BEAM

Blacknest BDS release testing

Development Manual – 2.2.2

Project	Blacknest
Date	2020-09-25
Reference	blacknest/bdsTestRelease
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Table of Contents

1. Introduction

This document provides an overview of the testing of the BDS system prior to a new production release.

2. During Development

During the development of new features or fixing, the changes will be tested in detail and any likely affected systems tested.

Preliminary development releases will be produced at key points for release to Blacknest for further testing, perhaps on real data using a test server.

3. Production Release Test

At this stage the new release has undergone testing of the changes and/or new features during development. The production testing is now mainly a regression test.

3.1. Build the code for the current development platform (currently Fedora31)

1. Make sure all of the code builds cleanly without errors or significant warnings.

2. Create an test RPM package to make sure all components are packaged correctly.

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3.2. Build the code for the main Blacknest server system (currently Redhat7)

1. Make sure all of the code builds cleanly without errors or significant warnings.
2. Create an test RPM package to make sure all components are packaged correctly.

3.3. Test Release

This test will be run on the main release targets. These are currently Redhat7(Centos7 compatible) and Fedora31. At all stages check the running processes memory usage and CPU usage especially the bdsServer program.

1. Make sure the appropriate test server is up to date with all software updates applied.
2. Update the BDS RPM packages on a test server.
3. Start off the main bdsServer and test for basic functionality. Use the bdsAdminGui program to check that the metadata access and test sensor data access functions as expected.
4. If necessary clear the test servers sensor data and database to bare metal install state.
5. Run the standard BDS Test suite.
6. Run the BDS Automatic test-standard.
7. Run the BDS Regression test.
8. Test the bdsImportStreamCd realtime import with real data streams from Blacknest. Check logs, BDS data files and test exporting data from newly created sensor data files.
9. Test the bdsImportStreamGcf realtime import with real data streams from Blacknest. Check logs, BDS data files and test exporting data from newly created sensor data files.
10. Blacknest testing.

4. BDS Test Suite

Run the BDS test programs and look for any reported errors.

1. Make sure the bds-test RPM package is installed on the test server.
2. Change to the /usr/bds/bdsTest directory.
3. Install the test database metadata: "./bdsTestCreateMetaData"
4. Import the standard test data: "./bdsTestImport"
5. Test the export of this data: "./bdsTestExport"

The tests are detailed in the BdsTestSuite manual.

5. BDS Automatic Test

At various stages run multiple instances of the "bdsTestAuto" program. These export random segments of data from random station data files reporting any errors.

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6. BDS Regression Test

Perform a regression test using the BDS's Real Data Regression Test as detailed in the BdsTestSuite manual.

7. Blacknest Testing

Once Beam has tested the new release Blacknest will test this on a test server.

8. Final Release

All test RPM packages will be in the Blacknest BDS Testing RPM repository. Once the release is complete the SVN tree will be tagged as a new release and the RPMS files will be moved into the standard stable BDS RPM repository.