Veryx ATTEST™-CTS IPv4-IKEv1 automated test suite provides a wide range of test cases to verify the Internet Key Exchange version 1(IKEv1) implementation in Hosts/Routers/Gateways. ATTEST enables significant speeding up of testing cycles and reduces the "time-to-market".

Veryx ATTEST IPv4-IKEv1 Conformance Test Suite is designed to verify the Key Exchange and Security Association establishment in IPv4 networks. ATTEST IPv4-IKEv1 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 182 test cases that comprehensively test for the MUST and SHOULD IKEv1 conformance. These test cases have been grouped into 8 convenient test groups based on the IETF specifications for each category of functions.
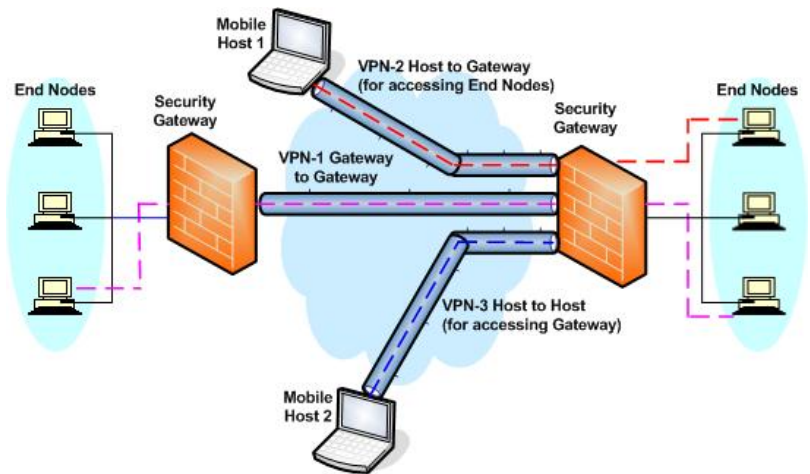
SPECIFICATIONS
IETF RFC2407
IETF RFC 2408
IETF RFC 2409
IETF RFC 4109

IPv4-IKEv1 TESTS
* IKE roles – Initiator & Responder
* Encryption algorithms – 3DES & AES
* Hash algorithms – HMAC SHA-1-96 & MD5-96
* Authentication Method - PSK
* Oakley Groups – Group 2 & 14
* Rekeying both ISAKMP SA & non-ISAKMP SA
* Key generation with or without Perfect Forward Secrecy (PFS)

PLATFORM REQUIREMENTS
* ATTEST 6.x Framework
* 2 Ethernet ports
* Serial or additional Ethernet port for DUT management

Figure 1. An example of a Typical VPN Topology

ATTEST IPv4-IKEv1 test cases verify the IKEv1 support in both Gateway to Gateway and Host to Host (For accessing security gateway) scenarios. As part of IKE Phase I verification ATTEST IPv4-IKEv1 Conformance Test Suite has test cases to verify PDU exchanges for all modes – i.e., Initiator Main Mode, Responder Main Mode, Initiator Aggressive Mode and Responder Aggressive mode. Tests also include verification for handling Phase 1 Error messages. As part of IKE Phase II verification ATTEST IPv4-IKEv1 conformance Test Suite has test cases to verify exchanges for both Initiator Quick Mode and Responder Quick Mode. Tests also include verification for Rekeying both ISAKMP and non-ISAKMP Security associations. Phase II Error messages handling and Key generation with Perfect Forward Secrecy (PSF) are also verified.

ATTEST-CTS IPv4-IKEv1 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 IPv4 protocols, Veryx provides one of the widest ranges of test suites for verification of IPv4. Test suites for IPv6, 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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