

ZAPTHINK ZAPNOTE™

FORUM SYSTEMS *ADVANCED XML NETWORK APPLIANCE*

Briefing Date: July 11, 2002

Analyst: Ronald Schmelzer

Abstract

Rather than requiring each application on the network to comply with the latest XML-based security specifications, compression algorithms, and business process standards, most organizations will seek to implement centralized intermediaries that will handle these tasks on behalf of the applications. Hardware XML Network Appliances can fill the role of the XML and Web Services intermediary in a credible way.

Forum Systems has produced a hardware appliance that aims to fill the role as Web Services Proxy as and XML "Application Firewall" by processing XML network traffic and applying security, routing, and transformation operations to the data in a transparent manner. They see the XML Network Appliance as an increasingly important device that will become crucial to the acceptance and growth of XML use within the enterprise. Forum has correctly reasoned that security is the primary and most immediate market for these XML Network Appliances.

All Contents Copyright © 2001-2002 ZapThink, LLC. All rights reserved. Reproduction of this publication in any form without prior written permission is forbidden. The information contained herein has been obtained from sources believed to be reliable. ZapThink disclaims all warranties as to the accuracy, completeness or adequacy of such information. ZapThink shall have no liability for errors, omissions or inadequacies in the information contained herein or for interpretations thereof. The reader assumes sole responsibility for the selection of these materials to achieve its intended results. The opinions expressed herein are subject to change without notice. All trademarks, service marks, and trade names are trademarked by their respective owners and ZapThink makes no claims to these names.



Perfecting the XML Network Appliance

As Web Services and XML proliferate in the enterprise, IT organizations will seek to enforce greater control and manage the increasing traffic of XML on the network. Rather than requiring each application on the network to comply with the latest XML-based security specifications, compression algorithms, and business process standards, most organizations will seek to implement centralized intermediaries that will handle these tasks on behalf of the applications. These intermediaries will seek to provide a level of security within the enterprise in an increasingly transparent manner. Intermediaries also provide additional value-add to XML and Web Services traffic that it handles, including adding compression and performance optimization, caching, routing, transformation, management, and security features. Given that there will be an increased role for the intermediary, a compelling question is raised as to whether that intermediary will be a software application (such as Service-Oriented Integration applications) or a hardware appliance.

Forum Systems makes a valid case that hardware XML Network Appliances can fill the role of the XML and Web Services intermediary in a credible way. The company has produced a hardware appliance that aims to fill the role as Web Services Proxy as and XML "Application Firewall" by processing XML network traffic and applying security, routing, and transformation operations to the data in a transparent manner. They see the XML Network Appliance as an increasingly important device that will become crucial to the acceptance and growth of XML use within the enterprise. Forum has correctly reasoned that security is the primary and most immediate market for these XML Network Appliances.

The problem with existing security solutions is that security policies have not moved behind the firewall. Current solutions aim at stopping intruders from gaining unauthorized access to data, but nothing stops inside users from accessing systems they shouldn't, nor protecting internal systems from accidentally "leaking" to the outside world through open ports and dumb firewalls. Clearly, enterprises need a new breed of content-aware, application-specific firewalls. These devices must be able to protect specific content at the origin of the content and protect that information at the element or content level.

Why Does XML Need to be Secured?

- XML data is human readable and text-based with no implicit protection meaning that it is "in the clear."
- XML data can easily pass through firewalls and move freely through networks and across the Internet.
- Web Services run mostly over HTTP, which is frequently an open port on most port-based firewalls.
- XML encodes not only the data but also its meaning and how it can be interpreted – making it a threat if it should be widely available.
- There are no accepted best practices for securing XML, but there are plenty of standards that have yet to proliferate in the enterprise
- XML's structure allows it to be secured at the data level, rather than document level, but very few applications can take advantage of this yet.

Forum Sentry

Released at Demo 2002, the Forum Sentry is a 1U rack-mounted server that is focused on providing an end-to-end XML security solution for the enterprise. The solution operates in tandem with other network devices and applications including network routers, firewalls, proxy servers, application servers, and accelerators. The system can operate by intercepting all traffic on the network as an "invisible" proxy server for XML traffic, or can operate along side existing devices functioning as an explicit server aimed at handling XML traffic. Either way, the device has been tailored to handle extremely high throughputs of XML and Web Services traffic.

Forum Sentry makes use of specialized hardware devices and chipsets to accelerate the calculation-intensive activities for encryption and decryption of data on the network. While there exist a number of other solutions for providing complete security on the network, most of these solutions are software based – requiring intensive CPU computing time to be able to handle high levels of throughput. Forum Sentry takes advantage of its hardware architecture by shuttling CPU-intensive encryption tasks to a dedicated SSL computation chip and other specialized hardware.

The Forum Sentry product handles all sorts of XML and non-XML traffic by means of a flexible, multi-tier architecture that aims at handling packets of data in real-time. The system can be administered using a telnet console, Web-based interface, or a Web Services API. Administrators can also configure processing rules and settings using a Java-based Workbench. Through these interfaces, the product leverages the latest XML security and transaction specifications to provide transparent element-level security and data-level encryption policies that live with document throughout its lifecycle, and through multiple hops. The box also provides logging, non-repudiation, and archiving and management capabilities so that it can perform as an integral part of the enterprise IT environment.

The company aims to differentiate its product in the market by focusing on providing complete data lifecycle security in a flexible manner that is easily deployed and managed and provides a high level of performance at a low cost. Current initial target markets include mostly large enterprises including the Global 1000, in particular targeting the Financial Services, Insurance, Health Care, Pharmaceuticals, Government, and High Tech Manufacturing industries. In 2003, the company hopes to expand to include the Small and Medium enterprise.

The ZapThink Take

ZapThink believes that intermediaries will increasingly become an important piece of the XML and Web Services equation. Rather than having to rely on individual end points to comply with security standards, business process and workflow specifications, and optimize their delivery and consumption of XML and Web Services, intermediaries such as Service-Oriented Integration (SOI) applications and XML Network Appliances will fill these roles. It will become easier to simply install hardware and software to solve these problems than it will be to recode end applications. As a result, the Forum Systems solution fills a critical gap that will become even more critical as XML and Web Services proliferates in the enterprise.

There are a number of compelling reasons why the intermediary solution should be hardware in certain instances. When processing power and performance is needed, it is hard to beat a dedicated application that is developed for optimal performance, especially the encryption

TAKE CREDIT FOR READING ZAPTHINK RESEARCH!



Thank you for reading ZapThink research! ZapThink is an IT market intelligence firm that provides trusted advice and critical insight into XML, Web Services, and Service Orientation. We provide our target audience of IT vendors, service providers and end-users a clear roadmap for standards-based, loosely coupled distributed computing – a vision of IT meeting the needs of the agile business.

Earn rewards for reading ZapThink research! Visit www.zapthink.com/credit and enter the code FORAPP. We'll reward you with ZapCredits that you can use to obtain free research, ZapGear, and more!

For more information about ZapThink products and services, please call us at +1-781-207-0203, or drop us an email at info@zapthink.com.

performance that is part of the Forum solution. Also, hardware solutions have a controlled deployment and management model that is easier for IT administrators to control. Rather than having to leave control of crucial network security to individual application developers, IT administrators can centralize and enforce data-level, content-aware security through a hardware appliance.

In general, XML and Web Services security will be handled by four classes of vendors:

- Service-Oriented Integration (SOI) applications, whether Web Services platforms such as IBM, Microsoft, and BEA or specialized SOI solutions from companies such as IONA and Actional.
- Value-added Networks for XML and Web Services such as those provided by Grand Central, Flamenco, and Slam Dunk Networks
- Security software solutions such as those provided by Vordel, VeriSign, Westbridge Technology, and Reactivity.
- XML Network Appliances such as those provided by Forum Systems.

Each of these classes of solutions aims to solve security in different contexts. ZapThink believes that the network appliance approach will be most attractive to end-users who wish to handle internal and external data-level security in a transparent and centralized manner. In order to take advantage of this security transparency, devices such as Forum Sentry are taking advantage of the emerging class of security specifications. Forum Systems hopes to seed the market by providing a free software security toolkit that can be easily plugged into existing Application Servers. Forum System's future looks bright as the adoption of these security specifications grows.

Profile: Forum Systems	(July 2002)
Date Founded: May 2001	
Funding: Privately-held, Venture-backed (GMG Capital Partners & Angel)	
CEO / President: Wes Swenson	
Employees: 30	
Products:	
• Forum Sentry	
Address:	
45 West 10000 South	
Suite 415	
Sandy, UT 84070	
URL: http://www.forumsys.com	
Main Phone: 801-313-4400	
Contacts:	
Wes Swenson wswenson@forumsys.com	
Vanessa Olsen vanessao@mkinc.com	

Related Research

- *Service-Oriented Integration* Report (ZTR-WS103)
- *XML and Web Services Security* Report (ZTR-WS104)
- *Web Services Technologies and Trends* Report (ZT-WEBSRV)
- *XML Proxies* Report (ZTR-DI101)
- *Service-Oriented Management* Report (ZTR-WS106)
- *Phaos Technology* ZapNote (ZTZN-0603)
- *RSA Security* ZapNote (ZTZN-0610)
- *Vordel* ZapNote (ZTZN-0238)
- *Westbridge Technology* ZapNote (ZTZN-0612)
- *DataPower* ZapNote (ZTZN-0132)



About ZapThink, LLC

ZapThink is an IT market intelligence firm that provides trusted advice and critical insight into XML, Web Services, and Service Orientation. We provide our target audience of IT vendors, service providers and end-users a clear roadmap for standards-based, loosely coupled distributed computing – a vision of IT meeting the needs of the agile business.

ZapThink's role is to help companies understand these IT products and services in the context of SOAs and the vision of Service Orientation. ZapThink provides market intelligence to IT vendors who offer XML and Web Services-based products to help them understand their competitive landscape and how to communicate their value proposition to their customers within the context of Service Orientation, and lay out their product roadmaps for the coming wave of Service Orientation. ZapThink also provides implementation intelligence to IT users who are seeking guidance and clarity into how to assemble the available products and services into a coherent roadmap to Service Orientation. Finally, ZapThink provides demand intelligence to IT vendors and service providers who must understand the needs of IT users as they follow the roadmap to Service Orientation.

ZapThink's senior analysts are widely regarded as the "go to analysts" for XML, Web Services, and SOAs by vendors, end-users, and the press. They are in great demand as speakers, and have presented at conferences and industry events around the world. They are among the most quoted industry analysts in the IT industry.

ZapThink was founded in October 2000 and is headquartered in Waltham, Massachusetts. Its customers include Global 1000 firms, public sector organizations around the world, and many emerging businesses. ZapThink Analysts have years of experience in IT as well as research and analysis. Its analysts have previously been with such firms as IDC and ChannelWave, and have sat on the working group committees for standards bodies such as RosettaNet, UDDI, CPExchange, ebXML, EIDX, and CompTIA.

Call, email, or visit the ZapThink Web site to learn more about how ZapThink can help you to better understand how XML and Web Services impact your business or organization.

ZAPTHINK CONTACT:

ZapThink, LLC
11 Willow Street
Suite 200
Waltham, MA 02453
Phone: +1 (781) 207 0203
Fax: +1 (786) 524 3186
info@zapthink.com

