Step-by-Step Guide:

Snort's installation prerequisites for Red Hat Enterprise Linux 5

31 Jul 2007 | SearchEnterpriseLinux.com

By James Turnbull

Once you've confirmed that the IDS sensor Snort can run on your customer's hardware, the next step is ensuring that the proper software has been installed on Red Hat Enterprise Linux 5 to support Snort -- this includes MySQL/PostgreSQL and PHP. This step lays the groundwork for installing Snort, compiling Snort and then configuring Snort by setting up its network intrusion detection rules.

Snort has a number of prerequisites that you will need to install depending on how you want to configure it. The most common is MySQL, though you could also use PostgreSQL if you prefer. Snort uses MySQL to store events and alerts. If you wish to add a console, such as BASE, to your Snort installation you will also need to install PHP, including MySQL integration for PHP and a Web server like Apache. In this tip, we're going to use MySQL to store events. For the Snort installation with MySQL, we need to add the following RPMs (best done using your package management mechanism as it will prompt you to install additional packages):

- mysql-server
- mysql-bench;
- mysql-devel;
- mysqlclient10
- libpcap
- libpcap-devel
- pcre-devel

After installing MySQL, start the server up by using the init script. Remember to change the MySQL password when MySQL starts up.

```
# /etc/init.d/mysqld start
```

After installing the prerequisites, you can install Snort. Snort is available in RPM packages, both binary and source, from Sourcefire or it can be compiled. On the Sourcefire site, RPMs are currently only available for RHEL 4. Until RHEL 5 RPMs are available, you'll need to compile Snort from source or build your own RPMs using the Snort spec file. In this scenario, we're going to compile Snort from source.

- **Network Intrusion Detection (IDS)**

How to test Snort
Snort hardware and network requirements for Red Hat Enterprise Linux 5
Snort's installation prerequisites for Red Hat Enterprise Linux 5
Configuring Snort for Red Hat Enteprise Linux 5
Editing the snort.conf file for Red Hat Enterprise Linux 5
Compiling Snort and configuration with MySQL for Red Hat Enterprise Linux 5
Snort Report
Output options for Snort data
Trend Micro warns of substantial Trojan attack
Snort command line output modes

- Acquiring Snort rules
- Activating Snort rules
- Loading rules

About the author
Richard Bejtlich is founder of TaoSecurity, author of several books on network security monitoring, including Extrusion Detection: Security Monitoring for Internal Intrusions, and operator of the TaoSecurity blog.

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HARDCORE IDS

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What is Hardcore IDS?

Hardcore IDS builds a secured GNU/Linux operating system and intrusion detection system using Fedora Core 5 with Snort 2.6.1.3 and Aanval 2.3 as an optional front-end to monitor your network for attacks and vulnerabilities. Hardcore IDS uses the Snort and Bleeding Edge Snort rules.

You can setup Hardcore IDS on one host or many. There are three install types to choose from so you have the ability to roll out your IDS solution how you see fit.


Console


Sensor


Console + Sensor

Latest News

- 3-30-07 Hardcore IDS 1.2 released for Fedora Core 5.
- 8-28-06 Hardcore IDS 1.1 released for Fedora Core 5.
- 8-22-06 Hardcore IDS 1.1 released for Fedora Core 4. See the ChangeLog for details.
- 7-31-06 Hardcore IDS 1.0 to be released at Defcon 14.
- 7-30-06 Development of Hardcore IDS for Fedora Core 5 is underway.

Download

Installer Type	Checksum	Last Modified	File
Hardcore IDS 1.2 for Fedora Core 5	MD5	Mon Apr 2 22:34:00 2007	hardcore-1.2-fc5.tar.gz

Support

Post any questions or comments in the forums. If you like Hardcore IDS and it was useful for you, optionally you can make a donation to support the work of the project.

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Questions, Comments or Suggestions

Security Channel Tips:

SNORT REPORT

Snort IDS installation basics and tips for security resellers

Richard Bejtlich

04.30.2007

Rating: -3.33- (out of 5)

Welcome to the first edition of Snort Report. The goal of this column is to provide value-added resellers (VARs) and security consultants with suggestions for the productive use of Snort, an open source intrusion detection and intrusion prevention system developed by Marty Roesch and his team at Sourcefire. To provide a solid foundation for future articles, this issue concentrates on installation and fundamentals.

Before discussing technical details, it's important to consider what Snort is -- and what it is not -- so you can "sell" the open source IDS/IPS to reluctant customers and properly set their expectations.

First, Snort is a network traffic inspection program and, when suitably configured, an access control system. Snort is not a "badness-ometer." One cannot expect to run Snort on an arbitrary network location and simply start discovering malicious activity. While it is possible to accomplish this goal, proper understanding of Snort's capabilities, limitations and deployment model is required for effective use. That's where you come in. You cannot simply drop Snort into place on your customer's network and leave it up to them to efficiently manage.

Second, Snort is not "lightweight." When Marty Roesch wrote his 1999 paper on Snort, his use of the term "lightweight" intended to convey the idea that Snort did not use many system resources. "Lightweight" never meant "ineffective." Today, Snort is extremely powerful, but effective use of these powers requires a dedicated system with plenty of RAM (1 GB or more is recommended) and quality components.

Third, although Snort originally relied on content matching in order to identify malicious activity, the program has advanced considerably beyond that simple technique and incorporates today's technologies. Snort indeed uses rules for core functionality, but some of those signatures are exceedingly complicated. Rules work alongside non-signature based decoders and preprocessors to alert users of many sorts of suspicious and malicious activities.

LEAVE REQUEST

Prepare one request only and submit it to your Line Supervisor and Nancy. The original request should be returned to Lisa for her records, with copies distributed to the employee and line supervisor.

I request the following: Vacation ☒ Admin.___ Holiday ___ Sick ___ AWOP ___ Other_____
(Please indicate)

Day/Hours(s) desired: Sept 21st thru Sept 21st

Add'l. Info.:

Employees Signature — Date: 08/30/07

(Circle Choice)

Line-Supervisor — Date: 8/30/07 — (Approved/Deny)

Nancy Romero COB — Date: 8.30.07 — (Approved/Deny)

Internet Explorer cannot display the webpage

Most likely causes:

- You are not connected to the Internet.
- The website is encountering problems.
- There might be a typing error in the address.

What you can try:

- Diagnose Connection Problems
- More information

About the author

James Turnbull works for the National Australia Bank as a Security Architect. He is also the author of Hardening Linux, which focuses on hardening Linux hosts including the base operating system, file systems, firewalling, connections, logging, testing your security and securing a number of common applications including e-mail, FTP and DNS. He is an experienced infrastructure architect with a background in Linux/Unix, AS/400, Windows, and storage systems. He has been involved in security consulting, infrastructure security design, SLA and service definition and has an abiding interest in security metrics and measurement.

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SNORT REPORT

Snort IDS rules

Richard Bejtlich

04.04.2007

Rating: --- (out of 5)

When Marty Roesch originally wrote Snort, he considered shipping it without any rules. Marty envisioned that Snort users would write their own rules, customized for their environment. Keep this in mind when you're deploying Snort on your customer's network. In the first Snort Report I wrote, "Snort is not a 'badness-ometer.' One cannot expect to run Snort on an arbitrary network location and simply start discovering malicious activity." Rules represent a rule writer's best approximation of a means to detect a certain type of network event.

Snort rules -- and any similar mechanism that performs some degree of matching against a packet or stream of packets -- are designed to alert an operator to a network event of interest. The two critical components in this statement are "network event" and "of interest." Snort rules often represent an inference -- sometimes even an educated guess -- that a particular network event has occurred. This network event is usually identified as a suspicious or malicious activity, but some of the network events could be utterly benign. Given the right combination of matching and/or inspection, Snort rules can be told to identify any sort of packet -- or even stream of packets -- desired by the rule author. In some cases, however, the means by which the rule author chooses to identify a network event might apply to traffic that is not what he wanted to identify. I'll return to this thought when I discuss false positives.

The second important part of the statement above is "of interest." One Snort operator might think a certain rule or set of rules is absolutely critical to his environment, while another Snort operator couldn't care less. There is no right or wrong answer here. This is one of the main reasons Marty Roesch didn't want to ship rules with Snort. Who could say that an operator of Microsoft Windows IIS Web servers would want to run a set of rules detecting attacks against Apache Web servers, or vice versa?

Request ID: 0000951
Status: New
Priority: Medium
Submitter: RDHENDERSON
Create Date: 10/1/2007 2:40:43 PM
Projected Completion:
Last Modified By: RDHENDERSON
Modified Date: 10/1/2007 2:40:43 PM

Clear User Information

User Information

User Last Name: Barnes
User First Name: Olivia
Novell Login:
Department: 3rd District
Division:
Phone Number:
User Location:
User Email: obarnes@rcbos.org

Tracking Information

Assigned To: Caroline, Etienne
Related Req ID:
Find Related Request
Audit Trail

Problem Information

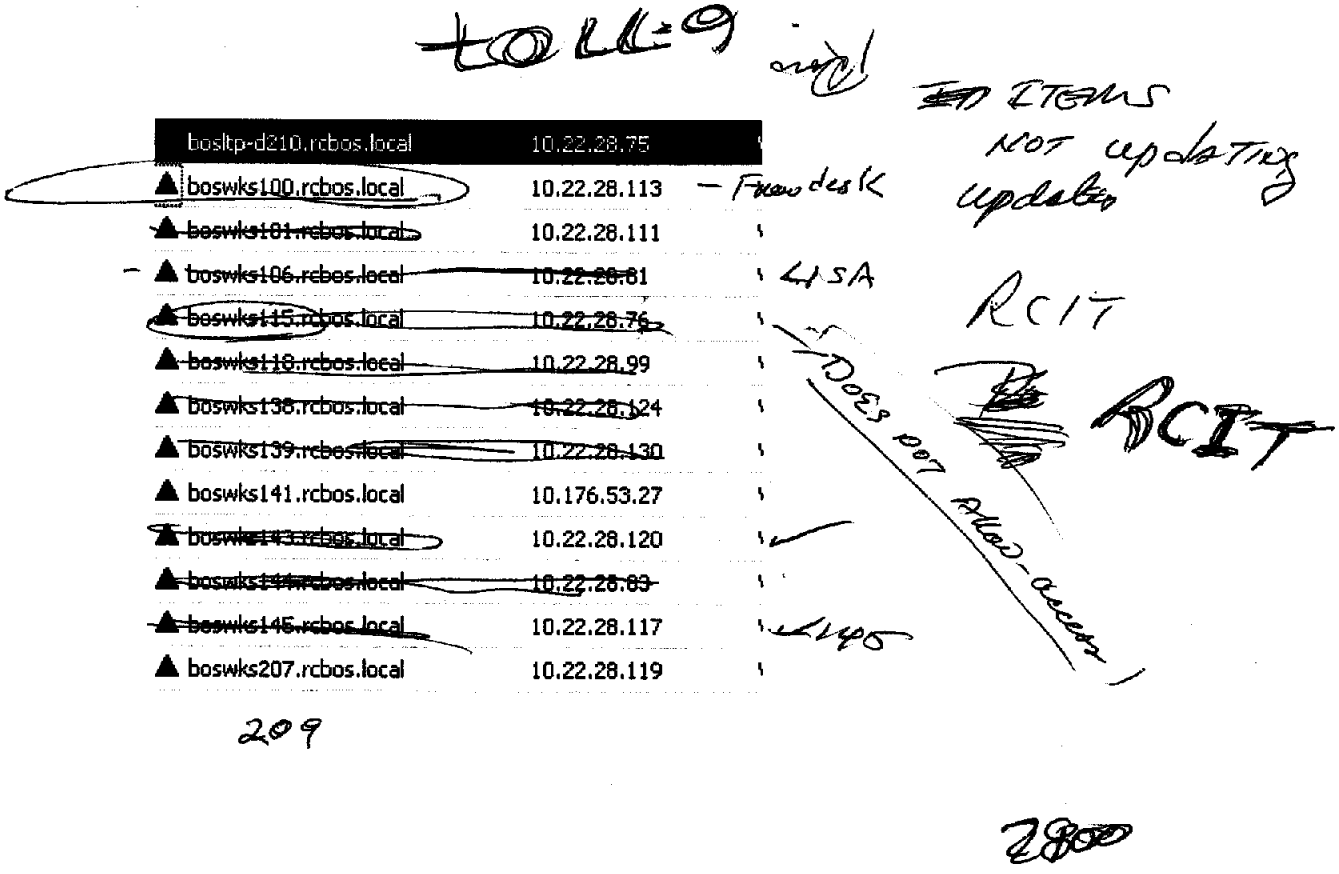
Problem Categor: Other
Description: OBBARNES from the 3rd district requested a surge protector
Work History:
Solution:
Attachment Field (5mb Limit)

Device Information

Device Type:
Device Location:
Device Name:

Vendor Information

Vendor Name:
Vendor Req #:
Vendor Contact:
Vendor Phone:
Vendor Email:


boslp-d210.rcbos.local 10.22.28.75
boswks100.rcbos.local 10.22.28.113
boswks101.rcbos.local 10.22.28.111
boswks106.rcbos.local 10.22.28.81
boswks115.rcbos.local 10.22.28.76
boswks118.rcbos.local 10.22.28.99
boswks138.rcbos.local 10.22.28.124
boswks139.rcbos.local 10.22.28.130
boswks141.rcbos.local 10.176.53.27
boswks143.rcbos.local 10.22.28.120
boswks144.rcbos.local 10.22.28.83
boswks146.rcbos.local 10.22.28.117
boswks207.rcbos.local 10.22.28.119
209
Front desk
USA
RCIT
Does not allow access
RCIT
2800

SPICEWORKS

Novell iPrint Client

Name	Installed On	Version	Product Id	Product Key
boswks112		v04.05.00	10, 22. 28. 69	Permission denied
boswks126		v04.05.00	Gori Stowe	
boswks123		v04.05.00	123	
boswks124		v04.05.00	124	

AGENDA
MONDAY, SEPTEMBER 17, 2007
BOARD OF SUPERVISORS – COUNTY OF RIVERSIDE
1st FLOOR – COUNTY ADMINISTRATIVE CENTER
BOARD CHAMBERS
4080 Lemon Street, Riverside, Calif.
(Clerk 951-955-1060)

8:30 A.M.

Invocation by Maria Vasquez, Board Assistant, Clerk of the Board Office

Pledge of Allegiance to the Flag

CONCURRENT EXECUTIVE SESSION-COUNTY OF RIVERSIDE, REDEVELOPMENT AGENCY, REGIONAL PARK AND OPEN SPACE DISTRICT, FLOOD CONTROL AND WATER CONSERVATION DISTRICT, WASTE RESOURCES MANAGEMENT DISTRICT, HOUSING AUTHORITY, PERRIS VALLEY CEMETERY DISTRICT, IN-HOME SUPPORTIVE SERVICES PUBLIC AUTHORITY AND COMMUNITY FACILITIES DISTRICTS:

With respect to every item of business to be discussed in closed session pursuant to Government Code Section 54956.9:

Conference with legal counsel-anticipated litigation:
Initiation of litigation pursuant to subdivision (c) of Government Code Section 54956.9:

A.1 Three potential cases.

With respect to every item of business to be discussed in closed session pursuant to Government Code Section 54956.9:

Conference with legal counsel-anticipated litigation:
Significant exposure to litigation pursuant to subdivision (b) of Government Code Section 54956.9:

B.1 One potential case.

With respect to every item of business to be discussed in closed session pursuant to Government Code Section 54957.6:

C.1 Conference with labor negotiator:
Agency negotiator – Ron Komers
Employee organization – RSA, LIUNA, Management, and Unrepresented

With respect to every item of business to be discussed in closed session pursuant to Section 54957(b)(1):

D.1 Public Employee Appointment
Title: Director of Public Social Services

Step-by-Step Guide:

Configuring Snort for Red Hat Enteprise Linux 5

31 Jul 2007 | SearchEnterpriseLinux.com

By James Turnbull

Once you've confirmed that the IDS sensor Snort can run on your customer's hardware under Red Hat Enterprise Linux 5, ensured that the proper software for Snort has been installed, and configured Snort with MySQL, the next step is to configure Snort's configuration directory and logging directory. This paves the way for the final step of editing the snort.conf file.

We need to configure Snort and add some detection rules. We start by creating a configuration directory, */etc/snort*, and a logging directory, */var/log/snort*. We then add the example configuration files from the package to */etc/snort*.

```
# mkdir /etc/snort
# mkdir /var/log/snort
# chown snort:snort /var/log/snort
# cd snort-2.6.1.5/etc
# cp *.conf *.config *.map sid generators /etc/snort
```

Now, we make a directory to hold the rules and signature documents and then download a set of rules.

```
# mkdir /etc/snort/rules
```

Snort rules come in a variety of flavours:

- a default set that is available at the time of a Snort release,
- a set available to unregistered users, a set available to users who register on the Sourcefire site,
- a set of community created rules

- and finally, a set for users who buy a subscription from Sourcefire.

We're going to grab the unregistered user set initially:

```
# wget http://www.snort.org/pub-bin/downloads.cgi/Download/vrt_pr/
snortrules-pr-2.4.tar.gz
```

You can go to the Sourcefire site and register, or buy a subscription to get the other rule sets. The other sets contain a more recent collection of rules. New rules are available and are added to these sets much quicker.

Next, we unpack the rules and signatures in the archive and moved them into the */etc/snort* directory.

```
# tar -xvzf snortrules-pr-2.4.tar.gz
# mv doc rules /etc/snort
```


About the author

James Turnbull works for the National Australia Bank as a Security Architect. He is also the author of Hardening Linux*, which focuses on hardening Linux hosts including the base operating system, file systems, firewalling, connections, logging, testing your security and securing a number of common applications including e-mail, FTP and DNS. He is an experienced infrastructure architect with a background in Linux/Unix, AS/400, Windows, and storage systems. He has been involved in security consulting, infrastructure security design, SLA and service definition and has an abiding interest in security metrics and measurement.*

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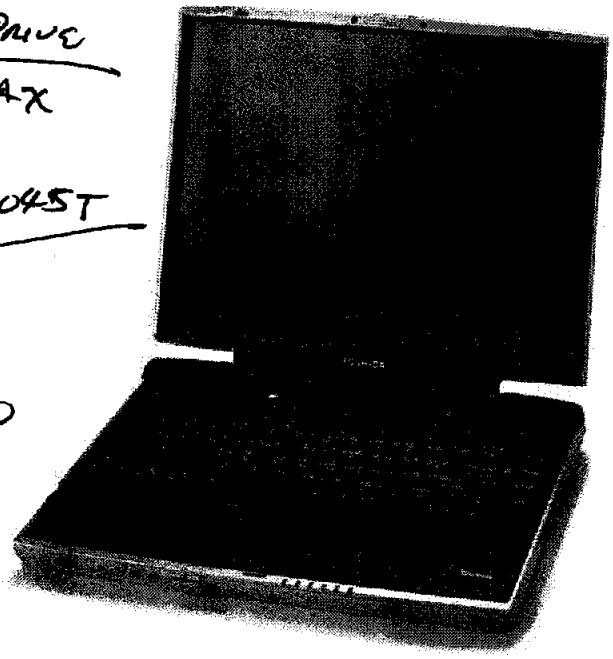
The future-proof computing platform offering wireless connectivity

TECRA 9100

- Enhanced portability and new design with robust magnesium casing configurable from 2.2kg
- Cutting-edge performance with up to Mobile Intel® Pentium® 4 Processor 2.00GHz-M, SD Media slot and i.LINK (IEEE 1394) port
- Complete mobile communication center with built-in modem, 10/100Mbps Ethernet, optional wireless LAN and Bluetooth™ module kits[1] with SPANworks™ software
- Brilliant graphics capability with 14.1" TFT color display and 16MB Video Memory
- Versatile Slim SelectBay design offers flexible expansion with optional 2nd HDD, 2nd Battery, DVD-ROM, CD-R/RW or CD-RW/DVD-ROM drives
- Common set of drivers, hardware components, expansion options support and standard software for lower Enterprise Cost of Ownership

40 GIG HARD DRIVE
MK4019GAX
H00 2171
S/N 520I0045T

VIDEO CARD
ATI GRAPHICS - CARD 128 PRO



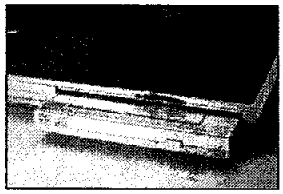
Toshiba recommends Microsoft® Windows® XP Professional for business.

Choose freedom.

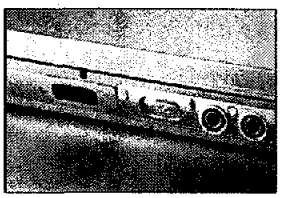
TECRA 9100

The new TECRA 9100 is built around a future-proofed platform concept that protects your investment and allows you to plan for the future with confidence. By incorporating high-powered Mobile Intel® Pentium® 4 Processor-M, common expansion options support, and latest communication technologies, including optional wireless LAN Card Kit[1], Bluetooth module kit[1] and SD Media slot, it opens up a whole new world of mobility and wireless connectivity in a new stylish, lightweight case.

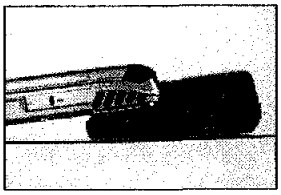
Toshiba recommends Microsoft® Windows® XP Professional for Business.



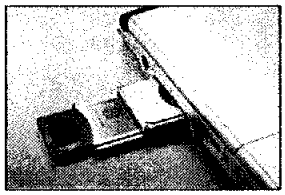
Versatile: use the SelectBay slot to swap CD, DVD, CD-R/RW and CD-RW/DVD drives, hard disks, battery pack and weight saver. Built-in SD Media slot enhances communications between portable digital devices.



Wireless connectivity becomes a reality with the built-in antenna and optional Wireless LAN Card Kit[1] or/and Bluetooth™ Module Kit[1], allowing users to access data anytime, anywhere without the need for cable.



Common docking support: The Advanced Port Replicator offers convenience one-touch docking solution for your office peripherals and is fully compatible with PORTÉGÉ 4000/4010 and Satellite Pro 6000/6100.



Hands-on security: an optional Fingerprint PC Card protects the TECRA 9100 at both BIOS and OS level, enhancing data security and simplifying access for authorized users without any need to remember numerous passwords.

	TECRA 9100		
Product Number	PT910L-5XPLK	PT910L-5XPZ9	PT910L-601V1
Processor[2]	Mobile Intel® Pentium® 4 Processor 1.80GHz-M supports Enhanced Intel® SpeedStep® Technology, 400MHz PSB	Mobile Intel® Pentium® 4 Processor 1.80GHz-M supports Enhanced Intel® SpeedStep® Technology, 400MHz PSB	Mobile Intel® Pentium® 4 Processor 2.00GHz-M supports Enhanced Intel® SpeedStep® Technology, 400MHz PSB
Cache	20KB Integrated, 512KB L2 Integrated	20KB Integrated, 512KB L2 Integrated	20KB Integrated, 512KB L2 Integrated
Chipset	Intel® 845MP	Intel® 845MP	Intel® 845MP
Memory	256MB PC2100 DDR SDRAM, expandable to 1024MB[3]	256MB PC2100 DDR SDRAM, expandable to 1024MB[3]	256MB PC2100 DDR SDRAM, expandable to 1024MB[3]
Mass Storage Hard Disk	30GB S.M.A.R.T., up to 90GB if optional 2nd HDD is installed[4]	40GB S.M.A.R.T., up to 100GB if optional 2nd HDD is installed[4]	40GB S.M.A.R.T., up to 100GB if optional 2nd HDD is installed[4]
Optical Drive	Hot swappable 8X/8X/8X (max.) CDRW/DVD-ROM drive (max. 24X when CD-ROM is accessed)	Hot swappable 8X (max.) DVD-ROM drive (max. 24X when CD-ROM is accessed)	Hot swappable 8X/8X/8X (max.) CDRW/DVD-ROM drive (max. 24X when CD-ROM is accessed)
Diskette Drive	External USB 3.5", 1.44MB diskette drive	Optional External USB 3.5", 1.44MB diskette drive	Optional External USB 3.5", 1.44MB diskette drive
Display Internal	14.1" TFT active matrix 16.7 million colors at 1,024 x 768 resolution		
External video modes	Max. 16.7M colors at 640 x 480 resolution, 800 x 600 resolution, 1,024 x 768 resolution Max. 64K colors at 1,280 x 1,024 resolution, 1,600 x 1,200 resolution		
Graphics Controller	S3 SuperSavage™ IXC-166, 128-bit 2D/3D graphics accelerator, 4x AGP Bus, 16MB Video Memory		
Integrated Communication Device	International V.90 software modem (56Kbps data, 14.4Kbps fax) and 10/100Mbps Ethernet (Wake-On-LAN and Remote Boot supported) Built-in antenna for Wi-Fi™ 802.11b Wireless LAN (with optional Wireless LAN Card Kit[1]) and Bluetooth™ (with optional Bluetooth™ Module Kit[1]) connectivity		
Keyboard	85-key Ergonomic Keyboard, AccuPoint II integrated pointing device with Scroll buttons, Windows® Key, Application Key and hot key functions, Toshiba Console button		
PC Card slots	Type III x 1 or Type II x 2 (Card Bus supported)		
Expansion Ports	Serial (16550UART), Parallel (ECP), RGB, USB x 2, PS/2 Keyboard/Mouse, Fast Infrared Port (4Mbps), i.LINK (IEEE 1394), SD Media slot, External Microphone, Headphone (stereo), NTSC/PAL TV-Out, RJ-11, RJ-45, Expansion Bus, DC-in		
Sound	Yamaha YMF753, 16-bit stereo SoundBlaster Pro and Windows Sound System compatible, 3D Sound supported, built-in stereo speakers, volume dial, internal Microphone (monaural)		
Power Supply	Universal 100-240V AC adaptor for worldwide usage		
Battery Type/Life[5]	Exchangeable Lithium-Ion battery, up to 2.3H of battery life, up to 4.4H with optional 2nd battery, up to 5.3H with optional 2nd battery in SuperLongLife mode		
Security	Cable Lock port, Power on Password, Supervisor Password, Keyboard Lock, Screen Blank		
System Management	Toshiba Hibernation and Resume, SM BIOS V2.3, ACPI power management		
Pre-installed OS	Microsoft® Windows® XP Professional operating system		
Bundled software & CD	Toshiba Utilities, Microsoft® Internet Explorer, Microsoft® Media Player, InterVideo™ WinDVD, SPANworks2000 software suite, Toshiba Configuration Builder CD, Toshiba Management Console (available in Toshiba Configuration Builder CD)		
Dimensions (W x D x H)[6]	310 x 269 x 32.2 / 37.5 mm (Front / Back)		
Weight[7]	2.2kg (w/ battery pack and weight saver) 2.4kg (w/ battery pack and CD-RW/DVD-ROM drive)		
Warranty	3-year parts & labor, 1-year battery International Limited Warranty		
Options PA3126U-1M12	PC2100 128MB Memory Kit		
PA3127U-1M25	PC2100 256MB Memory Kit		
PA3164U-1M51	PC2100 512MB Memory Kit[3]		
PA3176U-1BAS	Lithium-Ion Rechargeable Battery Pack		
PA3096U-1BAS	Slim SelectBay 2nd Battery Pack		
PA3116U-1H30	2.5" Enhanced IDE 30GB 2nd HDD Kit[4]		
PA3133U-1H40	2.5" Enhanced IDE 40GB (5,400rpm) 2nd HDD Kit[4]		
PA3204U-1H60	2.5" Enhanced IDE 60GB (5,400rpm) 2nd HDD Kit[4]		
PA3060U-1ETC	Slim SelectBay HDD Adaptor		
PA3087U-1DVD	Slim SelectBay 8X DVD-ROM Drive Kit		
PA3088U-3CD1	Slim SelectBay 8X/8X/24X CD-R/RW Drive Kit		
PA3162U-1CD2	Slim SelectBay 8X/8X/8X/24X CDRW/DVD-ROM Drive Kit		
PA3083U-1ACA	75W Universal AC Adaptor		
PA3082U-1PRP	Advanced Port Replicator Interfaces: Serial (16550UART), Parallel (ECP), RGB, USB x 2, i.LINK (IEEE 1394), PS/2 Keyboard, PS/2 Mouse, Line-in, Line-out, Digital Video Interface, RJ-45, RJ-11, Cable Lock Port, DC-in		
PA3109U-1FDD	USB FDD Kit		
PA3189U-1MPC	Wireless LAN Card Kit[1]		
PA3121U-3BTM	Bluetooth™ Module Kit[1]		
PA3066U-1PCC	Toshiba PC Card Fingerprint Reader		
PA3079T-1PCC	Toshiba 2GB Type II PC Card HDD		

[1] Applicable to countries where official Type Approval is obtained.
[2] CPU performance in your computer product may vary from specifications under some conditions. Please visit pc.toshiba-asia.com/support/cpuinfo for more detailed information.
[3] 1024MB is achieved by removing the standard 256MB Memory Kit and inserting two optional 512MB Memory Kits (2 memory slots are available).
[4] The optional Slim SelectBay HDD Adaptor is necessary for inserting the optional 2nd HDD Kit into the Select Bay.
[5] Battery Life may vary depending on applications, power management settings and features utilized. Recharge time varies depending on usage. Battery may not charge while computer is consuming full power.
After a period of time, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is normal for all batteries.
[6] Thickness may vary at certain points on the system.
[7] Weight may vary depending on SelectBay components
HDD calculation: 1GB means 1 billion bytes

Please note that thin-film transistor (TFT) liquid crystal display (LCD) is made with high-precision technology. However, black or bright dots of light (red, blue or green) may appear on the LCD screen, and we call these dots non-conforming pixels. This is a technology limitation of TFT LCD and does not represent a defect. Toshiba warranty does not cover limitations of technology such as non-conforming pixels.

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