

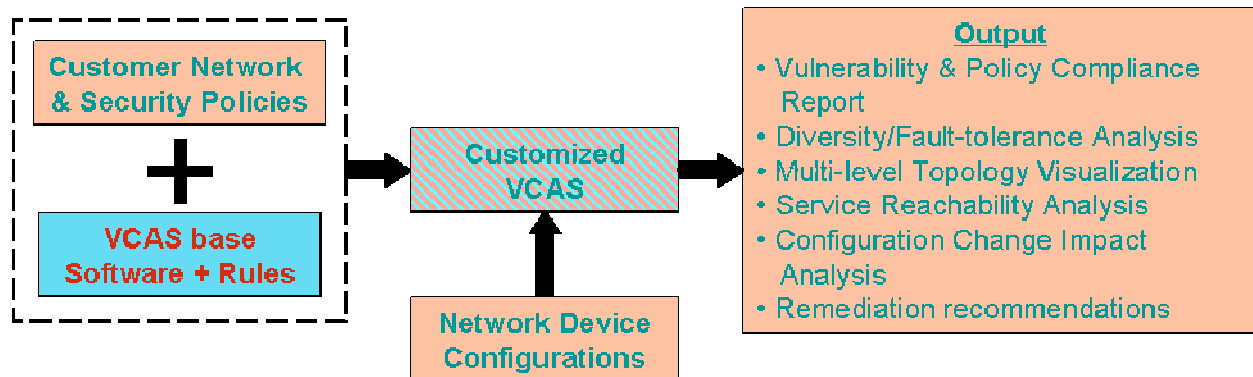
## **VCAS: IP Network Vulnerability and Compliance Assessment System**

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Today's IP network, with its responsibility for transporting real-time and mission-critical traffic, can no longer be considered a "Best-Effort" infrastructure. Fool-proof assurances are necessary about the ability of the IP network to satisfy Security, Regulatory and Availability requirements. Telcordia's VCAS is customizable software that provides these assurances by comprehensive vulnerability and compliance assessment of IP networks through automated analysis of configurations of devices such as routers, switches, and firewalls. Key benefits of VCAS are:

- **Reduce Vulnerabilities:** 65% of cyber attacks exploit systems with vulnerabilities introduced due to configuration errors, according to Gartner. IP network security can be significantly improved if configuration errors can be pro-actively detected. VCAS detects configuration errors efficiently by automating what was previously a difficult and manually intensive task.
- **Ensure Compliance with Security, Regulatory (FISMA, SOX, HIPAA, PCI) and Availability Requirements:** Today it is almost impossible to answer the simple question: "Is my IP network, as currently configured, compliant with my requirements?" Telcordia's VCAS provides this answer by allowing assessors to quickly and completely assimilate the network configuration in its entirety, and evaluate its compliance with end-to-end requirements.
- **Reduce Network Downtime:** Configuration errors are the cause of 62% of network downtime, according to the Yankee Group. VCAS reduces downtime by detecting errors before configuration changes are applied to the network devices.
- **Enable IP Network Situational Awareness:** Device configurations are the "DNA" of the network. VCAS provides multi-level visualizations of the entire network, such as physical and IP subnet connectivity, Virtual LAN, routing, and VPN topology. VCAS also provides a querying capability to determine service reachability between nodes and networks, Quality of Service on network paths, and single point-of-failures.

VCAS provides these benefits at less than 17% of the cost of manual configuration assessments, and is priced competitively relative to other products. Other products use intrusive scanning, link monitoring or device polling techniques, perform piecemeal single-device configuration analysis at best, or rely on resource-intensive simulation techniques. In contrast, VCAS uses patent-pending first-order logic-based algorithms for efficient and non-intrusive assessment and visualization of entire IP networks.



The VCAS server can be accessed securely from web-browsers such as Internet Explorer and Firefox, with separate accounts provided for individual users. Device configurations can be up-loaded using the web-based GUI, or can be periodically down-loaded directly from the devices. A range of devices used in today's IP networks are supported. The assessments include a large knowledge-base of Best-Current-Practices, regulations, and invariants for most IP protocols and technologies, and customer-specific requirements. Simpler customer-specific requirements can be input using the intuitive GUI, while more complicated requirements can be input by leveraging the expressiveness of Prolog. Debugging of the device configurations is simplified due to multi-level visualizations of the IP network based on configuration analysis, which is more accurate since they do not depend on instantaneous and ephemeral network state obtained by scanning, link monitoring or device polling techniques. VCAS can be used periodically, and on-demand such as before making configuration changes. VCAS can be used directly by enterprises, and by 3<sup>rd</sup>-parties acting as a Value-Added-Reseller of the VCAS product or VCAS-based service to their customers.