



System Requirements

RealSecure® Network Intrusion Detection System

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Contents of This Document

This document describes the system requirements for the current versions of RealSecure® Network Intrusion Detection System (IDS). For System Requirements documentation for other RealSecure components, please visit the documentation download center at <http://www.iss.net/support/documentation>.

Overview of RealSecure Components

This guide provides system requirements guidelines for the following RealSecure components:

- RealSecure Network Sensor 7.0 for Windows Server 2003 Service Pack 1 (including Full-Duplex)
- RealSecure Network Sensor 7.0 for Windows 2000 (including Full-Duplex)
- RealSecure Gigabit Network Sensor 7.0 for Windows 2000
- RealSecure Network Sensor 7.0 for RedHat Linux
- RealSecure Gigabit Network Sensor 7.0 for RedHat Linux

Getting the Most Current System Requirements

This document is updated periodically. The latest version can be found on the Internet at:

http://documents.iss.net/literature/RealSecure/rsns_sysreqs.pdf

Definitions—Dedicated System

RealSecure Network IDS components require dedicated systems. Where a dedicated system is required, the computer system should contain no software other than the component's software and the required third-party software.

System Requirements: RealSecure Network Sensor

RealSecure Network Sensors monitor network packets and look for signatures that could indicate an attack against your network. The RealSecure Network Sensor monitors all the traffic on half-duplex or full-duplex, 10/100 Mbps network segments.

Note the system requirements outlined below for Network Sensor are based on average traffic conditions. Due to variations in traffic composition and network utilization in different environments, your performance may vary. In high-utilization environments you may notice performance benefits when using faster CPUs and more memory than the recommended values.

RealSecure Network Sensor for Windows 2000 & Windows Server 2003 SP1

The system requirements for the Windows version of the RealSecure Network Sensor are:

RealSecure Network Sensor for Windows Requirements	
Processor & Memory Recommendations	<p>These specifications are meant to provide an estimate of the performance you should expect given average network conditions. Due to variations in network design and actual traffic composition, your results may vary.</p> <p>Up to 25 Mbps (using regular performance default Windows driver):</p> <ul style="list-style-type: none"> ▪ Pentium II w/ 256 MB minimum ▪ Pentium III w/ 512 MB recommended <p>Up to 45 Mbps (using regular or high performance 3Com driver):</p> <ul style="list-style-type: none"> ▪ Pentium III w/ 256 MB minimum ▪ Pentium III 800 MHz w/ 512 MB recommended <p>Up to 100 Mbps (using high performance 3Com driver only):</p> <ul style="list-style-type: none"> ▪ Pentium III 800 MHz w/ 512 MB minimum ▪ Dual Pentium III 800 MHz w/ 1 GB recommended <p>Note: Intel Pentium 4 and Xeon processors are also supported.</p>
Multi-sensor Recommendations	<p>Up to four network sensors may run on a single machine. Combined bandwidth should not exceed the above recommendations for given hardware. For example, each sensor in a four-sensor machine should handle no more than one quarter the total bandwidth stated in the above recommendation for any given machine. Faster dual CPUs and additional memory resources (> 1 GB) may improve performance of multi-sensor machines.</p>
Operating System	<ul style="list-style-type: none"> ▪ Microsoft Windows Server 2003 SP1 ▪ Microsoft Windows 2000 Professional SP2-3 ▪ Microsoft Windows 2000 Server SP2-3 ▪ Microsoft Windows 2000 Advanced Server SP2-3 <p>We highly recommend that you install Network Sensor on an NTFS formatted partition. FAT and FAT32 partitions do not allow the system to be hardened.</p>
Hard Disk Requirements	9 GB Ultra ATA EIDE or Wide SCSI
Dedicated System?	Yes
Other Requirements...	<p>Regular Performance Monitoring Interface: Any PCI network adapter capable of promiscuous mode and connected to the network segment to be monitored, supporting any of these standards:</p> <ul style="list-style-type: none"> ▪ Ethernet; Fast Ethernet; Token Ring; FDDI <p>Optional: A second network adapter connected to a secure network for dedicated communications with RealSecure Workgroup Manager or RealSecure SiteProtector.</p> <p>High Performance Monitoring Interface: One 3Com 3C905B, C ,CX-TX-M or CX-TX-NM PCI network adapter per monitored interface.</p> <ul style="list-style-type: none"> ▪ Management Interface: One standard 10/100 Ethernet card for regular network access and reporting to RealSecure Workgroup Manager or RealSecure SiteProtector. <p>NOTE: A separate management interface is a requirement when using the high performance 3Com driver.</p> <p>NOTE- If RSKills are to be used in conjunction with the high performance driver, you must use an additional network adapter for the kill interface.</p>

RealSecure Network Sensor (Full Duplex) for Windows 2000 and Windows Server 2003 SP1

RealSecure Network Sensor with integrated full duplex segment monitoring is supported on the two certified platforms below.

Note: Multiple full duplex sensors on a single host are not supported.

RealSecure Network Sensor (Full Duplex) Sensor Requirements

Processor & Memory Recommendations	<p>These specifications are meant to provide an estimate of the performance you should expect given average network conditions. Due to variations in network design and actual traffic composition, your results may vary.</p> <p>Up to 45 Mbps full duplex (using high performance 3Com driver):</p> <ul style="list-style-type: none"> ▪ Pentium III 800 MHz w/ 256 MB minimum ▪ Pentium III 800 MHz w/ 512 MB recommended <p>Wire speed full duplex (using high performance 3Com driver):</p> <ul style="list-style-type: none"> ▪ Pentium III 1 GHz w/ 512 MB minimum ▪ Dual Pentium III 1 GHz w/ 1 GB recommended <p>Note: Intel Pentium 4 and Xeon processors are also supported.</p>
Operating System	<ul style="list-style-type: none"> ▪ Microsoft Windows Server 2003 SP1 ▪ Microsoft Windows 2000 Professional SP2-3 ▪ Microsoft Windows 2000 Server SP2-3 ▪ Microsoft Windows 2000 Advanced Server SP2-3 <p>We highly recommend that you install Network Sensor on an NTFS formatted partition. FAT and FAT32 partitions do not allow the system to be hardened.</p>
Hard Disk Requirements	9 GB Ultra ATA EIDE or Wide SCSI
Dedicated System?	Yes
Monitoring Requirements	<ul style="list-style-type: none"> ▪ Monitoring Interfaces: <i>Two</i> 3Com 3C905B, C, CX-TX-M or CX-TX-NM network adapters. ▪ One Finisar single port ethernet tap. Part number: UTP Tap IL/1 (a single-port, full duplex 10/100 Ethernet splitter). To purchase a Finisar tap, contact a Finisar sales representative or visit: http://www.finisar.com. Alternately, you may also use previously available Shomiti Century Tap, part number: CT1001-010 (a single-port, full duplex Ethernet splitter). NetOptics also provides taps that may work with RealSecure Network Sensor. ▪ Management Interface: One standard 10/100 Ethernet card for regular network access and reporting to RealSecure Workgroup Manager or RealSecure SiteProtector.
Other Requirements...	<ul style="list-style-type: none"> ▪ Ensure that the hardware platform you choose supports one of the 3com 3C905 cards stated above. ▪ For optimal detection performance, at a minimum, your chosen hardware platform should support either a single PCI-X bus (66MHz or higher), or two independent PCI (33MHz) buses – one for each 3com monitoring adapter.

RealSecure Gigabit Network Sensor for Windows 2000 & Windows Server 2003 SP1

The RealSecure Gigabit Network Sensor monitors all traffic on Gigabit network segments.

Note: Updated drivers are available on the ISS Customer Download Center that add support for Intel's newer Pro/1000 MF & MT server adapters. Instructions for installing the drivers for use with RealSecure Gigabit Network Sensor are also provided there.

RealSecure Gigabit Network Sensor for Windows Requirements	
Processor & Memory Recommendations	<p>These specifications are meant to provide a rough estimate of the performance range one might expect given average network conditions. Due to variations in network design and actual traffic composition, your results may vary.</p> <p>Up to 200 Mbps (using high performance Intel Pro/1000 driver):</p> <ul style="list-style-type: none"> ▪ Pentium III 800 MHz w/ 512 MB <p>Up to 400 Mbps (using high performance Intel Pro/1000 driver):</p> <ul style="list-style-type: none"> ▪ Dual Pentium III 800 MHz w/ 512 MB minimum ▪ Dual Pentium III 800 MHz w/ 1 GB recommended <p>Up to 1 Gbps (using high performance Intel Pro/1000 driver):</p> <ul style="list-style-type: none"> ▪ Dual Pentium III 800 MHz w/ 1 GB minimum ▪ Dual Pentium III 1.13 GHz+ w/ 2 GB recommended <p>Note: Intel Pentium 4 and Xeon processors are also supported.</p>
Operating System	<ul style="list-style-type: none"> ▪ Microsoft Windows Server 2003 SP1 ▪ Microsoft Windows 2000 Professional SP2 ▪ Microsoft Windows 2000 Server SP2 ▪ Microsoft Windows 2000 Advanced Server SP2 <p>We highly recommend that you install Network Sensor on an NTFS formatted partition. FAT and FAT32 partitions do not allow the system to be hardened.</p>
Hard Disk Drive	9GB (Ultra ATA or SCSI)
Dedicated System?	Yes
Other Requirements...	<p>Monitoring Interface - ISS recommends Intel Pro/1000 F, Pro/1000 MF (SX version only) or Pro/1000 MT dual port server adapters.</p> <p>Note: Neither "LX" fiber versions or Desktop Adapters are supported. See: http://www.intel.com/network/connectivity/products/server_adapters.htm for further information.</p> <p>Reporting Interface - one standard 10/100 Ethernet card for regular network access and reporting to a Workgroup Manager or SiteProtector.</p>

RealSecure Network Sensor for Red Hat Linux

Note: The Linux Network Sensor (10/100 speed) was internally tested with Red Hat Linux 7.3 with kernel smp-2.4.18-10 which does not ship by default with Red Hat Linux 7.3. You may download the updated kernel from the Network Sensor area of the ISS' Customer Download Center: <http://www.iss.net/download>. See <http://rhn.redhat.com/errata/RHSA-2002-158.html> and the Network Sensor ns_readme.txt for more information about this updated kernel.

Note: The recommend SMP kernel supports both single and dual processor systems.

The system requirements for the Linux Network Sensor are:

RealSecure Network Sensor for Red Hat Linux	
Processor & Memory Recommendations	<p>These specifications are meant to provide an estimate of the performance you should expect given average network conditions. Due to variations in network design and actual traffic composition, your results may vary.</p> <p>Up to 25 Mbps (using high performance ring buffer driver):</p> <ul style="list-style-type: none"> ▪ Pentium III 800 MHz w/ 256 MB recommended <p>Up to 45 Mbps (using high performance ring buffer driver):</p> <ul style="list-style-type: none"> ▪ Pentium III 800 MHz w/ 256 MB minimum ▪ Pentium III 800 MHz w/ 512 MB recommended <p>Up to 100 Mbps (using high performance ring buffer driver):</p> <ul style="list-style-type: none"> ▪ Pentium III 1 GHz w/ 512 MB minimum ▪ Dual Pentium III 800 MHz+ w/ 1 GB recommended <p>Note: Intel Pentium 4 and Xeon processors are also supported.</p>
Multi-sensor Recommendations	<p>Up to four network sensors may run on a single machine. Combined bandwidth should not exceed the above recommendations for given hardware. For example, each sensor in a four-sensor machine should handle no more than one quarter the total bandwidth stated in the above recommendation for any given machine. Faster dual CPUs and additional memory resources (> 1 GB) may yield improved performance.</p>
Operating System	<ul style="list-style-type: none"> ▪ Red Hat Linux 7.3 Personal (with smp-2.4.18-10 Kernel) ▪ Red Hat Linux 7.3 Professional (with smp-2.4.18-10 Kernel)
Disk Space	9 GB
Dedicated System?	Yes
Other Requirements...	<p>Monitoring Interface: A PCI network adapter capable of promiscuous mode and connected to the network segment to be monitored:</p> <ul style="list-style-type: none"> ▪ Ethernet ▪ Fast Ethernet <p>Optional: A second NIC connected to a secure network for dedicated communications with the Workgroup Manager or SiteProtector.</p>

RealSecure Gigabit Network Sensor for Red Hat Linux

The Gigabit Network Sensor monitors all traffic on Gigabit network segments.

Note A: The SysKonnnect SK-9843 packet driver used with the Linux Gigabit Network Sensor was designed and built for Red Hat Linux Kernel smp-2.4.18-10. ISS cannot guarantee that a different kernel build will function properly with the Linux Gigabit Network Sensor. If you intend to install Gigabit Network Sensor for Linux, it is imperative that you install this updated kernel, as it differs from the kernel that ships with Red Hat Linux 7.3. You may download the updated kernel from the Gigabit Network Sensor area of the ISS' Customer Download Center: <http://www.iss.net/download>. See <http://rhn.redhat.com/errata/RHSA-2002-158.html> and the Network Sensor ns_readme.txt for more information about this updated kernel.

Note B: SMP kernels support both single and dual processor systems.

Note C: Hardware revision 1.4 of the SysKonnnect SK-9843 is required for correct operation of the high performance packet driver. New versions of the SysKonnnect adapter may not work correctly with our software.

The system requirements for the Linux Gigabit Network Sensor are:

RealSecure Gigabit Network Sensor for Red Hat Linux Requirements	
Processor & Memory Recommendations	<p>These specifications are meant to provide a rough estimate of the performance range one might expect given average network conditions. Due to variations in network design and actual traffic composition, your results may vary.</p> <p>Up to 200 Mbps (using high performance SysKonnnect driver):</p> <ul style="list-style-type: none"> ▪ Pentium III 800 MHz w/ 512 MB <p>Up to 400 Mbps (using high performance SysKonnnect driver):</p> <ul style="list-style-type: none"> ▪ Dual Pentium III 800 MHz w/ 512 MB minimum ▪ Dual Pentium III 800 MHz w/ 1 GB recommended <p>Up to 1 Gbps (using high performance SysKonnnect driver):</p> <ul style="list-style-type: none"> ▪ Dual Pentium III 1.13 GHz w/ 1 GB minimum ▪ Dual Pentium III 1.4 GHz+ w/ 2 GB recommended <p>Note: Intel Pentium 4 and Xeon processors are also supported.</p>
Operating System	<ul style="list-style-type: none"> ▪ Red Hat Linux 7.3 Personal (with 2.4.18-10 SMP Kernel) ▪ Red Hat Linux 7.3 Professional (with 2.4.18-10 SMP Kernel)
Hard Disk Drive	9GB (Ultra ATA or SCSI)
Dedicated System?	Yes
Other Requirements...	<p>Monitoring Interface - must be a SysKonnnect SK-9843 SK-NET GE-SX revision 1.4 adapter. See http://www.syskonnnect.com/syskonnnect/products/b0101_ethernet_9843.html for more information about this adapter.</p> <p>Reporting Interface - any standard Ethernet adapter for network access and reporting to Workgroup Manager or SiteProtector.</p>

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