**Overview**

VortiQa application identification software (AIS) is a commercial-grade deep packet inspection (DPI) software offering that identifies a wide variety of applications traversing the network, including popular voice, streaming audio-video, file-sharing, peer-peer applications and client-server applications. This software package forms a fundamental building block of advanced network equipment such as next-generation firewalls, enterprise wireless LAN access points, secure routers and subscriber traffic policy enforcement devices in carrier networks. VortiQa AIS solution brings the capability of network application visibility, which can be utilized for traffic monitoring, application usage trends and policy enforcement. VortiQa AIS software can be easily integrated with customer’s applications in tap mode as well as in in-line mode. It is built on top of the VortiQa base networking modules and Freescale Linux® SDK in order to leverage the unique Freescale communications processor capabilities such as pattern matching acceleration and data path acceleration, where applicable, to realize optimum performance. This software is accompanied with regular automated online signature update services to ensure application intelligence capabilities to detect emerging and evolving applications and protocols. Freescale offers commercial support and maintenance and optional services around VortiQa AIS software.

**Operation and Benefits**

VortiQa AIS employs deep packet inspection (DPI) to match application-specific signatures in the packet data stream. The signatures are loaded on the device at the boot time and get updated periodically. The DPI capabilities of VortiQa AIS ensure the detection of the supported applications even if they run on non-standard transport (UDP, TCP) ports. The signature-based detection approach is supplemented with traffic characterization, wherever necessary, in order to maximize the detection accuracy.

The Web 2.0 revolution initiated a wide spectrum of content and application delivery over the HTTP transport; this stateless protocol evolved in order to accommodate new MIME types and metadata extensions. VortiQa AIS parses
through various metadata elements and factors those into the application identification process. The rise of e-commerce, as well as widespread privacy concerns, have boosted adoption of HTTPS protocol and given rise to many proprietary encryption protocols. VortiQa AIS extends the application detection service to such encrypted content by deploying an SSL proxy for HTTPS protocol and a traffic characterization engine for proprietary encryption protocols.

VortiQa AIS provides a simplified registration API for customer/third-party applications such as policy enforcement and application visibility correlation and analytics applications. After a new instance of an application is identified on the network, VortiQa AIS invokes the registered call back functions with relevant information of the identified application.

Key Features

- Reliable application detection with 1800+ signatures, e.g. iTunes®, Netflix®, Facebook® and YouTube® with regular updates and increases
- Comprehensive automated signature distribution infrastructure
- Port-agnostic application detection with universal signatures
- Detection of HTTPS-based applications
- Detection of proprietary encrypted applications using traffic characterization engine
- Nested detection for select applications, such as Facebook photo sharing and Facebook games
- Encoded and obfuscated URL support
- Notification methods:
  - ANSI C call back
  - In-packet identification
- Event logging

Signature Distribution Infrastructure

The diagram above depicts the VortiQa AIS signature distribution infrastructure. Freescale hosts the master signature server (MSS) in its data center, and supplies the serving signature server (SSS) reference software as part of VortiQa AIS packages. Customers build their own SSS, which registers with the MSS, and whenever Freescale publishes new signatures, they get delivered to the active SSS over a secure channel. Customer’s deployed devices get their signatures updated from the respective customer’s SSS.

Product Form

VortiQa AIS is developed using the highly portable ANSI C programming language and is optimized to deliver the highest performance on Freescale communications processors. VortiQa AIS leverages hardware pattern-matching engine and other applicable capabilities of processors to achieve superior performance. VortiQa AIS employs optimized search algorithms in software on platforms where hardware PME is not available.

Pricing and Availability

VortiQa AIS is generally available. Please contact your local Freescale representative for pricing.

*For the current signature set information, please visit http://www.freescale.com/webapp/sps/site/overview.jsp?code=VORTIQA_DB

For more information, visit freescale.com/VortiQa

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