |
| **1.1 User Registration Test** |
| **Test Steps:** |
| 1.     Access the system registration page |
| 2.     Fill in user registration information (username, email, password) |
| 3.     Submit the registration form |
| 4.     Check email verification process |
| **Expected Results:** |
| ·       Registration page displays correctly |
| ·       Form validation functions properly |
| ·       Confirmation email received after successful registration |
| ·       User information correctly saved to database |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **1.2 User Login Test** |
| **Test Steps:** |
| 1.     Login using the registered account |
| 2.     Test incorrect password handling |
| 3.     Test "Remember Me" functionality |
| 4.     Test logout functionality |
| **Expected Results:** |
| ·       Login successful, redirect to main page |
| ·       Appropriate error message for incorrect password |
| ·       Remember Me function works properly |
| ·       Session information cleared after logout |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **Test Scenario 2: Real-time Network Monitoring** |
| **2.1 Start Real-time Monitoring** |
| **Test Steps:** |
| 1.     Navigate to real-time detection page |
| 2.     Select network interface |
| 3.     Choose detection model (Kitsune/Autoencoder/LSTM/CNN/Random Forest) |
| 4.     Start monitoring |
| **Expected Results:** |
| ·       Network interface list displays correctly |
| ·       Model selection function works properly |
| ·       Monitoring starts successfully |
| ·       Real-time display of network traffic and detection results |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **2.2 Model Switching Test** |
| **Test Steps:** |
| 1.     Switch detection models while monitoring is running |
| 2.     Observe changes in detection results |
| 3.     Verify effectiveness of different models |
| **Expected Results:** |
| ·       Model switching without errors |
| ·       Detection results updated in real-time |
| ·       Different models show different detection results |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **Test Scenario 3: PCAP File Analysis** |
| **3.1 File Upload and Analysis** |
| **Test Steps:** |
| 1.     Navigate to PCAP analysis page |
| 2.     Upload PCAP file (use provided test files) |
| 3.     Select analysis model |
| 4.     Start analysis |
| 5.     View analysis results |
| **Expected Results:** |
| ·       File upload successful |
| ·       Analysis progress displayed correctly |
| ·       Analysis results detailed and accurate |
| ·       Support for multiple file formats (.pcap, .pcapng, .cap) |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **3.2 Analysis Results Review** |
| **Test Steps:** |
| 1.     Review analysis report |
| 2.     Check attack type identification |
| 3.     Verify timeline display |
| 4.     Test report export functionality |
| **Expected Results:** |
| ·       Report format clear and readable |
| ·       Attack type identification accurate |
| ·       Timeline display correct |
| ·       Export function works properly |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **Test Scenario 4: Report Viewing and Management** |
| **4.1 Historical Report Viewing** |
| **Test Steps:** |
| 1.     Navigate to reports page |
| 2.     View historical detection reports |
| 3.     Use filtering functionality |
| 4.     Test search functionality |
| **Expected Results:** |
| ·       Report list displays correctly |
| ·       Filtering function works properly |
| ·       Search function accurate |
| ·       Pagination function works properly |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **4.2 Data Visualization** |
| **Test Steps:** |
| 1.     View attack map |
| 2.     Check statistical charts |
| 3.     Verify data export functionality |
| **Expected Results:** |
| ·       Map displays correctly |
| ·       Chart data accurate |
| ·       Export function works properly |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **Test Scenario 5: User Permission Management** |
| **5.1 Permission Control Test** |
| **Test Steps:** |
| 1.     Login with different role accounts |
| 2.     Verify function access permissions |
| 3.     Test administrator functions |
| **Expected Results:** |
| ·       Regular users can only access authorized functions |
| ·       Administrators can access all functions |
| ·       Permission control accurate and effective |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **5.2 User Management Functions** |
| **Test Steps:** |
| 1.     Navigate to user management page |
| 2.     View user list |
| 3.     Test user editing function |
| 4.     Test user deletion function |
| **Expected Results:** |
| ·       User list displays correctly |
| ·       Edit function works properly |
| ·       Delete function secure and reliable |
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| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **Test Scenario 6: Alert System** |
| **6.1 Alert Viewing** |
| **Test Steps:** |
| 1.     Navigate to alert system page |
| 2.     View real-time alerts |
| 3.     Test alert filtering |
| 4.     Test alert acknowledgment function |
| **Expected Results:** |
| ·       Alert list displays correctly |
| ·       Filtering function works properly |
| ·       Acknowledgment function effective |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **6.2 Alert Configuration** |
| **6.1 Alert Viewing** |
| **Test Steps:** |
| 1.     Configure alert rules |
| 2.     Set notification methods |
| 3.     Test alert thresholds |
| **Expected Results:** |
| ·       Rule configuration successful |
| ·       Notification function works properly |
| ·       Threshold settings effective |
| **Actual Results:** |
| **Issues Found:** |
| **Severity Level:** () High () Medium () Low |

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| **Feature Evaluation Table** | | | | |
|
| **Name of Parameter/Testing Category** | **Excellent (5 points)** | **Very Good (4 points)** | **Fair (2-3 points)** | **Poor (1-0 points)** |
| Account Registration and Login |  |  |  |  |
| User Profile Management |  |  |  |  |
| Real-time Network Monitoring |  |  |  |  |
| PCAP File Analysis |  |  |  |  |
| Report Viewing and Management |  |  |  |  |
| User Permission Control |  |  |  |  |
| Alert System |  |  |  |  |
| Data Security and Privacy |  |  |  |  |
| Overall Ease of Use and User Interface |  |  |  |  |

**Tester Signature:**

**Test Date:**