**Covidien Emerging Markets**

**Research & Development**

**System End to End Test Procedures – PB980**

**Gateway Device Management Platform**

**R0020235 Rev D**

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| Issue Date: Refer to Agile | | | Page 1 of 24 |
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| Revision History: | | | |
| Revision | SDA | Description | |
| A | W0016441 | Initial Release | |
| B | W0027327 | Numerous changes throughout document to make End to End test procedure document reflect new introduced business logic changes to meet new user needs for release of v1.1 Gateway. Please review the entire document. | |
| C | W0037229 | Updates for Gateway v2.0. | |
| D | RC006214 | Updates for Gateway v3.0. | |
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| Author(s): Refer to SDA RC006214 for approvals | | | |
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| **Approvals: Refer to SDA** RC006214 **for approvals** |
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**Table of Contents**

1 Introduction 3

1.1 Scope & Test Phase 3

1.2 Reference Documents 3

1.3 Users / User Characteristics 3

2 Test Directions 4

2.1 Recording Test Results 4

2.2 Redlines & Deviations 4

2.3 Test Configurations 4

2.4 Test Tools 5

3 Test Procedures 6

3.1 Test Procedure Trace 6

3.2 Test Procedure 9

4 Test Results 24

# Introduction

This document is the End to End Test procedure for Gateway project. It is the overarching test document that governs the end to end test effort. It calls out the specific tests that will be performed. These test procedures contain the test steps and PASS/FAIL criteria.

## Scope & Test Phase

This end to end test procedure document contains the set of user requirements for the PB980 Remote Service solution. The test is designed based on product users, their characteristics and use cases.

## Reference Documents

1. R0030891 System Requirements Specification (SRS)
2. RMS Agile ref: 100937750 User Requirements Document Remote Service System
3. R0023257 SW Design Document Gateway
4. R0026601 System Architecture Document Gateway
5. R0049903 SW Development Plan Gateway
6. R0031481 Protocol Usability Evaluation Gateway
7. R0030938 Use Case Diagrams Gateway

Note: Unless specified with a version number, all documents will be referenced by their latest approved version in Agile.

## Users / User Characteristics

| ***Application Users*** | | |
| --- | --- | --- |
| ***Title*** | ***Decision Authority*** | ***Role in Use Case*** |
| Biomedical Engineering Technician | * Champion * Influencer * Impacted Party | * Installs, updates, and maintains system * Maintain/service medical equipment in the hospital * Track & report ventilator service/performance statistics * Maintain hospital service agreements * Accept equipment into institution |
| Field Service Technician | * Impacted Party | * Maintain/service medical equipment in the hospital * Track & report ventilator service/performance statistics * Maintain hospital service agreements |
| Covidien TSE | * Champion * Impacted Party | * Track & report ventilator service/performance statistics * Remote Service Application System administrator * Administers users and associated privilidges * Reviews Device Logs * Creates new users who can only upload logs |
| Sustaining Engineering | * Impacted Party | * Retrieving Device error logs for fault analysis * This role maps to the R&D Role |
| Covidien Service Contract Manager | * Impacted Party | * Monitor hospital service agreements * This role maps to the CoT Admin |
| Covidien System Administrators | * Impacted Party | * Configures Software download package distribution rules. * This role maps to the CoT Admin |

# Test Directions

The following instructions are for the test personnel who are executing these procedures.

## Recording Test Results

Refer to [5] SW Development Plan

## Redlines & Deviations

Deviations to how the test is run will be noted for all cases. Deviations that do not affect the intent of the test are allowed. Examples include typographical errors, skipping steps that are not required, or rewording the test when the implementation of the software has changed. In the electronic Test Results modules, the category of deviation is entered along with the description of the change. Deviations can also include steps that need to added, in order to complete the test procedure.

## Test Configurations

### Hardware Configurations

All Gateway server version 3.0 deliverables run on servers hosted by Terremark.

* Web server 01:

Hostname (IP Address):

CPU:

Memory:

Harddisk:

* Web server 02:

Hostname (IP Address):

CPU:

Memory:

Harddisk:

* Application server:

Hostname (IP Address):

CPU:

Memory:

Harddisk:

* Database server:

Hostname (IP Address):

CPU:

Memory:

Harddisk:

All Gateway agent version 3.0 deliverables run on Windows Platforms

* Testing computers information such as Module, CPU, Memory and HDD will be captured during testing.

### Software Configurations

All Gateway server 3.0 run on Redhat (v6.2), test server run on the same configuration.

* JDK – v1.6.0\_33
* Apache - v2.2.23
* Apache tomcat – v7.0.29
* PHP - v5.3.3
* Drupal – v6.26
* Mod SSL – v2.2.23
* MySQL - v5.1.52

All Gateway v3.0 agents run on Windows 7 64bit Operation System.

* Internet Explorer 8.0

## Test Tools

Gateway 3.0 end to end testing will be conducted using the following tool:

* PB980 Enhanced Service Software version: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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# Test Procedures

The end to end test procedures are created based on 6 roles within Gateway system.

* Site administrator
* Class of Trade administrator (Service Contract Manager/ System Administrator)
* Sustaining Engineer (R&D)
* TSE (Technical Service Engineer)
* FST(Field Service Technician)
* Biomedical Engineering Technician

## Test Procedure Trace

| **URD ID#** | **User Requirement** | **Proposed Validation Method** | **Test Cases** |
| --- | --- | --- | --- |
| URD 01 | The system shall allow users to pull service related information from the device being serviced upon user request. | *Demonstration* | DeviceManageTestProcedureForVentilator  UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  CrossDeviceAndLaptopTestProcedureForVentilator  DeviceManageDisconnectModeTestProcedureForVentilator |
| URD 02 | The system shall make service related information available to Field Service and Technical Service Engineers. | *Demonstration* | DeviceManageTestProcedureForVentilator  UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  SoftwareDiscrepancyCheckTestProcedureForVentilator  DeviceManageDisconnectModeTestProcedureForVentilator |
| URD 03 | The system shall allow users to gather device related service data regardless of network communications status. | *Demonstration* | DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator  UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  SoftwareDiscrepancyCheckTestProcedureForVentilator  DeviceManageDisconnectModeTestProcedureForVentilator |
| URD 04 | The system shall allow CSE's and TSE's to view the collected service related information in chronological order. | *Demonstration* | DeviceManageTestProcedureForVentilator  UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator |
| URD 05 | The system shall provide the appropriate software releases based upon current device software and hardware version information. | *Demonstration* | DeviceManageTestProcedureForVentilator  DownloadMissingSoftwareTestProcedureForVentilator  UpdateAgentTestProcedure |
| URD 06 | The system shall allow administrative users to build the rules for controlling the behavior of the system with respect to determining which software packages are allowed for a specific device configuration, country, entitlement, etc. | *Demonstration* | CatalogManageTestProcedureForVentilator  CreateAgentAndAgentRuleTestProcedure |
| URD 07 | The system shall only provide software to users with valid entitlement privileges. | *Demonstration* | CreateVentilatorBiomedUserTestProcedure  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 08 | The system shall only provide software to devices in countries for which regulatory approval has been received. | *Demonstration* | CatalogManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 09 | The system shall manage entitlement privileges based upon valid user credentials upon login. | *Demonstration* | CheckAgentAdminTestProcedure  CreateVentilatorFieldServiceTechnicianUsersTestProcedure  CreateVentilatorBiomedUserTestProcedure  CreateVentilatorEmailSubscribeUserTestProcedure  UserManagementByTSEUserTestProcedure  CreateTechnicalServiceEngineerUserTestProcedure |
| URD 10 | The system shall support the capability for user to send out email notification to selected accounts by region, or device serial numbers. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  SoftwareDiscrepancyCheckTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  UploadLogfileWithR&DUserTestProcedure |
| URD 11 | The system shall track the hardware and software revision information of the devices in the field. | *Demonstration* | DeviceManageTestProcedureForVentilator  DeviceManageDisconnectModeTestProcedureForVentilator |
| URD 12 | The system shall compare the hw/sw rev info on file with the information on the device, and flag any discrepancies to Covidien users. | *Demonstration* | SoftwareDiscrepancyCheckTestProcedureForVentilator |
| URD 13 | The system shall allow administrators to filter discrepancy notifications information. | *Demonstration* | SoftwareDiscrepancyCheckTestProcedureForVentilator |
| URD 14 | The system shall compare the installed option info on file with the information on the device, and flag any discrepancies to Covidien users. | *Demonstration* | DeviceManageTestProcedureForVentilator  SoftwareDiscrepancyCheckTestProcedureForVentilator |
| URD 15 | The system shall allow Covidien users to manage hardware/ software revision and option configuration discrepancies. | *Demonstration* | SoftwareDiscrepancyCheckTestProcedureForVentilator |
| URD 16 | The system shall automatically pull service logs from devices prior to software upgrade for storage in the system. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  DeviceManageDisconnectModeTestProcedureForVentilator |
| URD 17 | The system shall automatically pull device configuration (inclusive of software revision, and installed option) information from devices prior to software upgrade for storage in the system. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator  UploadLogfileWithR&DUserTestProcedure |
| URD 18 | The system shall automatically pull device configuration (inclusive of software revision, and installed option) information from devices after software upgrades for storage in the system. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator  UploadLogfileWithR&DUserTestProcedure |
| URD 19 | The system shall pull service log information from devices after software upgrades for storage in the system. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 20 | The system shall pull updated device configuration for storage in the system on demand. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 21 | The system shall provide a means to report on the software versions currently installed on specified devices. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 22 | The system shall provide a means to report on the hardware versions currently installed on specified devices. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 23 | The system shall provide a means to store service maintenance records for devices serviced in the field. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 24 | The system shall provide summary service maintenance reports for devices serviced in the field by CSE, region, customer, and device. | *Demonstration* | AttemptToUpgradeSoftwareWithoutPrivilegeTestProcedureForVentilator  UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 25 | The system shall track dependencies between hardware configuration, software versions, and options. | *Demonstration* | SoftwareDiscrepancyCheckTestProcedureForVentilator |
| URD 27 | The system shall allow users to retrieve the correct software for specified devices and cache it for later installation on devices. | *Demonstration* | AttemptToUpgradeSoftwareWithoutPrivilegeTestProcedureForVentilator  UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 28 | The system shall allow users to install previously cached software to specified devices when they choose to do so. | *Demonstration* | AttemptToUpgradeSoftwareWithoutPrivilegeTestProcedureForVentilator  UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 29 | The system shall notify Covidien users regarding software installation status. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 30 | The system shall provide Biomed users with a means for retrieving software release notes and appropriate manuals upon the successful completion of a software installation. | *Demonstration* | ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 31 | The system shall allow users to cache device log information for later storage into the system. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 32 | The system shall allow users to cache device configuration information for later storage into the system. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator |
| URD 33 | The system shall allow users to cache service log information for later storage into the system. | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator  CrossDeviceAndLaptopTestProcedureForVentilator |
| URD 34 | The system shall provide users the option to retrieve all logs relating to device interaction with the patient (eg. Patient Data, Settings, General events, and Patient Alarm logs). | *Demonstration* | UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator  DeviceManageTestProcedureForVentilator  CrossDeviceAndLaptopTestProcedureForVentilator |

## Test Procedure

Note: Throughout these test procedures, all the email address and password need to be adjusted according to real deployment of system.  They will be recorded during test execution.

### Test Preparation

Following user should exist on Gateway QA server (The users need to be created before test execution if the users don’t exist.):

|  |  |  |  |
| --- | --- | --- | --- |
| **User Name** | **Email** | **Password** (Password is auto-generated) | **Roles** |
| Admin Global | [global.admin@covidien.com](mailto:global.admin@covidien.com) | Record password:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Ventilation: User Admin Infrastructure: User Admin Vessel Sealing: User Admin Compression: User Admin |
| Admin System1 | [vent.admin@covidien.com](mailto:vent.admin@covidien.com) | Record password:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Ventilation: CoT Admin |
| Admin System4 | [inf.admin@covidien.com](mailto:inf.admin@covidien.com) | Record password:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | infrastructure: CoT Admin |

### Gateway Related (Common)

| **Test Procedure** | **Description** | **#** | **Steps** | | **Expected Result** | **Actual Results** | **Defect Id** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| CheckAgentAdminTestProcedure | User scenario: 1. The agent admin has been created for downloading missing software, so check its role and privilege. 2. The agent admin is default 'CoT admin' for 'Infrastructure' class of trade, has default training records for all device types and have default download permission ("All Production Versions") for all device type | 1 | Login web UI as ‘Admin Global’ user. | | 1. It enters to home screen with 'Ventilator' in 'Class of Trade' field as default | PASS/FAIL |  |
| 2. The other options of 'Class of Trade' field are: Compression infrastructure and Vessel Sealing | PASS/FAIL |  |
| 2 | Switch to Admin - Users management page to search the agent admin user by name 'agent admin' | | The agent admin is found | PASS/FAIL |  |
| 3 | Click the agent admin name | | It goes to edit user page | PASS/FAIL |  |
| 4 | Check following fields:   First name: agent  Last name: admin  Email: GWagent.admin@covidien.com   Country: United States  Language: English  Business Unit: Administrative Business Unit | | All fields are entered correctly | PASS/FAIL |  |
| 5 | Click 'Manage Access' button to check following permission of the user:   Role: CoT admin for each class of trade and Infrastructure is the default role  Installation privilege: ' All production versions' for each device type | | The agent admin role and installation privilege are correct | PASS/FAIL |  |
| 6 | Go back to edit agent admin page and click 'Training Records' button | | It goes to 'Manage Training Records' page | PASS/FAIL |  |
| 7 | Check the agent admin training records:   --- Class of Trade: Ventilator  Device type: PB980  Trainer user ID: vent.admin@covidien. com   Date of Training: (A date before current date)  Status: Certified  --- Class of Trade: Infrastructure   Device type: Administrative\_Agent  Trainer user ID: inf.admin@covidien.com   Date of Training: (A date before current date)  Status: Certified | | The training records of agent admin are added correctly | PASS/FAIL |  |
| 8 | Login with web UI as agent admin user:   Email: GWagent.admin@covidien.com   Password: GWadmin@123 | | 1. It goes to home screen with 'Infrastructure' in Class of Trade field. | PASS/FAIL |  |
| 2. The other options of 'Class of Trade' field are: Compression, Ventilation and Vessel Sealing | PASS/FAIL |  |
| 9 | Go through each page with different Class of Trades | | User management page is visible to agent admin in all class of trades, but ‘Add New’ button is invisible on user management page | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| CreateAgentAndAgentRuleTestProcedure | User scenario: Infrastructure CoT admin create agent software and agent rule in web UI  Pre-condition:  Due to the installed Agent software is the latest version, for testing purpose, use the fake Agent software with version which is higher than current installed Agent version | 1 | Login web UI with “Admin System4” user | | 1. It enters to home page with 'Infrastructure' in Class of Trade field | PASS/FAIL |  |
| 2. Only 'Infrastructure' exists in the class of trade field | PASS/FAIL |  |
| 2 | Switch to Admin - Hardware catalog page and search hardware by device type 'Administrative\_Agent' | | The hardware of agent would be found and the hardware name is 'WINTEL' | PASS/FAIL |  |
| 3 | Click the hardware name link | | It goes to edit hardware page | PASS/FAIL |  |
| 4 | Check the following fields of the hardware:  Device type: Administrative\_Agent  Hardware name: WINTEL  Part #: ABC   Revision: 1.0  Hardware Type: MotherBoard | | The hardware information is correct | PASS/FAIL |  |
| 5 | Switch to Admin - Software catalog page and click 'Add new software' button | | It goes to create new software page | PASS/FAIL |  |
| 6 | Enter following fields:  Device type: Administrative\_Agent  Software name: Agent  Part #: part123  Version: \_\_\_\_\_\_ (Record the installed agent version during execution.)  Software Type: Software  Software Status: In production  Software package: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (This will be captured during execution.)  Associate it with the agent hardware 'WINTEL' and then click 'Add New Software button' | | The current version agent is created successfully | PASS/FAIL |  |
| 7 | Switch to Software catalog page and click 'Add new software' button to create a new version agent:  Device type: Administrative\_Agent  Software name: Agent  Part #: part123  Revision: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Record the version during execution: Fake Agent version which is higher than current installed agent version for testing upgrade function)  Software Type: Software   Software Status: In production  Software package: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (This will be captured during execution.)  Associate it with the agent hardware 'WINTEL' and then click 'Add New Software button' | | The new version agent is created successfully | PASS/FAIL |  |
| 8 | Wait for some time (in 5 munities) and then check the 'Available' field of the software created above | | The values of 'Available' field changes from 'No' to 'Yes' for software added in step 6 and 7 | PASS/FAIL |  |
| 9 | Follow 5- 6 to create an agent rule file  Device type: Administrative\_Agent  Software name: Agent Rule  Part #: part123  Revision: 1.0  Software Type: Business rules  Software Status: In production  Software package: (A agent rule file)  Associate it with the agent hardware 'WINTEL' and then click 'Add New Software button' | | The agent rule is created successfully | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| UpdateAgentTestProcedure | Use scenario:   The new version agent is available in server side, so it would be updated to new version automatically     Pre-condition:   1. The version of agent installed in laptop is the same as that in step 6 of CreateAgentAndAgentRuleTestProcedure  2. Due to the installed Agent software is the latest version, for testing purpose, use the fake Agent software with version which is higher than current installed Agent version | 1 | Go to agent Resource folder to check conf.propertiesFile | | The agent version is \_\_\_\_\_ in the conf.properties file | PASS/FAIL |  |
| 2 | Connect the laptop network | | The network is available | PASS/FAIL |  |
| 3 | Stop agent service | | 1. The agent service would be launched after 10 seconds by Boot Loader service | PASS/FAIL |  |
| 2. The new version agent would be downloaded | PASS/FAIL |  |
| 3. The downloaded file would be decompressed and extracted automatically | PASS/FAIL |  |
| 4 | Go to Laptop Agent folder to check conf.properties and other files | | 1. The configuration information in conf.properties file is not changed | PASS/FAIL |  |
| 2. There is a conf\_backup.properties file | PASS/FAIL |  |
| 5 | Check the agent version in conf.properties file under Resource folder | | The agent version is changed to the higher one in the conf.properties file | PASS/FAIL |  |
| 6 | Go to local service Control panel > Administrative tools > Services | | 1. The Device Management Agent Boot Loader Service and Device Management Agent Service are running | PASS/FAIL |  |
| 7 | Go to agent resource- rules folder | | The business rule added in CreateAgentAndAgentRuleTestProcedure exists in the folder | PASS/FAIL |  |
| 8 | Login web UI with global user admin to check the agent upgrade record  Email: global.admin@covidien.com   Password: GLOBALadmin@123 | | There shall be agent upgrade record with correct timestamp in user activity monitor page | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |

### PB980

| **Test Procedure** | **Description** | **#** | **Steps** | | **Expected Result** | **Actual Results** | **Defect Id** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| CreateVentilatorFieldServiceTechnicianUsersTestProcedure | User scenario:  1. Create Field Service Technician to provide field service with full Installation privileges and certified training  Pre-condition:  The email address of Field Service Technician should be valid to check notification email | 1 | Login web UI with ”Admin Global” user | | 1. It enters to home screen with 'Ventilator' in 'Class of Trade' field as default | PASS/FAIL |  |
| 2. The other options of 'Class of Trade' field are: Compression and infrastructure and Vessel Sealing | PASS/FAIL |  |
| 2 | Switch to Admin - Users and click 'Add new' button | | It goes to create new user page | PASS/FAIL |  |
| 3 | Enter following fields:  Is the new user a Covidien employee: Yes  First name: FST  Last name: Ventilator  Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (This will be captured during execution)  Country: United States  Language: English  Password: Auto-Generated  Business Unit: Surgical Solutions Business Unit  Then click Next button | | It will goes to 'Add Roles and User Permissions' page | PASS/FAIL |  |
| 4 | Assign following permission to the user:  Role: Ventilator Field Service Technician  Installation privileges: All production versions  Then click 'Create New user' button | | The Ventilator Field Service Technician user is created successfully | PASS/FAIL |  |
| 5 | Click the Field Service Technician user link to go to edit user page, and then click 'Training Records' button | | It goes to 'Manage Training Records' page | PASS/FAIL |  |
| 6 | Click 'Add new record' button and enter following fields in the pop-up windows:  Class of Trade: Ventilator  Device type: PB980  Trainer user ID: vent.admin@covidien.com   Date of Training: (A date before current date)  Status: Certified  Then click 'Add record' button | | The training records for Field Service Technician user is added successfully. | PASS/FAIL |  |
| 7 | Login web UI as Ventilator Field Service Technician user created above | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. Only ‘Ventilator’ exists in Class of Trade field | PASS/FAIL |  |
| 8 | Go through each page of the web site | | 1. Device and reports pages are visible to Ventilator Field Service Technician user  2. For Admin page, only Alerts page is visible to Ventilator Field Service Technician user | PASS/FAIL |  |
| 9 | Go to Alerts page to subscribe following Alert Event:  Upgrade Attempt: Successful  Upgrade Attempt: Device Failed to Apply Upgrade | | The email notifications are subscribed successfully | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| CreateVentilatorBiomedUserTestProcedure | User scenario:  1. Create Biomed user who is non-covidien user with ‘None’ installation privilege | 1 | Login web UI as ”Admin Global” user. | | 1. It enters to home screen with 'Ventilator' in 'Class of Trade' field as default | PASS/FAIL |  |
| 2. The other options of 'Class of Trade' field are: Compression and infrastructure and Vessel Sealing | PASS/FAIL |  |
| 2 | Switch to Admin - Users and click 'Add new' button | | It goes to create new user page | PASS/FAIL |  |
| 3 | Enter following fields:  Is the new user a Covidien employee: No  First name: Biomed   Last name: Ventilator  Email: ­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (This will be captured during execution)  Country: United States  Language: English  Password: Auto-Generated  Customer Name: [Fill with real customer name ]  Customer Account Number: [Fill with real customer account number ]  Then click Next button | | It will goes to 'Add Roles and User Permissions' page | PASS/FAIL |  |
| 4 | Assign following permission to the user:  Role: Ventilator Biomed  Installation privileges: none  Then click 'Create New user' button | | The Ventilator biomed user is created successfully | PASS/FAIL |  |
| 5 | Select 'Ventilator' in Class of Trade field and then click Biomed user link | | It goes to edit user page | PASS/FAIL |  |
| 6 | Click 'Training Records' button | | It goes to 'Manage Training Records' page | PASS/FAIL |  |
| 7 | Click 'Add training record' button and enter following fields in the pop-up windows:  Class of Trade: Ventilator  Device type: PB980  Trainer user ID: vent.admin@covidien.com   Date of Training: (A date before current date)  Status: Certified  Then click 'Add record' button | | The training record for Biomed user is added successfully. | PASS/FAIL |  |
| 8 | Login web UI as Ventilator Biomed user created above | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. The Class of Trade field is not selectable | PASS/FAIL |  |
| 9 | Go through each page of the web site | | 1. User management page is invisible to Ventilator biomed user | PASS/FAIL |  |
| 2. Biomed user has only view permission to hardware, software, document, configuration and Alerts page | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| CreateVentilatorEmailSubscribeUserTestProcedure | Use scenario: 1. Create CoT admin to view report and subscribe all email notifications Pre-condition: 1. The email address of Email Subscribe user should be valid. | 1 | Login web UI as ”Admin Global” user. | | 1. It enters to home screen with 'Ventilator' in 'Class of Trade' field as default | PASS/FAIL |  |
| 2. The other options of 'Class of Trade' field are: Compression and infrastructure and vessel Sealing | PASS/FAIL |  |
| 2 | Switch to Admin - Users and click 'Add new' button | | It goes to create new user page | PASS/FAIL |  |
| 3 | Enter following fields:  Is the new user a Covidien employee: Yes  First name: Subscriber   Last name: Ventilator  Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (This will be captured during execution)  Country: United States  Language: English  Password: [Auto Generated]  Business Unit: Surgical Solutions Business Unit Then click Next button | | It will goes to 'Add Roles and User Permissions' page | PASS/FAIL |  |
| 4 | Assign following permission to the user:  Role: Ventilator CoT admin  Installation privilege: None  Then click 'Create New user' button | | The Ventilator CoT admin is created successfully | PASS/FAIL |  |
| 5 | Login web UI as Ventilator Email subscriber user created above | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. The Class of Trade field is not selectable | PASS/FAIL |  |
| 6 | Go through each page of the web site | | 1. User management page is visible to Ventilator CoT admin user but there is no “Add New User” button available. | PASS/FAIL |  |
| 7 | Switch to Alerts page and subscribe all Alert Event | | The Alert event are subscribed successfully | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| CatalogManageTestProcedureForVentilator | User scenario: Create the hardware and software for the real PB980 device, and associate a document with them. | 1 | Login web UI as ”System Admin1” user | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. The Class of Trade field is not selectable | PASS/FAIL |  |
| 2 | Switch to Admin - Hardware catalog page and click 'Add new hardware' button | | It goes to create new hardware page | PASS/FAIL |  |
| 3 | Enter following fields:  Device type: PB980  Hardware name: GuiPcba  Part #: 21111111   Revision: X00  Hardware Type: MotherBoard  Then click 'Add New Hardware button' | | The hardware within PB980 device is created successfully | PASS/FAIL |  |
| 4 | Click 'Add new hardware' button again to create another hardware within real PB980 ventilator:  Device type: PB980  Hardware name: BdPcba  Part #: 11111111   Revision: X00  Hardware Type: MotherBoard  Then click 'Add New Hardware button' | | Another hardware within PB980 device is created successfully | PASS/FAIL |  |
| 5 | Switch to Admin - Software catalog page and click 'Add new software' button | | It goes to create new software page | PASS/FAIL |  |
| 6 | Enter following fields:  Device type: PB980  Software name: BdSoftware   Part #: 33333333  Revision: G  Software Type: Software Bundle   Software Status: In production  Software package: BdSoftware version G package   Associate it with the hardware created in step 3 and step 4, then click 'Add New Software button' | | The software within PB980 device is created successfully | PASS/FAIL |  |
| 7 | Switch to Admin > Software catalog page and click 'Add new software' button to create a new version software:  Device type: PB980  Software name: BdSoftware   Part #: 33333333  Revision: H  Software Type: Software Bundle  Software Status: In production  Software package: BdSoftware version H package   Associate it with the hardware created in step 3 and step 4, then click 'Add New Software button' | | The software within PB980 device is created successfully | PASS/FAIL |  |
| 8 | Wait for some time (in 5 munities) and then check the software 'Available' field | | The values of 'Available' field changes from 'No' to 'Yes' for the BdSoftware G version and BdSoftware H version | PASS/FAIL |  |
| 9 | Click the software BdSoftware version H link to go to edit software page, then click 'Regulatory Exception' button | | It goes to 'Manage Regulatory Exceptions' page | PASS/FAIL |  |
| 10 | Click 'Add Exception' button and enter following field in the pop-in window: Country: Singapore Then click 'Add exception' button | | The country exception for BoSoftware version H is added successfully | PASS/FAIL |  |
| 11 | Switch to Admin - Document catalog page and click 'Add New Document' button | | It goes to add new document page | PASS/FAIL |  |
| 12 | Enter following fields:  Device type: PB980  Document name: PB980 manual  Part #: Part123  Version: 1.0  Document Type: Service manual  Document file: (A PDF file which can be opened)  Language: English  Associate it with the hardware and software above, and then click 'Add new document' button | | The document is created successfully | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| DeviceManageTestProcedureForVentilator | **User scenario:** 1. Field Service Technician user creates device, upload log file and upgrades software, then Ventilator Email subscribe user would check email notifications and view report **Pre-condition** 1. The agent and ESS have been installed in laptop, but there is no user who has logged in ESS  2. The device has never been registered in server and its configuration is BdPcba\_X00, GuiPcba\_X00 and BdSoftware version G 3. The email address of Email subscribe user is valid  4, Agent service runs properly on laptop.  4. The Field Service Technician user has been created in CreateVentilatorFieldServiceTechnicianUsersTestProcedure | 1 | Connect laptop network | | The laptop network is available | PASS/FAIL |  |
| 2 | Go to agent cache folder to check the software packages | | There is not any packages in cache folder | PASS/FAIL |  |
| 3 | Connect laptop and PB980 ventilator with cable, launch ESS, accept the License Agreement and login with Ventilator Field Service Technician user (Refer to Pre-condition 4)  After click Login button then select ‘United States’ in select country screen | | Field Service Technician user login ESS successfully and it goes to ESS home screen | PASS/FAIL |  |
| 4 | Press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded automatically | PASS/FAIL |  |
| 5 | After the log files are uploaded completely, switch to Software update screen | | 1. The software BdSoftware version G and BdSoftware version H show in available software list after a while (After the software packages are downloaded) | PASS/FAIL |  |
| 6 | Go to agent cache folder to check the software packages | | 1. The software packages of BdSoftware version G and BdSoftware version H are downloaded in cache folder (Check the agent log file to make sure the software are downloaded) | PASS/FAIL |  |
| 2. The PDF document is downloaded in cache folder (the size is the same with the document in web UI) | PASS/FAIL |  |
| 7 | Go back to ESS screen and select the PDF document from available document list to view | | The document display correctly | PASS/FAIL |  |
| 8 | Select BdSoftware H from available software list to upgrade | | 1. The software package has been decrypted and extracted automatically. 2. Success of software update message prompts in ESS screen | PASS/FAIL |  |
| 9 | Go to agent cache folder to check the software packages | | 1. The decrypted software packages and document have been deleted | PASS/FAIL |  |
| 2. The encrypted, compressed software and document packages would be deleted after software expiration date.(the default expiration time is 14 day) | PASS/FAIL |  |
| 10 | Login with Ventilator Email subscribe user personal email address to check the email received | | 1. There are two notification emails in the CoT admin user email box:  mail title: ' New Device Record Created ' and ' Upgrade Attempt: Successful ' with correct user name and serial number | PASS/FAIL |  |
| 2. The ‘Upgrade Attempt: Successful ’ email includes Device Info (HW and SW components) | PASS/FAIL |  |
| 12 | Login with Ventilator Field Service Technician personal email address to check email received | | 1. There is a notification email in the Field Service Technician user email box: Device updated with correct user name and serial number | PASS/FAIL |  |
| 2. The Upgrade Attempt: Successful email includes the new software information | PASS/FAIL |  |
| 11 | Login web UI as ”System Admin1” user | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. The Class of Trade field is only vent can be selected | PASS/FAIL |  |
| 12 | Click Reports link | | It goes to reports page | PASS/FAIL |  |
| 13 | Select 'Software Upgrade Report' and enter following fields:  Device type: PB980  Customer name:  Date: (The date when the email is received)  Then click 'View Report' button | | 1. The PB980 device shows in the software upgrade report details | PASS/FAIL |  |
| 2. The software upgrade status is 'Pass' | PASS/FAIL |  |
| 3. The device previous software version is G and the new version is H | PASS/FAIL |  |
| 14 | Back to report page and select 'Device Current configuration report', enter following fields:  Device type: PB980  Customer name:  Device serial number: \_\_\_\_\_\_\_\_\_\_\_\_\_(Record the serial number during execution)  Then click 'View Report' button | | 1. The PB980 device configuration shows as BdPcba\_X00, GuiPcba\_X00 and software version as H | PASS/FAIL |  |
| 15 | Switch to report page and select 'Service Record report', enter following fields:  Device type: PB980  Customer name:  Device serial number: \_\_\_\_\_\_\_\_\_\_\_\_\_ (Record the serial number during execution)  From Date: today  Then click 'View Report' button | | The service records for the PB980 device shows as:   Log Retrieval  Device Connection  Upgrade – Pass  Device Discovery | PASS/FAIL |  |
| 16 | Check the log files uploaded above storing in server (The server storage folder is var/www/logfile) | | The log files are stored in server | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| DownloadMissingSoftwareTestProcedureForVentilator | User scenario: The Field Service Technician user downloads all the software in advance for disconnect mode service. Pre-condition 1. The Field Service Technician user logged into ESS before 2. Make sure cache folder is empty because the encrypted, compressed software and document packages have been deleted after software expiration date**.**  3. Field Service Technician user has been created in CreateVentilatorFieldServiceTechnicianUsersTestProcedure | 1 | Login web UI as “System Admin1” user. | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. Only 'Ventilator' exists in the Class of Trade field | PASS/FAIL |  |
| 2 | Switch to Admin - Software catalog page and click 'Add new software' button | | It goes to create new software page | PASS/FAIL |  |
| 3 | Enter following fields to create a new version software of ‘BdSoftware’  Device type: PB980  Software name: BdSoftware  Part #: 33333333  Revision: J  Software Type: Software Bundle  Software Status: In production  Software package: BdSoftware version J package   Associate it with the hardware BdPcba\_X00 and GuiPcba\_X00, then click 'Add New Software button' | | The software within PB980 device is created successfully | PASS/FAIL |  |
| 4 | Login web UI as Ventilator Field Service Technician user. (Refer to Pre-condition 3) | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. Only 'Ventilator' exists in the Class of Trade field | PASS/FAIL |  |
| 5 | Switch to device page and search the PB980 device serial number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(Record the serial number during execution) | | The device is found | PASS/FAIL |  |
| 6 | Click the serial number link and check the device configuration | | 1. The device configuration shows as BdPcba\_X00, GuiPcba\_X00 and BdSoftware version H | PASS/FAIL |  |
| 2.BdSoftware version J shows in 'Available Software' field | PASS/FAIL |  |
| 7 | Go to agent cache folder to check software packages after software expiration date | | All software packages and document have been deleted after expiration time. | PASS/FAIL |  |
| 8 | Restart laptop | | The agent service is running correctly | PASS/FAIL |  |
| 9 | Go to agent cache folder to check software packages | | 1. The software BdSoftware Version G, BdSoftware version H, BdSoftware version J and PDF document under PB980 device would be downloaded (size of all the downloaded software packages is the same as in Web UI). | PASS/FAIL |  |
|  |  |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| UploadLogfileAndUpgradeSoftwareFailInDisconnectModeTestProcedureForVentilator | User scenario:  The Field Service Technician user arrives customer's site but fail to upgrade software in disconnect mode  Pre-condition: 1. All software for PB980 device have been downloaded in DownloadMissingSoftwareTestProcedure 2. The messages in agent outbox would be sent out after connecting the network for 10 munities (Agent resend time).  3. Field Service Technician user has been created in CreateVentilatorFieldServiceTechnicianUsersTestProcedure | 1 | Disconnect the laptop network | | The laptop network is not available | PASS/FAIL |  |
| 2 | Launch ESS, accept License Agreement and login ESS with Ventilator Field Service Technician user (Refer to Pre-condition 3)  After click login button and then select ‘United States’ in select country screen | | Field Service Technician user login ESS successfully and it goes to ESS home screen | PASS/FAIL |  |
| 3 | Connect laptop and PB980 ventilator with cable and then press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded to server automatically | PASS/FAIL |  |
| 4 | After the log files are uploaded completely, switch to Software Update screen | | 1. The software with version G, H and J show in available software list after a while (After the software packages are downloaded) | PASS/FAIL |  |
| 2. The PDF document shows in the available document list | PASS/FAIL |  |
| 5 | Go to agent cache folder to check the software packages | | The software packages have been downloaded. (Check the agent log file to make sure the software are downloaded) | PASS/FAIL |  |
| 6 | Go to agent Agent\MailBox\encryptedLogs folder to check the uploaded log files | | There is no any log file in this folder | PASS/FAIL |  |
| 7 | Go back to ESS screen and select the document from available document list to view | | The document display correctly | PASS/FAIL |  |
| 8 | Select Software J from available software list to upgrade software and simulate upgrade failure(close the ESS Application) | | The software package J has been decrypted and extracted automatically.  ESS closed | PASS/FAIL |  |
| 9 | Go to agent cache folder to check the software packages | | The decrypted and extracted software packages are removed | PASS/FAIL |  |
| 10 | Connect the laptop network and check the agent service | | The agent service is running correctly | PASS/FAIL |  |
| 11 | Login with Ventilator Field Service Technician personal email address to check the email | | There is a notification email in the Field Service Technician email box:  Upgrade Attempt: Device Failed to Apply Upgrade  with correct user name and correct device serial number | PASS/FAIL |  |
| 12 | Login web UI as “System Admin1” user | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. Only 'Ventilator' exists in the Class of Trade field | PASS/FAIL |  |
| 13 | Click Reports link | | It goes to reports page | PASS/FAIL |  |
| 14 | Select 'Software Upgrade Report' and enter following fields:  Device type: PB980  Customer name: (Unknown)  Date: (Select a date before the update fail service)  Then click 'View Report' button | | 1. This PB980 device shows in the software upgrade report details | PASS/FAIL |  |
| 2. The latest software upgrade status of the device is 'Fail' | PASS/FAIL |  |
| 3. The device previous software version is H and the new version is H | PASS/FAIL |  |
| 15 | Switch to report page and select 'Service Record report', enter following fields:  Device type: PB980\_Ventilator  Customer name: (Unknown)  Device serial number: \_\_\_\_\_\_\_\_\_\_\_\_\_(Record the serial number during execution)  From Date: today  Then click 'View Report' button | | 1. The latest service records for this PB980 device shows as: Log Retrieval and Upgrade - Fail | PASS/FAIL |  |
| 16 | Check the log files uploaded above storing in server (The server storage folder is /var/www/logfile) | | The log files are stored in server | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| SoftwareDiscrepancyCheckTestProcedureForVentilator | User scenario: The Field Service Technician user downgrades the software in disconnect mode, and then he connect the device in connect mode with a different laptop  Pre-condition: 1. All software for PB980 device have been downloaded in DownloadMissingSoftwareTestProcedure  2. The device current software is BdSoftware H  3. Field Service Technician user has been created in CreateVentilatorFieldServiceTechnicianUsersTestProcedure | 1 | Disconnect the laptop(Laptop A) network | | The network is not available | PASS/FAIL |  |
| 2 | Launch ESS, accept the License Agreement and login ESS with Ventilator Field Service Technician user (Refer to Pre-condition 3)  After click login button then select ‘United States’ in select country screen | | Field Service Technician user login ESS successfully and it goes to ESS home screen | PASS/FAIL |  |
| 3 | Connect laptop A and PB980 ventilator with cable and then press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded to server automatically | PASS/FAIL |  |
| 4 | Switch to 'Update software' screen | | The software BdSoftware G, BdSoftware H, BdSoftware Jshow in available software list after a while (After the software packages are downloaded) | PASS/FAIL |  |
| 5 | Select ' BdSoftware G ' from available software list to downgrade software | | Success of deploying software message prompts in ESS screen | PASS/FAIL |  |
| 6 | Start agent service with network available in another laptop (Laptop B) | | The agent service is running correctly | PASS/FAIL |  |
| 7 | Launch ESS, accept the License Agreement and login ESS with Ventilator Field Service Technician user (Refer to Pre-condition 3)  And select ‘United States’ in country field | | Field Service Technician user login ESS successfully and it goes to ESS home screen | PASS/FAIL |  |
| 8 | Connect laptop B and PB980 ventilator with cable and then press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded to server automatically |  |  |
| 9 | Login with Ventilator Email subscriber user personal email address to check the email | | There is a notification email in the CoT admin user email box:  Device Configuration Changed  with correct user name and device serial number | PASS/FAIL |  |
| 10 | Login web UI as “System Admin1” user | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. The Class of Trade field is not selectable | PASS/FAIL |  |
| 11 | Click Reports link | | It goes to reports page | PASS/FAIL |  |
| 12 | Switch to report page and select 'Component Discrepancy Report', enter following fields:  Device type: PB980\_Ventilator  Customer name:  Device serial number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(Record the serial number during execution)  Then click 'View Report' button | | The Component Discrepancy records for the PB980 device shows as: Expected Version - BdSoftware H; Discrepancy Version BDSOFTWARE G | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| AttemptToUpgradeSoftwareWithoutPrivilegeTestProcedureForVentilator | User scenario:   The ventilator biomed user has not been trained, and he tries to upgrade device.   Pre-condition:   1. The device has been registered in server and current version of the PB980 ventilator is BdSoftware G  2. All software for PB980 device have been downloaded in DownloadMissingSoftwareTestProcedure  3. Biomed user has been created in CreateVentilatorBiomedUserTestProcedure | 1 | Connect laptop network | | The laptop network is available | PASS/FAIL |  |
| 2 | Launch ESS, accept the License Agreement and login ESS with Ventilator Biomed user (Refer to Pre-condition 3) | | Biomed user log in successfully and it goes to ESS home screen without selecting country | PASS/FAIL |  |
| 3 | Connect laptop and PB980 ventilator with cable and then press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded to server automatically |  |  |
| 4 | After log file is retrieving from device completely, switch to 'Update software' screen | | No software shows in available software selection after a while | PASS/FAIL |  |
| 5 | Go to agent cache folder to check the software packages | | The software packages of BdSoftware G, H and J are downloaded. (Check the agent log file to make sure the software are downloaded) | PASS/FAIL |  |
| 6 | Login web UI as “Admin Global” user | | It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 7 | Switch to User activity monitor page and search by the ventilator biomed user name | | The Biomed user activities is logged and prompt ‘User don’t have permission to view device’ | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| ModifiedUserPrivilegeAndUpgradeTestProcedureForVentilator | User scenario:   The ventilator biomed user try to upgrade device after user admin add training records for him   Pre-condition:   1. The current version of the device is BDSOFTWARE G.  2. All software for PB980 device have been downloaded in DownloadMissingSoftwareTestProcedure  3. Biomed user has been created in CreateVentilatorBiomedUserTestProcedure | 1 | Login web UI as “Admin Global” user. | | 1. It enters to home screen with 'Ventilator' in 'Class of Trade' field as default | PASS/FAIL |  |
| 2. The other options of 'Class of Trade' field are: Compression and infrastructure and Vessel Sealing |  |  |
| 2 | Switch to Admin - Users page and then search the ventilator biomed user. (Refer to pre-condition 3)‘ | | The user is found | PASS/FAIL |  |
| 3 | Click the Biomed user link to go to edit user page, then click 'Manage Access' button | | It goes to 'Edit Roles and User Permissions' page | PASS/FAIL |  |
| 4 | Edit the user installation privilege to 'Latest Version Only' and click 'Save changes' button | | The installation privilege of Biomed user is updated successfully | PASS/FAIL |  |
| 5 | Launch ESS, accept the License Agreement and login ESS with Ventilator Biomed user (Refer to pre-condition 3) | | Biomed user log in successfully and it goes to ESS home screen without selecting country | PASS/FAIL |  |
| 6 | Connect laptop and PB980 ventilator with cable and then press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded to server automatically | PASS/FAIL |  |
| 7 | Switch to 'Update software' screen | | 1. The software BdSoftware J shows in available software list after a while (After the software package is downloaded) | PASS/FAIL |  |
| 2. Documents which are associated with defined HW/SW are listed in the “Document” drop down list. | PASS/FAIL |  |
| 8 | Select one document from the list and Click “View Document” button | | PDF document can be opened and viewed. | PASS/FAIL |  |
| 9 | Go to agent cache folder to check the software packages | | BdSoftware J has been downloaded while BdSoftware G and BdSoftware H have not. (Check the agent log file to make sure the software are downloaded) | PASS/FAIL |  |
| 10 | Select BdSoftware J from available software list and upgrade software | | Success of software update message prompts in ESS screen | PASS/FAIL |  |
| 11 | Go to agent cache folder to check the software packages | | The decrypted and extracted file of BdSoftware J is deleted | PASS/FAIL |  |
| 12 | Login web UI as “System Admin1” user. | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. Only 'Ventilator' exists in the Class of Trade field |  |  |
| 13 | Switch to Device page to search the device, and then check the device configuration | | The software in device configuration is BdSoftware J | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| CrossDeviceAndLaptopTestProcedureForVentilator | User scenario:  The Field Service Technician user provides service for different ventilator using different laptop Pre-condition: 1. The agent and ESS have been installed in laptop1 and laptop2 2. No user has logged in ESS of both laptop1 and laptop2 3. The ventilators have not been registered in server and the current software is BDSOFTWARE G  3. Field Service Technician user has been created in CreateVentilatorFieldServiceTechnicianUsersTestProcedure | 1 | Launch ESS, accept the License Agreement and login with ventilator Field Service Technician user in Laptop1 (Refer to pre-condition 3)  After click login button then select ‘United States’ in select country screen | | Field Service Technician user login ESS successfully and it goes to ESS home screen | PASS/FAIL |  |
| 2 | Connect Laptop1 and PB980 ventilator (Device1) with cable and then press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded to server automatically | PASS/FAIL |  |
| 3 | After log files are unloaded completely, switch to update software screen | | The software BdSoftware G, H and J would be listed in update available list after a while | PASS/FAIL |  |
| 4 | Go to agent cache folder to check the software packages | | The software BdSoftware G, H and J have been downloaded. (Check the agent log file to make sure the software are downloaded) | PASS/FAIL |  |
| 5 | Select software BdSoftware H to upgrade | | The software H was decrypted and extracted  Success of software update message prompts in ESS screen | PASS/FAIL |  |
| 6 | Go to agent cache folder to check the software packages | | The decrypted and extracted software packages have been deleted | PASS/FAIL |  |
| 7 | Disconnect the PB980 ventilator(Device1) with laptop | | It goes to ESS home screen without device connected | PASS/FAIL |  |
| 8 | Connect Laptop1 with PB980 ventilator (Device2) with cable and press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded to server automatically | PASS/FAIL |  |
| 9 | Switch to update software screen | | The software BdSoftware G, H and J would be listed in update available list after a while | PASS/FAIL |  |
| 10 | Select software BDBdSoftware H to upgrade | | Success of software update message prompts in ESS screen | PASS/FAIL |  |
| 11 | Launch ESS, accept the License Agreement and login with ventilator Field Service Technician user in Laptop2 with network available (Refer to pre-condition 3)  After click login button then select ‘United States’ in select country screen | | Field Service Technician user login ESS successfully and it goes to ESS home screen | PASS/FAIL |  |
| 12 | Connect Laptop2 and PB980 ventilator (Device1) with cable and then press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded to server automatically | PASS/FAIL |  |
| 13 | Switch to update software screen | | The software BdSoftware G, H and J would be listed in update available list after a while | PASS/FAIL |  |
| 14 | Select BdSoftware J to upgrade | | Success of software update message prompts in ESS screen | PASS/FAIL |  |
| 15 | Login web UI as ”Admin Global” user. | | 1. It enters to home screen with 'Ventilator' in 'Class of Trade' field as default | PASS/FAIL |  |
| 2. The other options of 'Class of Trade' field are: Compression, infrastructure and Vessel Sealing | PASS/FAIL |  |
| 16 | Switch to Admin - User activities monitor page to search Ventilator Field Service Technician user latest activity | | 1. There are two upgrade device records for device1 | PASS/FAIL |  |
| 2. There is a upgrade device record for device2 | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| DeviceManageDisconnectModeTestProcedureForVentilator | User scenario:  The Field Service Technician user arrives customer's site to register a new device and then upgrade software in disconnect mode  Pre-condition:  1. All software for PB980 device have been downloaded in DownloadMissingSoftwareTestProcedure  2.The software installed on Vent is BdSoftware G  3. Field Service Technician user has been created in CreateVentilatorFieldServiceTechnicianUsersTestProcedure | 1 | Disconnect the laptop network | | The laptop network is not available | PASS/FAIL |  |
| 2 | Connect laptop and PB980 ventilator with cable, launch ESS, accept the License Agreement and login ESS with Ventilator Field Service Technician user (Refer to Pre-condition 3)  After click Login button then select ‘United States’ in select country screen | | Field Service Technician user login ESS successfully and it goes to ESS home screen | PASS/FAIL |  |
| 3 | Press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded to server automatically | PASS/FAIL |  |
| 4 | After the log files are uploaded completely, switch to Software Update screen | | 1. The software BdSoftware G, H and J show in available software list after a while (After the software packages are extracted) | PASS/FAIL |  |
| 5 | Go to agent cache folder to check the software packages | | The software packages have been downloaded. (Check the agent log file to make sure the software are downloaded) | PASS/FAIL |  |
| 6 | Go to agent Agent \ MailBox \ encryptedLogs folder to check the uploaded log files | | There is no any log file in this folder | PASS/FAIL |  |
| 7 | Go back to ESS screen and select the document from available document list to view | | The document display correctly | PASS/FAIL |  |
| 8 | Select BdSoftware H from available software list to upgrade software | | The software H was decrypted and extracted.  Success of software update message prompts in ESS screen | PASS/FAIL |  |
| 9 | Go to agent cache folder to check the software packages | | 1. The decrypted software packages and document have been deleted after log out ESS | PASS/FAIL |  |
| 2. The encrypted, compressed software and document packages would be deleted after software expiration date.(the default expiration time is 14 day) | PASS/FAIL |  |
| 10 | Connect the laptop network and check the agent service | | The laptop network is available | PASS/FAIL |  |
| 11 | After 10 min go to agent Agent \ MailBox \ encryptedLogs folder to check the uploaded log files | | The log files are stored in this folder | PASS/FAIL |  |
| 12 | Check the log files uploaded above storing in server (The server storage folder is var/www/logfile | | The log files are stored in server | PASS/FAIL |  |
| 13 | Login with Ventilator Field Service Technician personal email address to check the email | | 1.There is a notification email in the Field Service Technician user email box: Device updated with correct user name and serial number | PASS/FAIL |  |
| 2. The device update email includes the new software information | PASS/FAIL |  |
| 14 | Login with Ventilator Email subscribe user personal email address to check the email received | | 1. There are two notification emails in the CoT admin user email box:  mail title: ' New Device Record Created ' and ' Upgrade Attempt: Successful ' with correct user name and serial number | PASS/FAIL |  |
| 2. The ‘Device update’ email includes Device Info (HW and SW components) | PASS/FAIL |  |
| 15 | Login web UI as ”System Admin1” user. | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. The Class of Trade field is only vent can be selected | PASS/FAIL |  |
| 16 | Click Device link | | It goes to device page | PASS/FAIL |  |
| 17 | Search the created device above | | Device is found out | PASS/FAIL |  |
| 18 | Click Device serial number link to check the device Configuration and the Service History | | 1. Device configuration shows as BdPcba\_X00, GuiPcba\_X00 and BdSoftware H | PASS/FAIL |  |
| 2.There is a 'Upgrade-Pass' service record displays on the top of the list in Service history | PASS/FAIL |  |
| 3. Service History contains:  Log retriever Device Connection  Device Discovery | PASS/FAIL |  |
| 19 | Click the 'Upgrade-Pass' link | | 1. Device configuration detail window popped up | PASS/FAIL |  |
| 2. Configuration before upgrade and after upgrade are correct | PASS/FAIL |  |
| 20 | Click Reports link | | It goes to reports page | PASS/FAIL |  |
| 21 | Select 'Software Upgrade Report' and enter following fields: Device type: PB980\_Ventilator Customer name: Date: (The date when the email is received) Then click 'View Report' button | | 1. The PB980 device shows in the software upgrade report details | PASS/FAIL |  |
| 2. The software upgrade status is 'Pass' | PASS/FAIL |  |
| 3. The device previous software version is BdSoftware G and the new version is BdSoftware H | PASS/FAIL |  |
| 22 | Back to report page and select 'Device Current configuration report', enter following fields: Device type: PB980\_Ventilator Customer name: Device serial number: Then click 'View Report' button | | The PB980 device configuration shows as BdPcba\_X00, GuiPcba\_X00 and BdSoftware H | PASS/FAIL |  |
| 23 | Switch to report page and select 'Service Record report', enter following fields:  Device type: PB980  Customer name:  Device serial number: \_\_\_\_\_\_\_\_\_\_(Record the serial number during execution)  Then click 'View Report' button | | The service records for the PB980 device shows as:  Log Retrieval  Upgrade - P Configuration Update   Device Connection | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| CreateTechnicalServiceEngineerUserTestProcedure | User scenario:  1. Technical Service Engineer user is not created  2. Global admin user will create Technical Service Engineer user  3. After user is created then check the Technical Service Engineer user | 1 | Login web UI as ”Admin Global” user. | | 1. It enters to home screen with 'Ventilator' in 'Class of Trade' field as default | PASS/FAIL |  |
| 2. The other options of 'Class of Trade' field are: Compression infrastructure and Vessel Sealing | PASS/FAIL |
| 2 | Switch to Admin - Users page, then click Add New button | | It goes to Add a New User page | PASS/FAIL |  |
| 3 | Enter and select following user information:  Is the new user a Covidien employee: Yes  First name: TSE Last name: Vent Email address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (This will be captured during execution)  Country: United Status  Language: English Password: [Auto Generated] Business Unit: SSG Business  And then click Next button | | It goes to Add Roles and User Permissions page | PASS/FAIL |  |
| 4 | Select Technical Service Engineer Role for Ventilation Class of Trade, set user as default and then select All production versions for device access  Click Create New User button | | It goes to Users page and created user displays in users page | PASS/FAIL |  |
| 5 | Click the user name link of created user to add a certified training record for created user | | Certified training record is added for this Technical Service Engineer user | PASS/FAIL |  |
| 6 | Log out Web UI as global admin user and then log in with created Technical Service Engineer user above | | It goes to home page | PASS/FAIL |  |
| 7 | Go through all the page | | 1.Device page is visible and device serial number link is clickable | PASS/FAIL |  |
| 2. Reports page is visible and all type of reports can be viewed | PASS/FAIL |  |
| 3. HW Catalog/SW Catalog/Doc Catalog/Configuration Management page are visible and only have view permission | PASS/FAIL |  |
| 4. User Management page is visible and have view and edit permission | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| UserManagementByTSEUserTestProcedure | User scenario:  1.Technical Service Engineer create a user who can only upload log files  2.The created user only can upload log files but can’t update device  Pre-condition:  1.The Technical Service Engineer user is created on server  2.The device is already registered on server  3. Technical Service Engineer user has been created in CreateTechnicalServiceEngineerUserTestProcedure | 1 | Login web UI as Technical Service Engineer user (Refer to Pre-condition 3) | | 1.It goes to home page with 'Ventilator' in 'Class of Trade' field as default | PASS/FAIL |  |
| 2.There is only ‘Ventilation’ class of trade and other Class of Trade are invisible | PASS/FAIL |  |
| 2 | Switch to Admin - Users page | | 1.It goes to Users page | PASS/FAIL |  |
| 2.Add New button is visible | PASS/FAIL |  |
| 3.User name link and Email link are clickable | PASS/FAIL |  |
| 3 | Click Roles & Permissions menu on the left panel | | 1.It goes to Permission page | PASS/FAIL |  |
| 2.Manage Roles button/Cancel button/Save changes button are visible | PASS/FAIL |  |
| 4 | Click Manage Roles button | | 1.It goes to Manage Roles page | PASS/FAIL |  |
| 2.Add New Role and Delete selected button is visible | PASS/FAIL |  |
| 5 | Go back to Users page and then click ‘User Activity Monitor’ menu on the left panel | | 1.It goes to User Activity Monitor page | PASS/FAIL |  |
| 2.All the search field are available | PASS/FAIL |  |
| 6 | Click ‘Users’ menu on the left panel to go to users page | | It goes to users page | PASS/FAIL |  |
| 7 | Click Add New button | | It goes to Add a New User page | PASS/FAIL |  |
| 8 | Enter and select following user information:  Is the new user a Covidien employee: Yes  First name: Log Last name: Vent Email address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(This will be captured during execution)  Country: United Status  Language: English Password: [Auto Generated] Business Unit: SSG Business  And then click Next button | | It goes to Add Roles and User Permissions page | PASS/FAIL |  |
| 9 | Select CoT Admin Role for Ventilation Class of Trade, set user as default and then select All production versions for device access  Click Create New User button | | 1. It goes to Users page | PASS/FAIL |  |
| 2. Created user displays in users page | PASS/FAIL |  |
| 10 | Don’t add any training record for created user above and then log out web UI with Technical Service Engineer user | | User log out and it goes to Log in page | PASS/FAIL |  |
| 11 | Log in Web UI as created user above | | It enters home page | PASS/FAIL |  |
| 12 | Connect a registered device to Laptop and then launch ESS, accept the License Agreement and log in ESS with created user | | 1.Log in ESS successfully | PASS/FAIL |  |
| 2.It goes to Select Country screen | PASS/FAIL |  |
| 13 | Select a country for device and then click Submit button and then click Connect button on ESS home screen | | 1.Log files are retrieving from device automatically | PASS/FAIL |  |
| 2.Log files are uploading automatically | PASS/FAIL |  |
| 14 | After log uploaded successfully then check the log files uploaded above storing in server (The server storage folder is var/www/logfile) | | The log files are stored in server | PASS/FAIL |  |
| 15 | Go back to ESS screen and then click Software Update Tab to check the software in the selection drop down list | | 1.There is not any software available in the drop down list | PASS/FAIL |  |
| 2.User can’t update device due to no software available in the drop down list | PASS/FAIL |  |
| 16 | Go back to Web UI to check the device Service History | | The History only logged:  Device Connection Log retriever | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |
| UploadLogfileWithR&DUserTestProcedure | User scenario:  Create Sustaining Engineering user to retrieve and upload device logs  Pre-condition  1. The agent and ESS have been installed in laptop, but there is no user who has logged in ESS  2. The device has been registered in server and its configuration is BdPcba\_X00, GuiPcba\_X00 and BdSoftware G  3. Agent service runs properly on laptop. | 1 | Login web UI as “Admin Global” user. | | 1. It enters to home screen with 'Ventilator' in 'Class of Trade' field as default | PASS/FAIL |  |
| 2. The other options of 'Class of Trade' field are: Compression and infrastructure | PASS/FAIL |  |
| 2 | Switch to Admin - Users and click 'Add new' button | | It goes to create new user page | PASS/FAIL |  |
| 3 | Is the new user a Covidien employee: Yes  First name: Rnd   Last name: Ventilator  Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(This will be captured during execution)  Country: United States  Language: English  Password: [Auto Generated]  Business Unit: SSG Business Unit  Then click Next button | | It will goes to 'Add Roles and User Permissions' page | PASS/FAIL |  |
| 4 | Assign following permission to the user:  Role: Ventilator R&D  Installation privileges: All production versions  Then click 'Create New user' button | | The Ventilator R&D user is created successfully | PASS/FAIL |  |
| 5 | Click the R&D user link to go to edit user page, and then click 'Training Records' button | | It goes to 'Manage Training Records' page | PASS/FAIL |  |
| 6 | Click 'Add new record' button and enter following fields in the pop-up windows:  Class of Trade: Ventilator  Device type: PB980\_Ventilator  Trainer user ID: vent.admin@covidien.com  Date of Training: (A date before current date)  Status: Certified  Then click 'Add record' button | | The training records for R&D user is added successfully. | PASS/FAIL |  |
| 7 | Login web UI as Ventilator R&D user created above | | 1. It enters to home page with 'Ventilator' in Class of Trade field | PASS/FAIL |  |
| 2. Only ‘Ventilator’ exists in Class of Trade field | PASS/FAIL |  |
| 8 | Go through each page of the web site | | 3. R&D user has full permission to Gateway web UI | PASS/FAIL |  |
| 9 | Connect laptop network | | The laptop network is available | PASS/FAIL |  |
| 10 | Connect laptop and PB980 ventilator with cable, launch ESS, accept License Agreement and login ESS with Ventilator R&D user created above  After click Login button then select ‘United States’ in select country screen | | user login ESS successfully and it goes to ESS home screen | PASS/FAIL |  |
| 11 | Press 'Connect' button in ESS screen | | 1. ESS is running correctly with device connected and it goes to upload log file screen | PASS/FAIL |  |
| 2. Log files are retrieved from device and then uploaded automatically | PASS/FAIL |  |
| 12 | After the log files are uploaded completely, Check the log files uploaded above storing in server (The server storage folder is var/www/logfile) | | The log files are stored in server | PASS/FAIL |  |
| *The blocks below are for test execution purpose only (left blank in Test Procedure document)* | | | | | | | |
| **Tester Signature:** | | | | **Test Execution Date:** | | | |

# Test Results

The test results for End to End testing of PB980 will be summarized in a separate test report document. That document details the execution sequence of test procedures, problems found, test configurations used, and other details. The End to End Test Report will be put into Agile and approved by the appropriate project stakeholders. It is the expectation that the completion of these tests will provide evidence that the system has been fully verified from real use case perspective.