BACnet® TESTING LABORATORIES

TESTING POLICIES

Last Amended by formal vote of BTL-WG
September 26, 2017

Table of Contents

1 **Introduction**

BTL Testing Policies provides all the policies covering the application of the ***BTL Test Plan*** and package onto a specific product. In addition, the BTL Testing Policies guide the BTL Certification and Listing process. To get the most out of the ***BTL Testing Policies,*** a general understanding of the other documents in the BTL Test Package should also be acquired.

1.1 **Glossary**

BTL Certification – a process for recognising products which have successfully completed testing according to the BTL requirements and have met the requirements for issuance of a Certificate of Conformance. All products which have been Certified are eligible to apply for listing on the BTL website and are eligible to apply for use of the BTL Mark.

BTL Listing – is a listing of products that have successfully completed testing according to the BTL requirements and have either been Certified or were entered in the listing prior to the initiation of the BTL Certification process and have continued to meet the requirements for Listing. Note that a BTL Listed product may or may not be Certified, but in either case has been successfully tested according to the BTL requirements.

BTL-WG – BTL Working Group

Certified BACnet product – a BACnet product which has been awarded a Certificate of Conformance. Recognized BACnet Testing Organization (RBTO) – any test organization that has been formally recognized by BACnet International for BTL testing of BACnet Devices.

2 Checklist Accuracy Policy

2.1 Purpose

The purpose of this policy is to ensure all implemented BACnet functionality is tested and reported in BTL Listings.

2.2 Policy Description

The BTL Testing process requires that applicants completely and accurately complete the **BTL Functionality Checklist**. The checklist is not the set of functionality that the applicant wants tested; it is the set of functionality implemented in the device.

Each checklist entry succinctly describes the functionality in question but for a more detailed explanation see the corresponding Test Plan entry. The description in the Test Plan provides more information on whether an entry should be selected for a particular implementation.

No functionality implemented in the product under test shall be left off the checklist due to a partial implementation.

The RBTOs will validate the checklist against the product under test and report inaccurate checklist entries as failures.

2.3 Version History

This policy was adopted on September 26, 2017.

3   Minimum Protocol_Revision Testing Policy

3.1   Purpose
The purpose of this policy is to promote the advancement of the BACnet protocol into the user community.

3.2   Policy Description

The BTL requires that products being tested for \BTL Certification claim a Protocol_Revision equal to or greater than a moving minimum. The minimum Protocol_Revision is determined each January 1st and is the highest Protocol_Revision which has been available in a ***BTL Test Plan*** for at least 4 years. The schedule below indicates the specifics of how this will work for the next few years. See the BTL website for the current schedule.

Protocol_Revision	Date that BACnet at this Protocol_Revision was Published	Date that BTL-WG Test Plan for this Protocol_Revision became available	Becomes the minimum on Jan 1 of Year
6	March 2007	July 15, 2009	---
7	October 2008	July 15, 2009	2014
8	January 2009	December 1, 2011	---
9	June 2009	December 1, 2011	2016
10	January 2010	August 2, 2012	
11	July 2010	August 2, 2012	
12	February 2011	August 2, 2012	2017
13	June 2011	November 13, 2014	
14	January 2012	November 13, 2014	2019
15	January 2013	October 19, 2017	2022
16	July 2014		
17	December 2014		
18	February 2016		
19	April 2016		

3.2.1   Impact on BTL Certified and Listed Products

Products that are already Certified or Listed will be able to keep their status and will not need to be updated solely because the minimum Protocol_Revision advances.

All other products that are submitted for testing or retesting are required to meet the current minimum Protocol Revision requirement except products that are submitted for retesting solely due to the following reasons:

> a) an issue found in the field (see the Field Defects Resolution Policy);

> b) advancements in the test package which require the callback of products for functionality that existed in the device but which was untested, even if defects are found during testing and changes are made to the product in order to resolve the issues (see the Product Retesting Requirements Policy).

The minimum Protocol_Revision requirement that shall be met by a product is the minimum that is in force on the date that the product is submitted to the RBTO (both the testing application and the device have been received and are ready for testing).

3.3   Version History
This policy was adopted as version 6 on 13-Dec-2011.

This policy was updated as version 7 on 27-Sep-2012 to include the date of Test Plan-12.0

This policy was updated as version 8 on 19-Jan-2015 to include the date of Test Plan-14.0

This policy was updated and moved to the BTL Testing Policies document on September 26, 2017.

4 Policy for Testing Beyond the Test Package Protocol_Revision

4.1 Purpose

The purpose of this policy is to ensure devices with a newer Protocol_Revision can be tested and obtain BTL Certification in a reasonable time frame.

4.2 Policy Description

Devices claiming a Protocol_Revision newer than the Official Test Package shall be tested using an Interim Test Package if the BTL-WG determines the device's capabilities require additional tests be written. The Test Report shall indicate an Interim Test Package was applied.

Once a new Official Test Package has been released any devices tested using Interim Test Packages shall be reviewed by the BTL-WG and either recalled for further testing or a final Test Report shall be prepared if the Protocol_Revision of the device is at or below the Official Test Package.

4.2.1 Interim Test Package Development

The BTL-WG will endeavor to create an Interim Test Package in a timely manner and the BTL Manager will keep all test organizations apprised of the status of the Interim Test Package. The applicant has the option to develop and submit proposed interim tests to the BTL-WG. The BTL-WG retains the right to decide whether the proposed tests are sufficient for the product in question.

Once the Interim Test Package is complete it will be made publicly available.

4.2.2 Recalling a Device

After an Official Test Package has been released the BTL-WG will review each device tested under an Interim Test Package and has the right to recall the device to have new or improved tests performed. The applicant will be notified by the BTL-WG if further testing is required and has 3 months to deliver the device to an RBTO. If the product is not submitted for a retest, the BTL Certification for the product shall be revoked and notice of the revocation shall be published on the website along with a description of the known issue.

4.3 Version History

This policy was adopted as version 1 on 14-Feb-2012.

This policy was updated and moved to the BTL Testing Policies document on September 26, 2017.

5   Test Package Transition Policy

5.1   Purpose

The purpose of this policy is to allow test applicants and RBTO a reasonable amount of time to adopt the new test package after it is released and published.

5.2   Policy Description

When a new test package is released, there will be a transition period introduced. The length of this transition period will be determined by the BTL-WG, in consultation with the RBTOs. Whenever the BTL-WG releases a test package the BTL Manager will notify the RBTOs. The BTL Manager will also make an announcement through BACnet International. And the new version of the test package will be placed on the BTL Website along with the notification that the transition policy has begun. When the transition period ends, all new test applications shall be tested with the new test package.

If the product is received by the test lab and is ready for testing during the transition period, a testing applicant is allowed to choose which test package is applied to their product.

If the claimed Protocol_Revision is greater than that covered by the old test package, the product shall be tested with the new test package.

During the transition period, the new test package will be under review by the RBTOs. The BTL-WG reserves the right to extend the transition period to allow the RBTOs more time for review and/or to allow changes to be incorporated in the new test package before it is required for use.

5.3   Version History

This policy was adopted as version 3 on 16-Feb-2012.

This policy was updated and moved to the BTL Testing Policies document on September 26, 2017.

6   Product Retesting Requirements Policy

6.1   Purpose

The purpose of this policy is to state what circumstances require retesting of BTL Listed products.

6.2   Policy Description

A BTL Certification will be awarded to a product if the product meets the BTL's current requirements. However, partial or complete retesting of a BTL Listed product is required under certain circumstances. Generally, the BTL-WG will evaluate the need for retesting once per year around the anniversary of the awarding of a BTL Listing to a product. Annually, the BTL will require suppliers to submit an attestation indicating any changes in Listed products. To facilitate this process, each vendor of a BTL Listed product is responsible for providing the BTL with contact information for a person who is authorized to respond to the BTL's correspondence about the company's BTL Listed products.

Here are some specific circumstances that will lead to the requirement for retesting of a BTL Listed product:

    a.   Changes in the BTL Functionality Checklist:
        a.   When any new Test Package is released, the BTL will review all new Functionality Checklist sections and line-items, to determine any items which will result in the callback of products for untested functionality.
        b.   The annual attestation shall highlight items which BTL has determined will result in the callback of products for untested functionality.

    b.   Changes in the Product: Significant changes are made to the product's BACnet protocol stack implementation. Guidelines on what constitutes a significant change include, for example, if since the last testing more than 5% of the code, or more than 25% of any major functional module of the BACnet stack has been modified. If any of the following are true, the product must be retested regardless of the degree of code changes involved:

        a.   Any object type or service is added.

        b.   Any standard properties are added to an existing object type.

        c.   Any changes to the product that adds one or more checkmarks to the tested functionality checklist.

        d.   If the claimed protocol revision changed.

    c.   Extension of the Test Package: The Test Package has been extended to cover untested functionality which was in the product when the product was last tested. See Checklist Accuracy Policy. In this circumstance, customers will have the option of not getting a product retested. In this case, the product's BTL Listing will not be renewed; however, customers may continue using the mark on any previously created labeling. These types of legacy BTL Listings shall be archived.

    d.   New Tests: The BTL-WG has added a new test which exposes a known defect which was previously found by a test organization. See Testing Dispute Resolution Policy.

    e.   Field Interoperability: The BTL is provided with documented evidence of a significant interoperability problem in the field, for a BTL Listed product. See Field Defects Resolution Policy.

If no specific circumstance as detailed here requires retesting on the product before qualifying for a BTL Listing, then the product, as a derivative of the tested product, has inherited the test results. If the combined tests includes all functionality and conditionality as required, then no retesting is required. The vendor may be required to submit a written and signed attestation that no additional testing is required according to this policy.

6.3　Version History

This policy was adopted in May 2006.

This policy was updated and moved to the BTL Testing Policies document on September 26, 2017.

7   Product Retesting Selection Policy

7.1   Purpose

The purpose of this policy is to state which tests are selected when retesting a BTL Listed product.

7.2   Policy Description

A retest of a product occurs when dictated by the Product Retesting Requirements Policy section above in the ***BTL Testing Policies***. The test selection outlined below does not apply to products that have not previously completed a successful application of the BTL Test Package or are not a derivative of such a product (refer below to the Derivative Product Policy section, for details on what constitutes a derivative product).

If a new version of the ***BTL Test Plan*** is to be applied to a previously tested product the following tests shall be selected for application to the product (in addition to tests required by other sections of policy.)

a. All tests that apply to the product and which were not previously applied, or which have been substantively changed since they were previously applied shall be selected.

b. All tests where the test was previously skipped due to a conditionality requirement described in the ***BTL Test Plan***, but the BTL Test Package has changed such that the conditionality requirement no longer applies.

c. All tests where the number of iterations of the test, as specified by the Test Directives in the ***BTL Test Plan***, differs from the number applied due to a change in the BTL Test Package.

In addition to the above which ensures complete application of the current BTL Test Package, when functionality is added to, removed from, or modified in the product, the following tests shall be selected for application to the product (in addition to tests required by other sections of this policy.)

a. All tests associated with any line item in the ***BTL Functionality Checklist*** that is selected that was not selected when the product was last tested shall be selected.

b. All tests associated with any line items in the ***BTL Functionality Checklist*** for which the vendor indicates that significant changes were made to the product's implementation.

c. All tests where the test was previously skipped due to a conditionality requirement described in the ***BTL Test Plan***, but the product has changed such that the conditionality requirement no longer applies.

d. All tests where the number of iterations of the test, as specified by the Test Directives in the ***BTL Test Plan***, differs from the number applied due to a change in the product.

e. All tests in the EPICS Consistency Tests section of the ***BTL Test Plan***.

f. From the originally performed testing, for each changed Checklist functional section include:

- One other test in the Checklist functional section

- A pair of tests (or all the tests if there are less than 2 in that section) in another Checklist functional section.

- Where there are related sections (such as ACK-B and INFO-B), if any defect is found in an unchanged section, and the remedy makes a change in that section, then testing as-if this is a change in that section as well, shall be performed.

- All tests in the Data Sharing - Read Property - B Base Requirements section of the ***BTL Test Plan***.

- All tests in the Data Sharing - Write Property - B Base Requirements section of the ***BTL Test Plan***, if the product supports DS-WP-B.

Testing shall only occur with the current BTL Test Package. When there are multiple BTL Test Packages that are current (which occurs when the BTL is transitioning to a new BTL Test Package), either test package may be applied.

7.3   Version History

This policy was adopted on September 26, 2017.

8 Regression Testing Test Selection Policy

8.1 Purpose

The purpose of this policy is to identify the amount of regression testing that is performed after each submission of updated firmware.

8.2 Policy Description

RBTOs find problems in almost every product that is submitted for testing. Here is a description of the BTL's regression testing process, starting with the first testing pass:

a. The RBTO runs a suite of tests on vendor's product. (This is the first testing pass.)

b. The RBTO reports all problems found in the product to vendor.

c. Vendor reproduces all reported problems.

d. Vendor may request a re-evaluation of one or more problems by the RBTO.

e. If there are no problems that are required to be fixed, go to step j.

f. Vendor fixes the problems and runs his own regression tests.

g. Once vendor is confident that the product will meet all of the BTL requirements, vendor sends a product or firmware update to the RBTO.

h. The RBTO selects specific regression tests and test parameters, and then runs those tests.

i. If one or more regression tests failed during step h, go to step b.

j. The RBTO reports to vendor that the product passed all required tests. The product now qualifies for a BTL Certification.

Regression tests are selected by the RBTO (in step h) in order to check whether previously identified problems have been fixed. The RBTO will select tests that previously failed and closely related tests may also be included. New tests that could not be characterized by any existing test may also be included. For each regression test, the RBTO chooses a reasonable number of sets of test parameter values. The values will typically include a mix of new parameter values and values that were previously used.

8.3 Version History

This policy was adopted in May of 2006.

This policy was updated and moved to the BTL Testing Policies document on September 26, 2017.

9 Derivative Product Policy

9.1 Purpose

The purpose of this policy is to specify when a product is considered a derivative product. When a product passes all applicable BTL Test Package tests applied by one of the RBTOs both that product and all derivative products qualify for a BTL Listing.

9.2 Policy Description

9.2.1 Terminology

Child Product – Product being considered as a derivative of another product or set of products.

Parent Product – The product or set of products that has been fully tested by an RBTO.

Partial Derivative Product – product which mostly derives from a parent product but may contain additional or changed BACnet functionality.

Duplicate Tests – Tests that are the same between derivative products

9.2.2 Single Product Derivative

A product is considered a derivative of a single product, if it meets the following conditions:

   a. The child product is built from the same source code for all of its BACnet functionality implementation as the parent product

   b. The child product is a subset of the parent product. The child product does not contain any BACnet functionality that is not contained in the parent product. (i.e. there are no checklist items selected that were not selected for the parent product(s)).

   c. The child product was developed by the same company as the parent product.

   d. The child product does not require any additional tests that were already applied to the parent product due to any conditionality requirements called out in the ***BTL Test Plan***.

Only BACnet functionality affects whether a product is considered a derivative product. The application programs in a product, which do not implement BACnet object functionality or services, are not considered part of the BACnet implementation and do not impact a product's derivative status.

9.2.3 Partial Derivative Product

A product may be considered a partial derivative of another product if it meets the following conditions:

   a. The child product is built from the same source code for all of its BACnet functionality implementation as the parent product

   b. The child product was developed by the same company as the parent product.

Any functionality that is different between the products must be tested on the respective product.

9.2.4 Multiple Product Derivative

Multiple products can be considered a set of products which as a set represent a parent product in order to define additional derivative products as described above.

To define a set of parent products, each member of the parent product set must meet the following conditions:

   a. Each member must be built from the same source code for all of its BACnet functionality implementation.

   b. Each member must be developed by the same company.

 c. Each member must be tested such that the combined tests, include all functionality required by any derivative product, including any conditionality requirements called out in the ***BTL Test Plan***.

9.2.5 Testing of Multiple and Partial Product Derivatives

If both the parent product and the partial derivative product are tested at the same time, then the set of tests that are the same between the multiple products may be distributed between the multiple products.

The RBTO may choose to perform the testing in one of the following ways provided the total number of tests run is not greater than the sum of the unique tests.

 a. All duplicate tests may be run on one product and all unique tests per product are run on the appropriate product.

 b. The duplicate tests can be randomly tested on either product and all unique tests per product are run on the appropriate product.

9.3 Version History

This policy was adopted on September 26, 2017.

10 Testing Dispute Resolution Policy

10.1 Purpose

The Testing Dispute Resolution Policy states the framework and process for appeal in the case of a disagreement on product behavior not covered by existing tests. The BTL testing program allows any vendor to appeal a negative RBTO finding, while ensuring that all functionality is correctly implemented. This appeals policy ensures that the test plan is correctly specified, and that testing is correctly implemented, when resolving the dispute.

10.2 Testing Dispute Resolution Policy Statement

In the event of a disagreement between the vendor and the RBTO over the resolution of a severe problem in the product discovered during testing, but which is not covered by existing tests, this procedure shall apply. A "severe" problem is defined here as a problem that is likely to prevent the device from interoperating with other devices in an otherwise properly functioning system.

a. The BTL Manager reviews the problem. If he deems it to be a severe problem, he reports it to the vendor as such. If he does not deem it to be a severe problem, this procedure is terminated.

b. If the vendor agrees to fix the problem, this procedure is terminated.

c. The RBTO documents the problem and its reasoning why this is a severe problem that must be fixed and presents it to the vendor and the BTL Manager.

d. The vendor either presents a written rebuttal to the BTL Manager that will be appended to the severe bug report, or declares that he is waiving the right. There is no time limit set for this step.

e. The BTL Manager convenes a review committee with five representatives from association members, not including the vendor and presents the RBTO's documentation and reasoning, along with the vendor's rebuttal, if any, to the review committee.

f. The review committee evaluates the documentation and rebuttal. The review committee is permitted to ask questions of the RBTO and the vendor in the course of its evaluation.

g. If the review committee does not find that the problem is severe, this procedure is terminated and the RBTO shall not refuse to award a passing test report because of this problem.

h. If the review committee finds the issue to be a potential interoperability problem, but does not require the problem to be fixed immediately, then the vendor will be notified that the product shall be called back for testing within a year following the date that the BTL-WG adds the test for this problem to the Test Package. See Product Retesting Requirements Policy. Alternately the problem may be fixed immediately by the vendor and verified by the RBTO in which case no call back shall be required. In either case, the BTL shall not refuse to award BTL Certification because of this problem until and unless the product is called back and found not to pass the added test.

i. If the review committee agrees that this is a severe problem that must be fixed, it shall produce a test for this problem within one month of being convened. If BTL via the review committee fails to produce the test, this procedure is terminated and the RBTO shall not refuse to award a passing test report because of this problem.

j. The RBTO performs the test upon the device. If the device passes the test, the BTL shall not refuse to award BTL Certification because of this problem. If the device fails the test, it must be fixed in order to qualify for BTL Certification, or the vendor can elect to appeal to BACnet International per the procedures in the Appeals Procedure.

10.3 Version History

This policy was adopted in May of 2006.

This policy was updated and moved to the BTL Testing Policies document on September 26, 2017.

11 Field Defects Resolution Policy

11.1 Purpose
To define the BTL Policy for handling Field Defects resulting in Interoperability Issues on BTL Listed Products.

11.2 Policy Description
While the BTL strives to provide a thorough testing process, some products may go through the process with undetected interoperability issues, or products may have interoperability issues inserted during the normal course of product maintenance.

In either case, when a problem is encountered with a BTL Listed product, the first action to take is to contact the vendor(s) of the product(s) to get the problem resolved. If there is a disagreement over whether the problem exists in the product, or if the vendor is unwilling to fix the issue, then BACnet International may be requested to help to get the problem resolved.

To request help from BACnet International for such issues, contact the BTL Manager. Be prepared with information about the defective product, the interoperability issue, the installation at which the problem is occurring, and contact information for the individuals that have already discussed the issue.

A BACnet International representative will contact all parties to the dispute and collect statements from each. The problem will then be analyzed by a technical BACnet International representative to determine the accuracy of the report and severity of the issue. If the issue is determined to be an issue with the product in question, and the issue is the result of an error that could be caught through the application of the test package, the BTL Manager shall request that the product be submitted for a retest. If the product is not submitted for a retest within six months, the BTL Listing (and Certification if applicable) for the product shall be revoked and notice of the revocation shall be published on the website along with a description of the known issue. The retesting will be restricted to the functional area in question, and any functional areas that have been changed since the last test application. The cost of retesting will be the responsibility of the product vendor.

The expectation is that the parties to the dispute will provide sufficient information and support to make their case to the BTL Manager so that BACnet International's costs to arbitrate the dispute are minimized. Depending on the nature of the dispute and the costs to resolve it, BACnet International at its sole discretion, may allocate costs of a dispute resolution to the parties.

11.3 Version History
This policy was adopted as version 1 in June of 2012.

This policy was updated and moved to the BTL Testing Policies document on September 26, 2017.

12 Appeal Policy

12.1 Purpose
The purpose of the appeal policy is to ensure a fair and correct testing procedure.

12.2 Policy Description
An Applicant that has submitted a product for testing according to these BTL testing policies may appeal for any of the following reasons:

   a. Applicant believes that the RBTO responsible for testing Applicant's product has misinterpreted BTL's requirements by selecting inappropriate tests. Such an appeal may be filed while testing is underway or after testing has been completed.

   b. Applicant believes that the RBTO responsible for testing Applicant's product performed a test incorrectly or has misinterpreted the results of a test. Such an appeal may be filed while testing is underway or after testing has been completed.

   c. Applicant believes that circumstances exist that may have substantially impacted the ability of the RBTO to perform, repeat, or communicate the results of testing in a professional and objective manner.

An applicant that has submitted a product for Certification according to these BTL policies may appeal any of the following reasons:
   d. Applicant believes that the BTL requirement for Certification is in some way inappropriate.
   e. Applicant believes a BTL requirement for Certification has been misinterpreted.

Testing requirements and the determination as to whether or not a product has met the requirements for a BTL Certification or Listing shall be made by the sole determination of BACnet International. Notwithstanding the foregoing, the parties recognize that questions may arise regarding the interpretation of a requirement, specific decisions, or the test results in general. Such questions may, at the request of the Applicant, be addressed through the Appeals Procedure described here. The full costs of the Appeals Procedure shall be borne by the Applicant. The Appeals Procedure will allow a reasonable opportunity for the Applicant's concerns to be heard, reviewed, and, if determined on appeal to have substance, acted upon.

Applicants are encouraged to resolve disputes without recourse to the Appeals Procedure. Questions about the selection or execution of specific tests should be directed to the management of the test organization or to the BTL Manager, and questions about test requirements should be directed to the BTL Working Group through the BTL Manager.

12.2.1 Appeal Procedure

12.2.1.1 Initiating an Appeal

An appeal shall be initiated by written notice from the Applicant to the Association Manager of BACnet International. The notice must include the following:

a. The reason(s) for the appeal;

b. Documentation supporting the appeal; and

c. A non-refundable deposit of $500 (U.S.) that will be applied to the cost of the appeal.

Applicant must file an appeal of test results no later than six months after the completion of product testing or retesting. Applicant must file an appeal no later than 90 days after notification that a product is not eligible for Certification. Otherwise Applicant loses the right of appeal. Applicant may halt an appeal filed previously by Applicant at any time by written notice to BACnet International's Association Manager.

12.2.1.2 The Appeals Board

Applicant's appeal shall be heard by an Appeals Board consisting of three people selected by BACnet International's Association Manager from a list of people previously approved by BACnet International's President. The members of the Appeals Board shall be selected for each appeal on the basis of their ability to render a fair judgment based on technical and business considerations. A person will be disqualified from serving on an Appeals Board, if in the opinion of BACnet International's Association Manager, the person has a significant conflict of interest that is relevant to the appeal.

Once the members of the Appeals Board are selected, BACnet International's Association Manager will provide the Applicant with the names and affiliations of the members of the Appeals Board. If the Applicant believes that one or more members of the Appeals Board will not be able to render a fair judgment, the Applicant may present relevant evidence to the BACnet International's Association Manager, who after reviewing the evidence and contacting the parties involved, may change the members of the Appeals Board.

Once the Applicant is ready to proceed with the Appeal, BACnet International's Association Manager will officially seat the Appeals Board. The members of the Appeals Board will review the documentation supplied by the Applicant, materials supplied by other parties including the RBTO and BACnet International, and collect any other information that is relevant to the appeal. For each item being appealed, the Appeals Board will issue a decision. Each decision requires a majority vote of the members of the Appeals Board. The decisions may include any or all of the following:

a. Reject an item in the appeal.

b. Reverse the outcome of a specific test already performed by the RBTO, if it is determined that the test organization incorrectly interpreted the test results.

c. Require the RBTO to remove, modify, substitute, or add specific tests in order to test BACnet functionality claimed by Applicant, if it is determined that the RBTO chose tests that did not meet the requirements approved by BACnet International.

d. Require the RBTO to rerun a test, if it is determined that the RBTO incorrectly executed a particular test. Appropriate instructions shall be given to the RBTO.

e. Require the RBTO to take additional steps to ensure that the tests are sufficiently documented and repeatable. Appropriate instructions shall be given to the RBTO.

f. Request the review of a particular test requirement by BACnet International, if it is the opinion of the Appeals Board that the test requirement is not sufficiently clear.

g. Request the review of a particular test requirement by BACnet International, if it is the opinion of the Appeals Board that the test requirement is not appropriate.

The collection of decisions, the reasons for the decisions, and any minority opinions will be presented to BACnet International's Association Manager in a written report. The report shall be completed within 60 days of the formation of the Appeals Board unless BACnet International's Association Manager determines there are unusual circumstances and extends the deadline by an additional 30 days. Failure to deliver the written report by the deadline shall result in the appeal proceeding directly to the BACnet International President. Following the delivery of the written report, the Appeals Board shall be disbanded, although its members may be contacted by BACnet International's President if there is some question about the content of the report.

BACnet International's Association Manager will provide a copy of the Appeals Board's report to Applicant and to the BTL Manager.

12.2.1.3 Review of Test Requirements

If the Appeals Board's report requests the review of one or more test requirements, then BACnet International shall complete such a review of those requirements not later than 30 days after the receipt of the report. The review will be conducted using procedures determined by BACnet International. Such a review may result in the removal, modification, or addition of test requirements, and the new set of requirements shall apply to all of Applicant's products that are currently being tested and all products submitted for testing after the review is complete. BACnet International's Association Manager will inform Applicant of the results of the review.

12.2.1.4 Appeal to BACnet International's Board of Directors

Following the completion of the Appeals Board's report and any possible review of test requirements by BACnet International, Applicant may appeal to BACnet International's Board of Directors by written notice to BACnet International's Association Manager. After reviewing the Appeals Board's report, considering Applicant's arguments, and obtaining any other relevant information, the Board of Directors will issue a decision. The decision reached by the Board of Directors is final and may not be appealed.

Applicant's appeal to BACnet International's Board of Directors must be filed within the 60 days following the receipt of the Appeals Board's report. The Board of Directors shall issue a decision within 60 days of receipt of Applicant's appeal.

12.2.1.5 Implementation of Decisions

BACnet International's Association Manager is responsible for the implementation of decisions reached as a result of this Appeals Procedure.

12.2.1.6 Confidentiality

BACnet International does not guarantee that information pertaining to Applicant's appeal will be kept confidential. In particular, certain documents generated as a result of the appeal will be distributed to people that are involved in determining how BACnet products should be tested by the BTL, and summaries of appeals decisions may be published.

12.2.1.7 Appeal Cost

BACnet International will invoice Applicant for the cost of the appeal. Applicant will be charged $500 in administrative fees, plus reasonable fees for time and expenses charged to BACnet International by the Appeals Board members and the test organization. The maximum amount charged to Applicant for a single appeal will be $5,000. A single appeal may include multiple claims on a single product.

12.2.1.8 Delivery of Documents

All notices, reports, and other documents shall be sent by e-mail, fax, mail or courier, in each instance confirmed by certified mail return receipt requested, with notice to be given to the parties at their principal address as recorded in the official BACnet International records.

12.3 Version History

This policy was adopted 03-Nov-2008.

This policy was updated and moved to the BTL Testing Policies document on September 26, 2017.

13   Expiration of BTL Certification Policy

13.1   Purpose
The purpose of this policy is to define the conditions for expiration of a BTL Certificate and BTL Listing.

13.2   Policy Description
BTL Certificates expire on March 31 following the fifth anniversary of the date of the test report on which the Certificate was based, unless revoked before that time. See Product Retesting Requirements Policy for details on the requirements to maintain qualification for BTL Certification.

BTL Listings expire after 25 years for B-SS and B-SA devices, and after 15 years for all other devices, unless revoked before that time. See Product Retesting Requirements Policy for details on the requirements to maintain qualification for the BTL Listing.

13.3   Version History
This policy was adopted on September 26, 2017.

Change History

Date	Change
22-Apr-2016	Initial release of combined policy document.
16-Mar-2017	Added additional final paragraph to clause 6.2 stating the attestation policy.
25-Sept-2017	Change to wording to include BTL Certification Change to wording from test organization to RBTO Addition of wording concerning Certificate expirations and Annual Review Process. Change in wording concerning current titles and responsibilities of BACnet International. Update to minimum Protocol Revision table.