The first agentless Security, Virtual Firewall, Anti-Malware and Compliance Solution built for Windows Server 2012 Hyper-V
#1 Hyper-V Security

The *first* agentless Security, Virtual Firewall, Anti-Malware and Compliance Solution built for Windows Server 2012 Hyper-V
Today’s Reality

The March to 100% Virtualization

2010
Virtual Servers 25%

2012
Virtual Servers 52%

2014 est.
Virtual Servers 75%

Sources: Gartner 2010, Forrester 2012 and 2014
Driving Exponential Growth for Virtualization Security

(US $ million)

Source: Technavio. April 2012
Windows Server Hyper-V: Growing Market Acceptance

New Virtualization Servers (2012)

- VMware: 36%
- Windows Server Hyper-V: 36%
- Other: 28%

Source: Gartner
Microsoft Exponentially Accelerates This Movement

New Hyper-V Release: Democratizes Virtualization and Cloud
Virtualization Changes the Game for Security/Compliance

New Level of Risk and Exposure

- **High-density Servers**: larger impact if compromised
- **VM Sprawl**: instant provisioning, offline machines: more exposure points
- **Intra-VM Traffic**: creates blind spots, threats bypass perimeter
- **Dynamic IT Loads**: Live Migration, ever-changing security posture
Virtualization Requires a New Approach To Security

Old Way: agent-based

- Overhead provisioning, managing and updating multiple agents
- Consumes resources, reduces performance
- Creates AV storms

New Way: agentless

- No need to manage and update multiple agents and signature databases
- No degradation of performance, maximize consolidation ratios
- Fast, incremental scans
- Eliminates AV storms
You Should Not Have To…

- Drive up IT costs
- Install agents that consume valuable resources
- Have the headache of deploying and managing agents on every VM and different guest OS
- Reduce your consolidation ratio
- Perform simultaneous scans which drain resources and cause anti-virus storms that impact performance
- Be forced to install agents to maintain QoS and control intra-VM traffic
Today’s Need: Additional Layer of Hyper-V Protection

Leverage Hyper-V Extensible Switch

Additional Security and Compliance Capabilities

- Agentless, incremental scan
- AM caching
- Orchestrated scans
- Set thresholds to avoid AV storms
- Centralized management
- Proactive real-time monitoring
- Application level protection
- Isolate VM’s: security policies
- Multi-tenant protection
- Network virtualization support
- Control and protect intra-VM traffic
- Stateful, deep packet inspection
- Security follows VMs during Live Migration
- Granular QoS
- Aggregate, analyze, audit logs

Manage Risk, Improve Protection, Ensure Compliance
The Answer: 5nine Software

The first and only agentless anti-malware and filter-in security solution for Windows Server 2012 Hyper-V
Introducing 5nine Software

#1 Hyper-V Security
First and only agentless anti-malware and filter-in security solution for Windows Server 2012 Hyper-V

- Virtualization Security Management Company
- Market Maker: built from ground-up for Windows Server Hyper-V
- Agentless for virtualization and cloud
- Global coverage
- Trusted by over 20K users worldwide: SMB, Enterprises, Hosted
- Delivering a new level of protection and compliance for Windows Server Hyper-V
- Powerful, yet easy-to-use
5nine Hyper-V Enterprise, SMB, Hosting customers

Forward-thinking executives

- Vodafone
- HSBC
- IBM
- Goldman Sachs
- KCES
- Finisterre
- IEEE
- Department of Defense
- GMX
- CBeyond
- WEB.DE
- Telenet
Partnership with Microsoft

- Deep technology collaboration
- Built from ground-up for Microsoft Windows Hyper-V
- Certified extension for the Windows Server 2012 Hyper-V Extensible Switch
- First and only agentless anti-malware and filter-in security solution for Windows Server 2012 Hyper-V
- New level of protection and compliance for Microsoft Windows Hyper-V
Why Forward-Thinking Execs Choose 5nine

Security Built for Windows Server Hyper-V
- Native: built from the ground-up for Windows Hyper-V
- Optimized for Windows Hyper-V
- Leverage Hyper-V Host vSwitch and Windows Filtering
- Agentless security approach
- Additional layer of protection and compliance

Multi-Layered Protection for Your VM’s
- Integrated firewall, anti-virus/anti-malware, intrusion detection system
- Isolate and secure VM’s by ID, names, org unit, user
- Support network virtualization and multi-tenant security
- Spot threats proactively

Relieve Admin Headache
- Centralized management and control of security and compliance
- Administration of policies, rules, filters
- Log and analysis with full audit
- Powerful, yet easy-to-use
- Armed for the unexpected

Maximize Hyper-V Investment
- Lightweight agentless approach
- Maximize your consolidation ratio and density
- Won’t consume valuable Windows Hyper-V resources: no degradation of performance
- Supports Hyper-V Windows12, 2008R2: aligned with Hyper-V economics

Intensified Effort: Manage Security, Risk and Compliance
# Multi-Layered, Native Windows Hyper-V Security Solution

## Security Manager
- Enterprise-grade
- Aggregate security control
- Policies, filters and settings
- Simplified deployment

## Anti-Virus/ Anti-Malware
- Agentless: no degradation
- All versions of guest O/S supported by Windows Hyper-V
- Fast, incremental scan
- Orchestrate scans and set thresholds across VM’s
- Staggered scanning
- Caching across VM’s
- Centralized management

## Virtual Firewall
- Application-level protection against a wide range of exploits
- Isolate VM’s: manage security programmatically per VM
- Control and protect inbound, outbound, intra-VM traffic
- Multi-Tenant protection and support of network virtualization
- Stateful, deep packet inspection
- Granular QoS
- Aggregate, analyze, audit logs

## Intrusion Detection
- Industrial-strength
- Pro-active, real-time threat monitoring (detect, warn, block)
- Block application-level attacks
- Behavioral: build baseline for known attacks

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5nine Software, Inc. Proprietary & Confidential
Isolate, harden and secure every VM, secure intra-VM traffic
Live Migration support
Protection and compliance by VM, user, application, organizational unit

Agentless deployment
Incremental scan using snapshot
Inbound/outbound traffic throttling
Log, analysis, audit

Centralized, administration of policies, filters, rules
5nine Security Manager Uses Hyper-V Extensible Switch Components

5nine Security manager: purpose-built to leverage Hyper-V extensible switch components to filter network traffic and perform anti-malware protection.

- Windows Filter Platform (WFP) Extensions can inspect, drop, modify, and insert packets using WFP APIs.
- Windows Antivirus and Firewall software uses WFP for traffic filtering.

Legend: 5nine components =
Windows Server 2012 Hyper-V: Journey to Cloud

IT-as-a-Service

- Secure and Protect Cloud Assets
- Manage Business Risk
- Deliver Security Service Levels
- Contain Security Admin Costs
- Access, Privacy, Data Protection
- Compliance and Regulatory Controls in Cloud
Benefits for any size Hyper-V customer

**SMB**
- Move from reactive to proactive AV/AM protection and security
- Do more with less: minimize IT security burden
- Lowest cost, no degradation of performance

**Enterprise**
- Compliance and risk management: collect more data - accessible and auditable
- Fundamentally restructuring the IT cost structure for security and compliance
- Protect private cloud and enable smooth shift to IT-as-a-Service

**Hosting Providers**
- First and only agentless architecture for better deployment and performance
- Multi-tenancy with full protection of public cloud
- Security and compliance by customer
Benefits Across the Organization

**IT Executive**
- Highest protection of Hyper-V environment
- Cut IT Security OPEX
- Ensure business continuity, manage risk

**IT Security**
- No surprises
- Defense in-depth
- Pro-active security
- Reduce compliance risk

**IT Infrastructure & Ops**
- Simple to deploy
- Automated: no headaches
- Operational dexterity
- Visibility with new tools to manage, control, fix
- Powerful, yet easy-to-use

**Enterprise Architect**
- Optimized for Hyper-V
- Clean-sheet design: native
- Supports multiple O/S
- Leverages Hyper-V extensions
"More and more companies are looking to Windows Server Hyper-V virtualization. 5nine Security Manager with Anti-Malware and Virtual Firewall is designed to help our mutual customers address the important security and compliance considerations that are part of every virtualization deployment."

Ian Carlson, Director, Windows Server and Management

"Scalability and thus ROI of virtualization projects have been restricted by the intensity of security applications. Traditional anti-virus solutions were designed so customers had to run an instance of the security agent in each guest. All of these instances quickly add up to significant performance issues, with painful cost implications. In the new 5nine Security Manager, Sophos Anti-Virus can perform expensive security tasks centrally on the host, significantly enhancing performance while maintaining protection."

James Lyne, Director of Technology

"We are extremely excited to have this OEM agreement with 5nine Software. 5nine new virtual firewall and anti-malware solution will control network traffic between virtual machines, detect and block malicious attacks, and perform fast anti-virus scans, thus improving the security of a Hyper-V virtualized environment. HEROware has appliance version of 5nine Security."

Lynn Shourds, CTO
<table>
<thead>
<tr>
<th>Initiative</th>
<th>Immediate Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud Computing</td>
<td>Securely manage cloud assets</td>
</tr>
<tr>
<td>Server Consolidation</td>
<td>Protect virtual machines</td>
</tr>
<tr>
<td>Virtualization</td>
<td>New level of protection – optimized for VM’s</td>
</tr>
<tr>
<td>Cost Control</td>
<td>Eliminate excessive admin burden, maximize host/cluster density</td>
</tr>
<tr>
<td>IT-as-a-Service</td>
<td>Manage service levels, quality of service</td>
</tr>
<tr>
<td>Compliance</td>
<td>Collect more data, accessible and auditable: PCI, etc.</td>
</tr>
</tbody>
</table>
In Conclusion

The march to 100% virtualization

2010  2012  2014

Traditional approach to security won’t work for virtualization

New Way: agentless

Traditional approach to security won’t work for virtualization

The answer: first security and compliance built for Windows Server Hyper-V

www.5nine.com

Try and buy
www.5nine.com
Positioning Strategy

Target Markets
Hyper-V Installed Base

- SMB
- Enterprise
- Hosting

Buyer Types

- Hyper-V Champion
- IT Executives: Head of IT, CIO, CISO
- IT Infrastructure and Ops
- IT Security

Problem Solved

Virtualization requires a new approach to security. Traditional security built for another era.

Key Differentiators

- Only Native Hyper-V Security
- Complete Suite: Mgr, FW, AM, IDS
- Agentless approach
- Orchestration, incremental scanning
- Log and analysis, bandwidth throttling
- Pro-active detection
- Centralized mgt and control, rules, filters
<table>
<thead>
<tr>
<th>Issue</th>
<th>Benefit (Pillar)</th>
<th>Differentiated Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional security doesn’t work for virtualization (convergence, intra-vm traffic, sprawl, dynamic loads)</td>
<td>First Purpose-Built Security for Hyper-V</td>
<td>Native: built from the ground up for Hyper-V</td>
</tr>
<tr>
<td>Hyper-V security is not good enough for today’s security and compliance needs</td>
<td>Multi-Layered Protection for Your VM’s</td>
<td>Integrated Firewall, Anti-virus/Anti-Malware, Intrusion Detection System</td>
</tr>
<tr>
<td>Security is an IT admin burden</td>
<td>Relieve the Admin Headache</td>
<td>Centralized administration</td>
</tr>
<tr>
<td>IT budget pressures</td>
<td>Maximize your Hyper-V investment</td>
<td>Agentless approach, Economical investment</td>
</tr>
</tbody>
</table>
Security and Compliance to Fit your Environment

Agent-based when you need it

Agentless

Combination (do both)

Agent

5nine Windows Server Hyper-V Security Management

#1 Hyper-V Security
5nine Software, Inc. Proprietary & Confidential
5nine Hyper-V enterprise customers

Forward-thinking executives

- IBM
- Cisco
- Verizon
- Goldman Sachs
- GM
- HSBC
- Accenture
- Dell
- ING
- Microsoft
- HP
- AT&T
5nine Hyper-V SMB customers

Forward-thinking executives

SWC  NDYNAMICS  CLARITY  telenet
KCES  web3talk  SCAS  FINISTERRE
SIP  netfunction  widder  FIEGE.NET
5nine Windows Server Hyper-V Hosting Customers

Forward-thinking executives

FiberCloud

CBEYOND

fasthosts

ResellerChoice

USA.NET

web.com
## Two Very Different Choices

<table>
<thead>
<tr>
<th>Security Company</th>
<th>Router Company</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus:</strong></td>
<td></td>
</tr>
<tr>
<td>Hyper-V Security and Compliance</td>
<td>Security is an After-Thought</td>
</tr>
<tr>
<td><strong>Target Buyer:</strong></td>
<td></td>
</tr>
<tr>
<td>SMB, Enterprise, Hosting</td>
<td>Juniper Customers, Big Data Ctr.</td>
</tr>
<tr>
<td><strong>Agentless AV/AM</strong></td>
<td>Not Available: Agent</td>
</tr>
<tr>
<td><strong>Incremental Scan</strong></td>
<td>Not Available</td>
</tr>
</tbody>
</table>