Broadcom Limited
Corporate Headquarters: San Jose, CA

BroadView 3.0.2.2 Release Notes

Version 1.0

17 August, 2016

Contents

1 Overview

This document is the Release Notes for BroadView™ Instrumentation Reference Agent for release version 3.0.2.2. The BroadView™ Instrumentation Agent provides means to access the underlying networking silicon's instrumentation features via REST API.

This release contains Buffer Statistics Tracking, Packet Trace and Black Hole Detection features in BroadView software version 3.0.2.2.

2 Deliverables

2.1 Date of Delivery

BroadView 3.0.2.2 is released on August 17, 2016.

2.2 Distribution Method

BroadView 3.0.2.2 is distributed via Broadcom's Github and docSAFE.

2.3 Items included in delivery

Following are the items included in this delivery:

- Black Hole Detection Feature
- Live traffic triggered PTI feature
- BST Congestion Drop Counter feature
- OpenNSL upgrade to 3.2.0.4

The binaries included in the release package are the executables and shared libraries for the different platforms the source archive has been tested against and qualified. These binaries are located at `<broadview-base>/bin/<package>` directory. The details of each set of these binaries within the tar ball are mentioned below.

Binary	Description
BroadViewAgent (Executable)	BroadView™ Instrumentation Reference Agent. The **BroadViewAgent** uses the underlying OpenNSL for the Switch silicon.
BroadViewBstApp (Executable)	The reference application communicates with **BroadViewAgent** using REST API which is a Web (HTTP) like mechanism for communication.
BroadViewPacketTraceApp (Executable)	The reference application communicates with **BroadViewAgent** using REST API which is a Web (HTTP) like mechanism for communication.

BroadViewBhdApp	The reference application communicates with **BroadViewAgent** using REST API which is a Web (HTTP) like mechanism for communication.
ExampleCfgApp (Executable)	The example application communicates with **BroadViewAgent** using internal socket.
libsbopennsl.so.1 (Shared Library)	South Bound plugin shared library. The **BroadViewAgent** dynamically links this library.
libvendorinit.so.1 (Shared Library)	Shared library to initialize OpenNSL. The **BroadViewAgent** dynamically links this library.

2.4 Significant changes from Release Version 3.0.1.1

- Added Black Hole Detection Feature
- Added Live traffic triggered PTI feature
- Added BST Congestion Drop Counter feature
- Upgraded OpenNSL version to 3.2.0.4

2.5 Significant changes from Release Version 3.0.0.2

- Upgraded OpenNSL version to 3.1.0.9

2.6 Significant changes from Release Version 2.0.4.3

- Added Registration and Heartbeat module to allow BroadView Agent to register with a Controller
- Added Buffer usage percentage of BroadView BST statistics

2.7 Significant changes from Release Version 1.0.0.3

- Enhanced REST APIs for Buffer Statistics Tracking feature
    - Added capability to automatically re-enable BST feature upon a threshold breach
    - Added rate limiting for Trigger reports
    - Added configurable facility to send complete data in Async reports
    - Added version number in agent response messages
    - Added API to get switch properties such as ASIC information
    - Added support to report counter related information on threshold breaches
    - Added a configuration option to report buffer statistics in percentage

2.8 Significant changes from Release Version 2.0.4.1

- Enhanced REST APIs for Buffer Statistics Tracking feature
    - Added option to configure the agent reporting statistics in percentage
- Defects Fixed
    - Fixed issue in sending full async reports

- Fixed incorrect `dst-lag-member` value reporting in Packet Trace
- Fixed a segmentation fault while executing `get-bst-thresholds` method

3 Platform Support

The source archive contains the entire source tree for the features being released. It has been tested and qualified against the following build combinations (the binaries of which are available in the `<broadview-base>/bin` directory)

Platform	CPU	OpenNSL	OS	Kernel
TD2_SVK (BCM56850_A2)	GTO	3.2.0.4	brl_2.0	2.6.34.6
TH_SVK (BCM56960_A0)	GTO	3.2.0.4	brl_2.0	2.6.34.6
IM_N2948_6XLM	X86	3.2.0.4	ubuntu_12	Ubuntu 3.5.0-54
S6000	X86	3.2.0.4	Debian 8.0	3.16.7-ckt7

4 Known Issues

- **FP-217202:** Operations on `mc-share-queue-entries-threshold` parameter are currently not supported. Get operations always return zero for this parameter.
- **FP-217230:** Operations on `mc-share-threshold` parameter in `configure-bst-thresholds` method for `egress-port-service-pool` realm are currently not supported. Get operations always return zero for this parameter.
- **FP-221472:** When unicast packet with unresolved DA is injected for tracing the egress LAG port, the packet does not get hashed correctly in the LAG.
- **FP-221473:** Frames sizes greater than 1588 are not supported in the Packet Tracing feature.
- **FP-229379:** On Trident-2 platform, ingress service pool statistics is not cleared on clear statistics command.
- **FP-241517:** On S6000 platform, `mc-buffer-count` (realm: `egress-service-pool`) statistics do not fallback to zero when buffer utilization reaches its maximum and traffic is stopped. When the traffic is started again, the statistics gets updated normally. This behavior is observed only in S6000 platform.
- **FP-243795:** On IM platform, for ingress- realms (i.e. `ingress-port-priority-group, ingress-port-service-pool, ingress-service-pool`), a genuine trigger-report is followed by a second unreal trigger-report with no data content. This behavior is observed only in IM platform.

```
A real trigger-report with “data”
{
        "jsonrpc": "2.0",
```

```
            "method": "trigger-report",
            "asic-id": "1",
            "version": "3",
            "time-stamp": "2016-08-16 - 11:45:43 ",
            "realm": "ingress-port-priority-group",
            "counter": "um-share-buffer-count",
            "port": "13",
            "priority-group": 7,
            "report": [{
                        "realm": "ingress-port-priority-group",
                        "data": [{
                                    "port": "13",
                                    "data": [
                                                [7, 7, 0]
                                    ]
                        }]
            }]
}

An un-real trigger-report with no “data”
{
            "jsonrpc": "2.0",
            "method": "trigger-report",
            "asic-id": "1",
            "version": "3",
            "time-stamp": "2016-08-16 - 11:45:43 ",
            "realm": "ingress-port-priority-group",
            "counter": "um-share-buffer-count",
            "port": "49",
            "priority-group": 0,
            "report": [{
                        "realm": "ingress-port-priority-group",
                        "data": []
            }]
}
```

- **FP-243793:** When BST statistics is requested in percentage and the statistics are smaller in numbers, the percentage calculation results to a value closer to zero. In such a case, the `get-bst-report` json data from Agent shows zeroes instead of blank

5 Previous Releases

Date	Release Number	Feature Set
02 Feb 2015	BroadView 1.0.0.3	Support for Buffer Statistics Tracking
22 Sep 2015	BroadView 2.0.4.1	Support for Packet Tracing & Ganglia Presentation tool

30 Sep 2015	BroadView 2.0.4.3	Enhanced REST API and Defect Fixes
18 January 2016	BroadView 3.0.0.2	Registration and Heartbeat module. Buffer usage percentage of BroadView BST Statistics.
16 May 2016	BroadView 3.0.1.1	Upgraded OpenNSL version to 3.1.0.9