



Aviva® HostShield™

Securing and Simplifying TN Access

Securing inbound connections from remote access, intranet or extranet to your IBM mainframes and AS/400 hosts

Mainframes house the majority of critical business data of large corporations. In the past, mainframes have typically been isolated from the 'outside' world – people assumed they were secure.

Today, many corporations are providing internal and remote users access to mainframe data and applications via the Internet or intranet, without taking additional security precautions. Firewalls are a must, but not enough! Inbound connections to the mainframe leave a port wide open, poking holes in your firewall. Aviva HostShield provides additional security to ensure that your corporate data is protected from malicious internal or external attacks or misuse.



Aviva HostShield is a unique Host Access Security solution to protect your corporate mainframe data from attacks or misuse. Aviva Solutions is a member of the Check Point OPSEC alliance and Aviva HostShield is Check Point OPSEC certified. Aviva HostShield works with Check Point™ VPN-1/Firewall-1®, the world's leading firewall product, to provide you with the most comprehensive end-to-end host security solution.

Key Features

TN Intrusion Detection System (IDS) – Performs real-time analysis of Telnet and TN protocols using stateful inspection. When suspicious activity or a known intrusion is detected, Aviva HostShield triggers alarms (SNMP, email), writes logs, and instructs the firewall to perform actions such as dropping the connection.

TN proxy gateway (Application level firewall) – Controls network traffic at the application level. It can block or allow TCP traffic based on rules and Intrusion Detection System decisions. Aviva HostShield is closely integrated with Check Point VPN-1/Firewall-1 that manages classical attacks at the IP and TCP levels.

Encryption – Provides strong encryption of network links using TLS or SSL protocols or alternatively, via Check Point's Virtual Private Network (VPN) using the IPSec standard protocol.

Intrusion Detection and Firewall Solution for Host Access



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New business opportunities introduced by e-business or remote access allow intruders through your firewall via an open port, exposing your network and compromising the confidentiality of your corporate data. The TN intrusion detection capabilities of Aviva HostShield provide one more level of security above your current firewall to ensure that only legitimate users access your critical business applications. Aviva HostShield is completely transparent to both users and mainframe applications and seamlessly coexists with other security tools.

Additional Features

Network Address Translation (NAT)

Conceals internal network addresses from the Internet by a virtual reserved IP address managed by the firewall.

Authentication

Strongly authenticates users, client computers or sessions using smart cards, token-based products such as SecurID, LDAP-stored passwords, RADIUS or TACACS+ servers, pre-shared secrets, X.509 digital certificates, or advanced biometric techniques. User information is stored either in the Check Point VPN-1/FireWall-1 repository or in the mainframe security system (RACF, TSS or ACF-2) through an LDAP compatible directory. HostShield authentication mechanisms can also be integrated with popular SSO solutions such as IBM Tivoli Global Sign-On or CA eTrust Single Sign On.

Central Management

Provides a central management GUI to change and manage configurations, licenses, and LDAP-based users, groups and machines. Additionally, Check Point provides a central management console to manage firewall rules and publish them on the enforcement points.

Key Benefits

- **An additional safeguard** reducing vulnerabilities, and internal as well as external threats to your mainframe
- **Unique real-time intrusion detection and prevention system** for IBM mainframe and AS/400 systems
- **Unique end-to-end encryption with protocol filtering** between client applications (PC-to-host, Web-to-host, or EAI) and the mainframe protecting the confidentiality and integrity of your corporate data
- **User confidentiality** with the use of specific encryption algorithms and cipher suites to access TN servers, ensures that users comply with security policies, imposing the use of specific SSL/TLS cipher suites
- **Comprehensive logging capabilities** – provides detailed intrusion attempt information including the identity of the intruder and the type of violation or activity
- **Central management, monitoring, and auditing**
- **Non-intrusive** - does not require software to be installed or configured on the mainframe and additional software is not required on the client computer
- **Compatible with your current network** – works with any client emulator or Web-based application and TN server
- **Flexible deployment** - can run on the firewall server, or a separate server, allowing the firewall and the IDS to perform at an optimum level
- **Operating system independent technology** allowing compatibility with Microsoft Windows, Sun Solaris and RedHat Linux

The image displays two screenshots of the Aviva HostShield software interface. The top screenshot shows the 'Aviva HostShield Configuration Editor' window, which is used for configuring intrusion detection and encryption settings. It features tabs for 'Intrusion Detection', 'Diagnostics', and 'Encryption'. Under 'Intrusion Detection', there are checkboxes for 'Enable', 'Allow TN3270 traffic', 'Allow TN3270E traffic', and 'Allow TN5250E traffic'. The 'TN3270E' section is expanded, showing options for 'Enable', 'Inactivity timeout (in seconds): 60', 'Device-type' (set to 'Enable'), 'Validate device-type name' (set to 'Enable'), and 'Severity level' (set to 'Severe'). The bottom screenshot shows the 'Aviva HostShield SAM Manager' window, which displays a table of firewall rules and their configurations. The table has columns for Src Address, Src Netmask, Dst Address, Dst Netmask, Dst Port, Protocol, Log and Alert, Action, and Expiration. The table contains several rows of rule configurations, including one for '181.58.143.1' and another for '208.187.155'. Below the table, there are buttons for 'Connect', 'Disconnect', 'Delete Rule', 'Delete All Rules', 'Refresh', and 'Help'. The footer of the SAM Manager window reads 'Copyright © 2002 Aviva Solutions Inc. All rights reserved.'

Aviva HostShield Technology

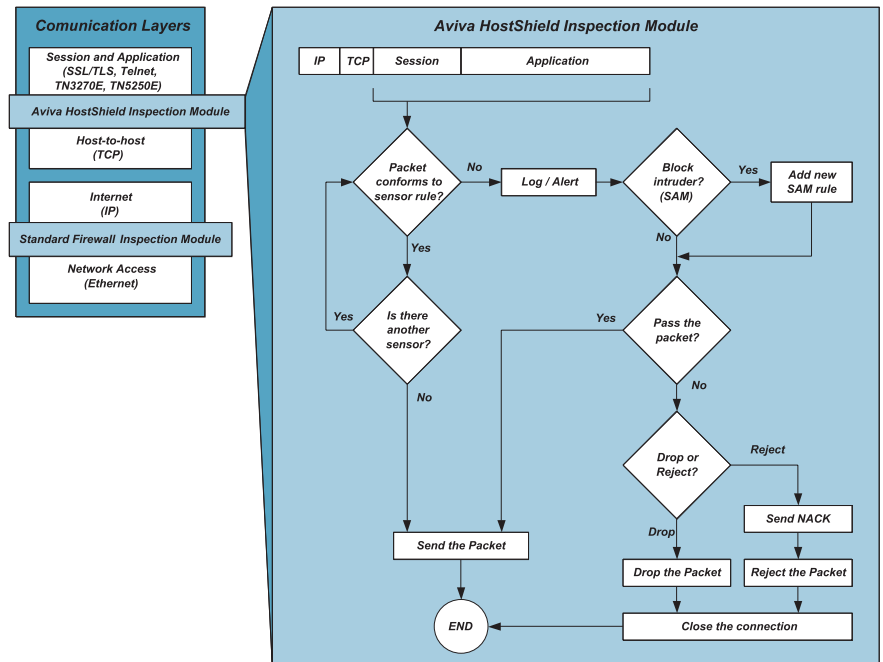
Aviva HostShield provides a powerful Inspection Module that uses stateful inspection to examine every packet passing through the security enforcement point to access the host computer. This module can trigger logs and alerts, and according to the configuration, drop the connection and block subsequent intruder attempts. All the logs and alerts for the entire system are centralized and accessible from the systems administrator's workstation. Packets do not access the host computers unless they comply with the enterprise Security Policy.

Aviva HostShield protects your network against:

- Attempts to obtain sensitive data using TN port scanning, LU scanning combined with dictionary attacks or brute force attacks.
- IP packet sniffing on the network to retrieve user IDs and passwords.
- Data content modifications.
- IP packet spoofing to gain access to an application on behalf of another authenticated user.
- Denial of Service (DoS) attacks on the TN server using SSL, or Telnet and/or TN handshake looping or incomplete negotiations.
- Protocol violations that result in a buffer overflow.

Aviva HostShield inspects all of the SSL/TLS, Telnet and TN traffic for protocol violation, suspicious activity and custom restrictions.

Aviva HostShield Inspection Technology



Performance Impact of Aviva HostShield's Inspection Module: according to the results of Aviva Solutions testing, Aviva HostShield's Inspection Module adds a few hundred milliseconds of overhead to the network exchange time. This overhead was measured with all of the Intrusion Detection sensors turned on and with several hundred simultaneous connections from the TN emulator to the TN servers through HostShield. The overhead added by Aviva HostShield is not noticeable from a user's perspective.

Security Safeguard ROI

Aviva HostShield is insurance against TN server attacks. The Return On Investment (ROI) is immeasurable. Can you afford to find out how much time, information and money you will lose without Aviva HostShield protecting your corporate data and critical business applications? Let Aviva HostShield act as your insurance policy against TN server attacks!

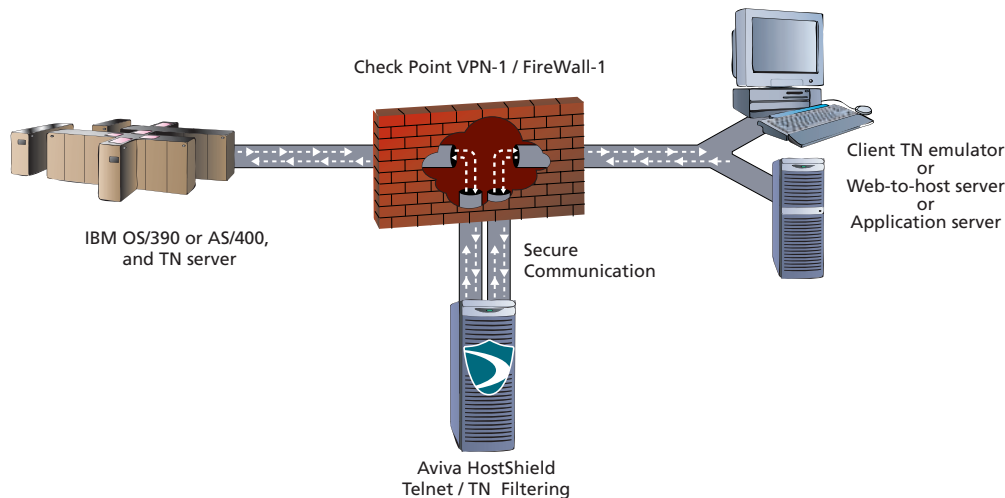
Host Penetration Testing

Host penetration testing is designed to expose key security vulnerabilities in your host at various levels. We have partners in North America and Europe who specialize in host penetration testing and can provide such services to Aviva Solutions' customers.

Consulting and Training Services

We offer consulting and training programs designed to meet your specific needs. Trust Aviva Solutions to deliver. Put our experience to work for you.

Aviva HostShield Network Diagram



Technical Specifications

- Microsoft® Windows® 2000 Server and Microsoft® Windows® 2000 Advanced Server
- Solaris® 7 SPARC, Solaris® 8 SPARC
- RedHat® Linux® 7.0 and 7.2
- Check Point™ Firewall-1/VPN-1® 5.0 NG with FP1
- Compatible with all TN Servers and all TN clients such as PC-to-host, Web-to-host, Enterprise, eBusiness or eCommerce portals
- TN3270, TN3270E, and TN5250E protocols

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Proven Solutions for
Secure Host Access and Integration