Veryx ATTEST™ BGP4+ Conformance Test Suite DATASHEET

Veryx ATTEST™-CTS Border gateway Protocol version 4 with Multiprotocol extensions (BGP4+) automated test suite provides Equipment Manufacturers and Service Providers an easy and efficient solution for verification of BGP version 4 implementation in routing devices deployable in IPv6 networks. ATTEST enables significant speeding up of testing cycles and reduces the "time-to-market".

Veryx ATTEST BGP4+ Conformance Test Suite is designed for conformance testing of the Border Gateway Protocol version 4 in IPv6 networks. ATTEST BGP4+ relies on ATTEST -- a powerful test framework that requires minimal time for set-up and enables efficient use of time and resources.

Veryx has devised over 210 test cases that comprehensively test for BGP4+ conformance over IPv6 environment. These test cases have been grouped into 8 convenient test groups based on the RFC specifications for each category of functions.

BGP4+ test cases verify sending, modifying and propagation of messages in both IBGP and EBGP implementations. Tests include verification of initiation and establishment of TCP connections. Configuration support for the local system is also verified.

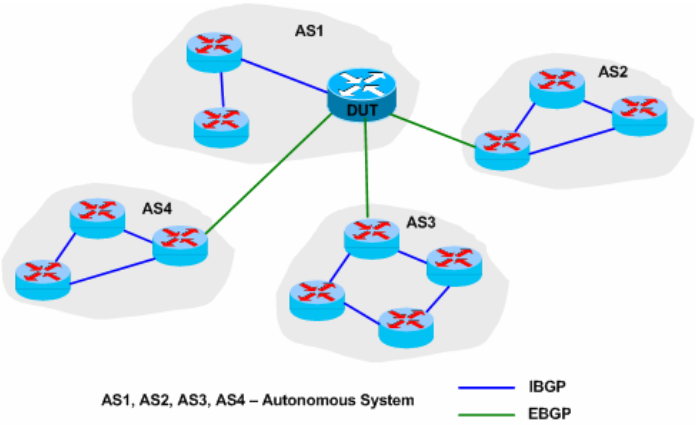

Figure 1. An example of BGP4+ Topology

SPECIFICATIONS

IETF RFC 4271
IETF RFC 2545
IETF RFC 4760

BGP4+ TESTS

* Connection Request
* Local System Configuration
* BGP Functionality
* Message Transaction
* Message Format
* Error Handling
* Finite State Machine
* Update Message Handling

PLATFORM REQUIREMENTS

* ATTEST 6.x Framework
* 3 Ethernet ports
* Serial or additional Ethernet port for DUT management

BGP4+ test cases verify the transaction of messages sent or received, format of the message sent or received and various attributes such as ORIGIN, AS_PATH, NEXT_HOP etc. It also verifies routes stored in ADJ_RIBs_IN, ADJ_RIBs_OUT and LOC_RIBs. BGP TCP session establishment is verified for both Active and Passive neighbors. Handling of finite state machine messages and errors by sending notification messages with error codes and subcodes is also verified.

ATTEST BGP4+ Conformance Test Suite is written in industry standard Tcl scripts. Well-defined APIs and source files provide the flexibility to add, customize or modify the test cases for specific requirements. Together with other ATTEST-CTS and ATTEST-XP test suites for IPv6 protocols, Veryx provides one of the widest ranges of test suites for verification of IPv6. Test suites for IPv4, Layer-2 bridging and Carrier Ethernet are also available.

About Veryx Technologies

Veryx Technologies (formerly Net-O_2 Technologies) provides innovative Verification and Measurement Solutions for the global communications industry. ATTEST solutions verify networking equipment being used for Access, Carrier Ethernet, Data Center, Edge, Enterprise, Industrial and Security. The unique offerings from Veryx enable customers to reduce the "time-required-to-test" and enhance their "time-to-market".

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