# Operational Qualification Template

* 1. Objective

The objective of Operational Qualification (OQ) testing is to demonstrate that the solution is operable under normal expected conditions with acceptable and expected output results

* 1. Scope

OQ testing involves using a Nymi solution to perform day-to-day activities that are defined in the Nymi Design/Configuration Specifications document

* 1. Assumptions
     + A reliable network connection exists between each component in the environment
     + The tester has access to Nymi Connected Worker Platform documentation
  2. Exclusions

n/a

1. Acronyms and References
   1. Acronyms and Definitions

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| **Acronyms and Definitions** | |
| AC | Acceptance Criteria |
| CFR | Code of Federal (US) Regulations |
| cGxP | Abbreviation which includes current Good Manufacturing, Clinical and Laboratory Practices |
| CS | Configuration Specification |
| CSV | Computer Systems Validation |
| DS | Design Specification |
| FS | Functional Specification |
| GUI | Graphical User Interface |
| IQ | Installation Qualification |
| LAN | Local Area Network |
| OQ | Operational Qualification |
| PQ | Performance Qualification |
| SOP | Standard Operating Procedure |
| URS | User Requirements Specification |

* 1. References

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| **References** | |
| 21 CFR | Part 11, Part 210 |
| GAMP5 | Guide for Validation of Automated Systems |
| URS | URS for Biometric MES System |
| FS | NYMI FS-001 |
| DS/CS | NYMI CS-001 |

1. Responsibilities
   1. System Owner

To provide all required documentation, create the performance qualification testing document, and to provide a functional test environment

* 1. System Validation Tester

To perform the qualification testing and record the results in this document and documenting any issues that are encountered

1. System Description

Unless otherwise noted, NES and AD servers reside in the same domain as do the user computers

Each User computer has one attached Nymi-supported NFC reader and one attached Bluegiga BLE adapter

The configuration falls into GAMP5 Category 3

1. Test Procedure

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| **System Name:** | Nes-and-evidandomain.com | | | |
| **Test Title** | Testing NES operations | | | |
| **Purpose** | Validate that the NES is functional in the IT Infrastructure and that a user can enroll in Nymi Band | | | |
| **Test Reference:** | | OQ-001 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-001, URS-002**  **Functional Specification: FS-CFG-001, FS-CFG-010** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Connect to the NES Administration console | A secure NES Console webpage appears | NES Console Login page appears | Pass |
| 2 | Log into the NES Administration Console with an administrator account | Log in succeeds | Login with administrator username and password succeeds | Pass |
| 3 | Navigate to the About page and click View Full System Diagnostics | The System Diagnostics page does not report errors | All items in the System Diagnostics page report "Pass" | Pass |

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| **System Name:** | Nes-and-evidiandomain.com | | | |
| **Test Title** | Testing operations in a multi-domain environment | | | |
| **Purpose** | Validate that the Nymi Evidian solution is functional in a multidomain environment, users in different domains can enroll Nymi Band to the same Evidian instance, and NES administrators in different domains can manage NES | | | |
| **Test Reference:** | | OQ-002 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-003, URS-024, URS-39**  **Functional Specification: FS-CFG-03, FS-APP-002, FS-CFG-04**  **Configuration details:**  NES is installed in domain A Users are in domain A, B, C Domain A is a root domain and B is A's sub-domain Domain C is the root domain of another forest There is a two-way trust from A to C | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Use a computer and user account on Domain A to enroll a Nymi Band using Nymi Band Application | Enrollment succeeds | Enrollment succeeds | Pass |
| 2 | Use a computer and user account on Domain B to enroll a Nymi Band to using Nymi Band Application | Enrollment succeeds | Enrollment succeeds | Pass |
| 3 | Use a computer and user account on Domain C to enroll a Nymi Band using Nymi Band Application | Enrollment succeeds | Enrollment succeeds | Pass |
| 4 | Connect to the NES Administration console from a terminal on Domain A, B or C | A secure NES Console webpage appears | NES Console login page appears | Pass |
| 5 | Log into the NES Administration Console with an administrator account in Domain A | Login succeds | Log in succeeds | Pass |
| 6 | Open Policies page to view policies | Policies pages opens successfully | Policy page appears | Pass |
| 7 | Open the default policy and edit and save the changes | Policy saves succeeds | Policy successfully saved | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Testing that the solution supports multiple authentication methods | | | |
| **Purpose** | Validate that Nymi Enterprise Edition supports authentication by AD credentials and/or fingerprint verification | | | |
| **Test Reference:** | | OQ-003 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-030**  **Functional Specification: FS-NB-015, FS-APP-001** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Instruct a user to use Nymi Band Application to enroll a Nymi Band | Enrollment succeeds | Nymi Band displays a checkmark (successful authentication) and battery sign | Pass |
| 2 | Instruct the user to remove Nymi Band | Nymi Band de-authenticates | Nymi Band vibrates and displays the user label(name) and battery sign | Pass |
| 3 | Instruct the user to place Nymi Band back on the same wrist that was used during the enrollment process | Nymi Band prompts the user to authenticate | Nymi Band displays a fingerprint sign prompting the user to authenticate | Pass |
| 4 | Instruct the user to place the finger that they used to enroll Nymi Band on the fingerprint sensor for the amount of time indicated on Nymi Band screen | Nymi Band authentication succeeds | Nymi Band displays a checkmark and battery sign | Pass |
| 5 | Instruct the user to remove Nymi Band | Nymi Band deauthenticates | Nymi Band vibrates and displays user label and battery sign on | Pass |
| 6 | Instruct the user to log in to Nymi Band Application using their corporate credentials | Login succeeds | Log in succeeds | Pass |
| 7 | Instruct the user to click the Authenticate button | Nymi Band authentication succeeds | Nymi Band is authenticated, and the band displays a checkmark and battery sign | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Testing solution interactions with Active Directory | | | |
| **Purpose** | Validate that Nymi Connected Worker Platform solution ensures that Nymi Band user is  valid in Active Directory Usernames and passwords are not stored by NES | | | |
| **Test Reference:** | | OQ-004 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-013**  **Functional Specification: FS-NB-016** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Instruct a user to use Nymi Band Application to enroll a Nymi Band | Enrollment succeeds | Nymi Band displays a checkmark (successful enrollment) and battery sign | Pass |
| 2 | Instruct the IT admin to log in to a DC and disable the AD account for the user that is associated with Nymi Band | Disabling the user account succeeds | The account is disabled | Pass |
| 3 | Instruct the user to remove Nymi Band and put it back on | Nymi Band deauthenticates | Nymi Band displays the user label and battery sign | Pass |
| 4 | Instruct the IT admin to log into a workstation | Login is successful | Log in succeeds | Pass |
| 5 | Instruct the user to log into Nymi Band application on the workstation | Log in fails with an error | Log in fails | Pass |
| 6 | Instruct the IT admin to re-enable the user’s AD account | Enabling the user account succeeds | Account is enabled | Pass |
| 7 | Instruct the user to log into Nymi Band Application | Login is successful in Nymi Band Application | Nymi Band Application displays the Authenticate button | Pass |
| 8 | Instruct the user to click the Authenticate button | Authentication succeeds | Nymi Band is authenticated and displays a checkmark and battery sign | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Testing that the Nymi solution has an interface for enrollment | | | |
| **Purpose** | Validate that Nymi Band application provides users with an interface to  associate Nymi Bands with users | | | |
| **Test Reference:** | | OQ-005 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **URS tested: URS-026, URS-030, URS-039**  **Functional specification: FS-NB-015, FS-APP-001, FS-PHY-007** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Locate Nymi Band Application and follow the steps on the interface to enroll your Nymi Band | Enrollment succeeds | Nymi Band displays a checkmark (successful enrollment) and battery sign | Pass |
| 2 | Take out Nymi Band from the user’s wrist | Nymi Band de-authenticates | Nymi Band vibrates and displays the user label(name) and battery sign | Pass |
| 3 | Put Nymi Band on your wrist | Nymi Band prompts the user to authenticate | Nymi Band displays a fingerprint icon prompting the user to authenticate | Pass |
| 4 | Log in to Nymi Band Application using the same credentials that you used when you enrolled your Nymi Band | Log in succeeds | Nymi Band Application displays the Authenticate button | Pass |
| 5 | Authenticate Nymi Band by pressing the “Authenticate” Button in Nymi Band Application | Authentication succeeds | Nymi Band authenticates and | Pass |
| 6 | Take out Nymi Band from the user’s wrist | Nymi Band de-authenticates | Nymi Band vibrates and displays the user label with battery sign | Pass |
| 7 | Put Nymi Band on your wrist | Nymi Band prompts the user to authenticate | Nymi Band displays a fingerprint icon prompting the user to authenticate | Pass |
| 8 | Put the finger that you used to enroll Nymi Band on the fingerprint reader and follow the instructions to authenticate Nymi Band | Authentication succeeds | Nymi Band is authenticated with a successful fingerprint | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Test removal of biometric information from Nymi Band | | | |
| **Purpose** | Validate that Nymi Connected Worker Platform provides users with the ability to remove  biometric information Nymi Band | | | |
| **Test Reference:** | | OQ-006 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: USR-012**  **Functional specification: FS-NB-012** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Instruct a user to use Nymi Band Application to enroll a Nymi Band | Enrollment succeeds | Nymi Band displays a checkmark and battery sign | Pass |
| 2 | Instruct the user to remove Nymi Band | Nymi Band de-authenticates | Nymi Band vibrates and the band displays user label and battery sign | Pass |
| 3 | Instruct the user to place Nymi Band back on the same wrist that was used during the enrollment process | Nymi Band prompts the user to authenticate | Nymi Band displays a fingerprint icon prompting the user to authenticate | Pass |
| 4 | Instruct the user to place the finger that they used to enroll Nymi Band on the fingerprint sensor for the amount of time indicated on Nymi Band screen | Nymi Band authentication succeeds | Nymi Band is authenticated with a successful fingerprint | Pass |
| 4 | Instruct the user to remove Nymi Band | Nymi Band deauthenticates | Nymi Band vibrates and displays the user label and battery sign | Pass |
| 5 | Instruct the user to plug Nymi Band in to charge | Nymi Band starts to charge | Nymi Band screen displays the charging icon | Pass |
| 7 | Instruct the user to hold the bottom button of Nymi Band until the Deleting User Data appears | Nymi Band data deletion succeeds | Nymi Band screen displays “Deleting User Data”, boot sequence information and then displays No User and battery sign | Pass |
| 8 | Instruct the user to put on Nymi Band | Nymi Band does not prompt the user to authenticate | Nymi Band displays the setup code | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Testing firmware updates | | | |
| **Purpose** | Validate that firmware updates can be performed concurrently on up to 5 Nymi Bands and without Nymi assistance | | | |
| **Test Reference:** | | OQ-007 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-025, URS-009**  **Functional specification: FS-BAT-006, FS-BAT-005** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Obtain a USB charging hub that has at least 10 ports | n/a | n/a | n/a |
| 2 | Plug 5 Nymi Bands and 5 Bluetooth adapters into the USB hub and ensure that the hub is plugged into a power supply | Nymi Bands start to charge | Nymi Bands display the charging symbol | Pass |
| 3 | Place the hub within Bluetooth range of a computer that has Nymi Band Application software installed and a Bluetooth adapter plugged into it | n/a | n/a | n/a |
| 4 | From a command prompt on the computer, type the command to start the firmware updater script | The firmware updater script starts, and Nymi Band displays a message to indicate that the update is in progress | The firmware updater displays a status window for the firmware updates and Nymi Bands screens display “STANDBY” | Pass |
| 5 | While Nymi Band is displays "STANDBY", take Nymi Band off charge | Firmware update stops and Nymi Band does not display an error | Nymi Band does not display "STANDBY" or report an error | Pass |
| 6 | Leave Nymi Band off charge for 5 mins | The firmware update does not start | Nymi Band does not display "STANDBY" | Pass |
| 7 | Put Nymi Band back on charge | The update of Nymi Band firmware starts again | Nymi Band displays "STANDBY" | Pass |
| 8 | Monitor Nymi Band display and the firmware updater status window | Nymi Band firmware updates complete and the administrator is provided with visual indications | Nymi Bands reboot as each update completes and the status window provides information about the number of completed Nymi Bands | Pass |
| 9 | In Windows Explorer, go to the Properties of the firmware updater script file | The properties of the file provide signing information | Signing information appears on the Digital Signatures tab | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Testing Nymi Band cleaning | | | |
| **Purpose** | Validate that Nymi Band can be sanitized with an alcohol wipe or spray | | | |
| **Test Reference:** | | OQ-008 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 06-20-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-008**  **Functional specification: FS-ENV-003** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Using a wipe that has been soaked in 70% isopropanol, wipe all surfaces of Nymi Band’s body  including:  -Front surface (display, fingerprint sensor)  -Back surface (ECG electrode, sensor glass)  -Sides (button surfaces, USB port)  -exposed strap surfaces | Nymi Band is cleaned and the body of Nymi Band is undamaged by cleaning | Nymi Band displays battery symbol and the body appears unchanged | Pass |
| 2 | Wear Nymi Band on your wrist and authenticate it using your fingerprint | Nymi Band prompts the user to authenticate, and then authentication succeeds | Nymi Band is authenticated following successful fingerprint | Pass |
| 3 | Remove Nymi band off the wrist | Nymi Band deauthenticates | Nymi Band vibrates,deauthenticates and then displays the user label and battery sign | Pass |
| 4 | Repeat these 3 steps several times throughout the day | Nymi Band deauthenticates each time | Nymi Band vibrates, deauthenticates and then displays the user label and battery sign each time | Pass |
| 5 | Place Nymi Band to charge | Nymi Band starts to charge | Nymi Band displays a battery icon that is full or has a lightning bolt | Pass |

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| **System Name:** | Nes-and-evidian.domain.com | | | |
| **Test Title** | Testing Nymi-Evidian solution auditing | | | |
| **Purpose** | Validate that the system maintains an audit log of  Nymi Band user assignments in Evidian’s Enterprise Access Management (EAM) solution | | | |
| **Test Reference:** | | OQ-009 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-027, URS-028**  **Functional Specifications: FS-SAF-005** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | In the EAM directory, search for the following objects names with objectClass “enatelUserManagedAuth”:  CN=RegReqTokenId:RFIDPCSC:%NFCserialnumber% corresponding to NFC part of the band  CN=RegReqTokenId:RFIDPCSC:%MACAddressBLE% corresponding to BLE part  These objects are stored:  Under user container in Active Directory as EAM Directory  Under O=EAM/CN=Program Data/CN=Evidian Enterprise Access Management/CN=IAMForeignObjects/CN=%ActiveDirectoryUserObjectGUID% | Objects are found for user of interest | Entries found | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Test the dissociation of a user from their Nymi Band | | | |
| **Purpose** | Validate that IT admin can dissociate a user from a Nymi Band | | | |
| **Test Reference:** | | OQ-010 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-019**  **Functional specification:** **FS-APP-002** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | In the EAM Console, select the Directory panel | Directory Panel appears | Panel appears | Pass |
| 2 | Select the search request by changing the object type to user and then in the Filter field, type the username for the individual you want to disassociate Click Search | User details appear | User details window appears | Pass |
| 3 | Select the user, and then select the RFID tab | RFID Tab appears | RFID tab appears | Pass |
| 4 | Select the wearable entry and click Blacklist | Confirmation window appears and blacklisting succeeds | Entry is blacklisted | Pass |
| 5 | Select the wearable entry, and then click Delete | Confirmation window appears and wearable entry disappears | Entry is deleted | Pass |
| 6 | Select the RFID entry, and then click Delete | Delete operation succeeds | Entry is deleted | Pass |
| 7 | Select the RFID panel From the RFID state list, select Blacklisted, and then click Apply | Operation succeeds | Blacklist is successful | Pass |
| 8 | Select the RFID entry, and then click Delete | Delete operation succeeds | Entry is deleted | Pass |
| 9 | Select the Wearable entry, and then click Delete | Delete operation succeeds | Entry is deleted | Pass |
| 10 | IT admin clicks Disconnect beside Nymi Band entry in Nymi Band table | The Disconnect Nymi Band page appears | The Disconnect Nymi Band page appears | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Test the installation of an NEA on a Windows 10 thin client | | | |
| **Purpose** | Validate that an NEA can be installed on a Windows 10 thin client | | | |
| **Test Reference:** | | OQ-011 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-021**  **Functional specification:** **FS-RDP-005** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Follow the instructions in the Nymi Deployment Guide to install the Nymi Agent application on the NES host | Nymi Agent application installed successfully | Installation succeeds | Pass |
| 2 | Follow the instructions in the Nymi Deployment Guide to install the Nymi Bluetooth Endpoint application on the Citrix or RDP client | Installation completes successfully | Installation succeeds | Pass |
| 3 | Follow the instructions in the Nymi Deployment Guide to create the nbe.toml file on the Citrix or RDP client | File creation succeeds | nbe.toml file is in the directory | Pass |
| 4 | Follow the instructions in the Nymi Deployment Guide to install the NEA | Installation completes successfully | Installation succeeds | Pass |
| 5 | Put a Nymi Band on your wrist and authenticated it | Nymi Band prompts the user to authenticate | Authentication succeeds | Pass |
| 6 | Start the NEA | NEA prompts you for your username and password | The Login screen appears | Pass |
| 7 | Tap Nymi Band against the NFC reader | The NEA login completes successfully | Login succeeds | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Testing the Nymi solution with thin clients with NEAs and MES applications | | | |
| **Purpose** | Validate that an NEA can be installed on a Windows 10 thin client and Nymi Band can be used to perform authentication tasks | | | |
| **Test Reference:** | | OQ-012 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-004, URS-006, URS-014, URS-015, URS-016, URS-017, URS-018, URS-020, URS-022, URS-023**  **Functional specification:** **FS-RDP-005, FS-MES-006, FS-MES-008, FS-NB-019, FS-MES-001**  **Configuration information: Tester is wearing a class A/C, C or D PPE suit The NFC reader is covered with 3 cm of plexiglass** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Following the steps in the Nymi Evidian Deployment Guide to install and configure the Evidian EAM controller in the environment | Installation completes successfully | Installation succeeds | Pass |
| 2 | Following the steps in the Nymi Evidian Deployment Guide to install the Evidian EAM client and Nymi Band Application for Evidian software on a machine in the environment | Installation completes successfully | Installation succeeds | Pass |
| 3 | Install the MES application Refer to the Nymi Evidian Deployment Guide for special instructions | Installation completes successfully | Installation succeeds | Pass |
| 4 | Follow the instructions in the Nymi Evidian Deployment Guide to enroll a Nymi Band | Enrollment completes successfully | Enrollment succeeds | Pass |
| 5 | Remove the Nymi Band from your wrist | Evidian cannot detect the presence of the authenticated Nymi Band | The computer locks | Pass |
| 6 | Put the Nymi Band back on your wrist and authenticate it | Nymi Band prompts the user to authenticate | Authentication completes and Nymi Band displays a checkmark (successful authentication) and battery sign | Pass |
| 7 | Tap the authenticated Nymi Band against a connected NFC reader | Log in to the computer | Log in succeeds | Pass |
| 8 | Open the MES application | The application prompts you to login | Login screen appears | Pass |
| 9 | Tap the authenticated Nymi Band against a connected NFC reader | Log in to the MES application completion | Log in succeeds | Pass |
| 10 | Perform an authentication task in the MES application | The MES application prompts you for your username and password | Username and Password prompts appear | Pass |
| 11 | Tap the authenticated Nymi Band against a connected NFC reader | The authentication task in the MES application completes successfully | MES records the authentication event | Pass |
| 12 | Walk away from the computer, until the user is outside of BLE range | Evidian cannot detect the presence of the authenticated Nymi Band | The computer locks | Pass |
| 13 | Remove the BLE adapter from the computer | Adapter removed | Adapter is on the desk | Pass |
| 14 | Following the steps in the Nymi Evidian Deployment Guide to enable NFC only | Configuration completes successfully | Configuration succeeds | Pass |
| 15 | Remove Nymi Band from your wrist | Nymi Band deauthenticates | Nymi Band displays "WEAR BAND" | Pass |
| 16 | Put Nymi Band back on your wrist and authenticate it | Nymi Band prompts the user to authenticate, and Authentication succeeds | Authentication completes and Nymi Band displays a checkmark (successful authentication) and battery sign | Pass |
| 17 | Tap the authenticated Nymi Band against a connected NFC reader. | Log in to the computer succeeds | Computer desktop appears | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Testing the secure Nymi Band association with user during enrollment | | | |
| **Purpose** | Validate that the Nymi Band Application (NBA) requires the user to provide consent when enrolling a Nymi Band. | | | |
| **Test Reference:** | | OQ-013 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-042**  **Functional specification:** **FS-ENR-009**  **Configuration information: User is wearing a charged, un-enrolled Nymi Band.** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Instruct the user to open the Nymi Band Application | Nymi Band applications opens. | Nymi Band applications opens. | Pass |
| 2 | Instruct the user to tap the Nymi Band to the dongle | Prompt the user to login to the Nymi band application. | Username and Password prompts appear. | Pass |
| 3 | Instruct the user to login with their Active Directory username and password | The user entered the username and password to login. | The username and pasaword was entered and login is success. | Pass |
| 4 | Instruct the user tap the Nymi Band to the dongle to accept request consent. | The user accepts the request consent that user is assigned to this band. | The user accepts the consent for band and user association. | Pass |
| 5 | Instruct the user to perform the fingerprint capture process and authentication training. | The fingerprint print capture and authentication training are successful for this user. | The fingerprint print capture and authentication training are successful for this user. | Pass |
| 6 | The Nymi Band pushed the certs to the band and band is updated | Enrollment is completed successfully. | Enrollment is completed and the user disconnects. | Pass |

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| **System Name:** | Nes-and-evidan.domain.com | | | |
| **Test Title** | Testing how to disable the haptic signals on the Nymi Band | | | |
| **Purpose** | Validate the disabling of the haptic signals on a Nymi band. | | | |
| **Test Reference:** | | OQ-014 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 10-23-2023 |

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| **Test Protocol** | | | | |
| **URS tested: URS-040**  **Functional specification:** **FS-ENV-005**  **Configuration information: User is wearing a charged, unenrolled Nymi Band** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Follow the Administration Guide and disable the haptic feedback on the Nymi band. | The haptic feedback is disabled in the policy. | The haptic feedback is disabled in the policy. | Pass |
| 2 | Follow the Administration Guide and enroll a Nymi Band. | Nymi Band is successfully enrolled without haptic feedback. | Nymi Band is successfully enrolled and does not vibrate upon completion of the enrollment. | Pass |
| 3 | Remove the Nymi band from user’s arm. | The Nymi band is removed from the user’s arm without haptic feedback. | The Nymi band is removed from the user’s arm and does not vibrate. | Pass |
| 4 | Place the Nymi Band to the user’s arm and authenticate | Nymi Band authenticated successfully without haptic feedback. | Nymi Band authenticated successfully without haptic feedback and does not vibrate. | Pass |

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| **Test Title** | Testing Self- Service re-enrollment | | | |
| **Purpose** | Verify that users can re-enroll their Nymi Band while maintaining organization level access control | | | |
| **Test Reference:** | | OQ-016 | **Test Run #:** | 01 |
| **Tester name:** | | Deb Claudio | **Execution Date:** | 06-03-2024 |

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| **Test Protocol** | | | | |
| **URS tested: URS-039, URS-043**  **Functional specification:** **FS-APP-004, CS-APP-005**  **Configuration information: Self – Serve enrollment is configured and usable** | | | | |
| **Step#** | **Procedure** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | As the Site – Admin or Supervisor, follow the instructions in the Nymi Connected Worker Platform Administration Guide activate the policy to enable self-service re-enrollment policy. | Self- Service re-enrollment is enabled in the policy. | Self- Service re-enrollment is enabled in the policy. | Pass |
| 2 | As the End User, follow the instructions in the Nymi Connected Worker Platform Administration Guide to enroll a Nymi Band. | Enrollment is completed successfully. | Enrollment succeeds. | Pass |
| 3 | Open the MES application. | The application prompts you to login. | Login screen appears. | Pass |
| 4 | Tap the authenticated Nymi Band against a connected NFC reader. | The application log in completes successfully. | Log in succeeds. | Pass |
| 5 | Perform an authentication task in the MES application. | The MES application prompts you for your username and password. | Username and Password prompts appear. | Pass |
| 6 | Tap the authenticated Nymi Band against a connected NFC reader. | The authentication task in the MES application completes successfully. | MES records the authentication event. | Pass |
| 7 | As the End User, follow the instructions in the Nymi Connected Worker Platform Administration Guide to delete the user on the Nymi Band. | User deletion is completed successfully on the Nymi Band. | User deletion is completed successfully on the Nymi Band. | Pass |
| 8 | As the End User, follow the instructions in the Nymi Connected Worker Platform Administration Guide to enroll a Nymi Band. | Enrollment is completed successfully. | Enrollment is completed successfully. | Pass |
| 9 | Open the MES application. | The application prompts you to login. | Login screen appears. | Pass |
| 10 | Tap the authenticated Nymi Band against a connected NFC reader. | The application log in completes successfully. | Log in succeeds. | Pass |
| 11 | Perform an authentication task in the MES application. | The MES application prompts you for your username and password. | Username and Password prompts appear. | Pass |
| 12 | Tap the authenticated Nymi Band against a connected NFC reader. | The authentication task in the MES application completes successfully. | MES records the authentication event. | Pass |
| 13 | As the End User, follow the instructions in the Nymi Connected Worker Platform Administration Guide to delete the user on the Nymi Band. | User deletion is completed successfully on the Nymi Band. | User deletion is completed successfully on the Nymi Band. | Pass |
| 14 | As the End User, follow the instructions in the Nymi Connected Worker Platform Administration Guide to enroll a Nymi Band. | Enrollment is completed successfully. | Enrollment is completed successfully. | Pass |
| 15 | Open the MES application. | The application prompts you to login. | Login screen appears. | Pass |
| 16 | Tap the authenticated Nymi Band against a connected NFC reader. | The application log in completes successfully. | Log in succeeds. | Pass |
| 17 | Perform an authentication task in the MES application. | The MES application prompts you for your username and password. | Username and Password prompts appear. | Pass |
| 18 | Tap the authenticated Nymi Band against a connected NFC reader. | The authentication task in the MES application completes successfully. | MES records the authentication event. | Pass |