

Symantec NetRecon™ 3.6
Security Update 7
Release Notes



Symantec NetRecon Security Update 7 Release Notes

The software that is described in this book is furnished under a license agreement and may be used only in accordance with the terms of the agreement.

Documentation version: v3.6 SU7

Copyright Notice

Copyright © 2003 Symantec Corporation.

All Rights Reserved.

Any technical documentation that is made available by Symantec Corporation is the copyrighted work of Symantec Corporation and is owned by Symantec Corporation.

NO WARRANTY. The technical documentation is being delivered to you AS-IS and Symantec Corporation makes no warranty as to its accuracy or use. Any use of the technical documentation or the information contained therein is at the risk of the user. Documentation may include technical or other inaccuracies or typographical errors. Symantec reserves the right to make changes without prior notice.

No part of this publication may be copied without the express written permission of Symantec Corporation, 20330 Stevens Creek Blvd., Cupertino, CA 95014.

Trademarks

Symantec and the Symantec logo are U.S. registered trademarks, and Symantec NetRecon, Symantec Enterprise Security Architecture, Symantec Enterprise Security Manager, LiveUpdate, and Symantec Security Response are trademarks of Symantec Corporation.

Microsoft, MS-DOS, Windows, and Windows NT are registered trademarks of Microsoft Corporation.

Other product names that are mentioned in this manual may be trademarks or registered trademarks of their respective companies and are hereby acknowledged.

Printed in the United States of America.

Technical support

As part of Symantec Security Response, the Symantec Global Technical Support group maintains support centers throughout the world. The Technical Support group's primary role is to respond to specific questions on product feature/function, installation, and configuration, as well as to author content for our Web-accessible Knowledge Base. The Technical Support group works collaboratively with the other functional areas within Symantec to answer your questions in a timely fashion. For example, the Technical Support group works with Product Engineering as well as Symantec Security Response to provide Alerting Services and Virus Definition Updates for virus outbreaks and security alerts.

Symantec technical support offerings include:

- A range of support options that gives you the flexibility to select the right amount of service for any size organization
- Telephone and Web support components that provide rapid response and up-to-the-minute information
- Upgrade insurance that delivers automatic software upgrade protection
- Content Updates for virus definitions and security signatures that ensure the highest level of protection
- Global support from Symantec Security Response experts, which is available 24 hours a day, 7 days a week worldwide in a variety of languages
- Advanced features, such as the Symantec Alerting Service and Technical Account Manager role, that offer enhanced response and proactive security support

Please visit our Web site at <http://www.symantec.com/techsupp/> for current information on Support Programs. The specific features that are available may vary based on the level of support purchased and the specific product that you are using.

Licensing and registration

If the product that you are implementing requires registration and/or a license key, the fastest and easiest way to register your service is to access the Symantec licensing and registration site at www.symantec.com/certificate. Alternatively, you may go to www.symantec.com/techsupp/ent/enterprise.htm, select the product that you wish to register, and from the Product Home Page, select the Licensing and Registration link.

Contacting Technical Support

Customers with a current support agreement may contact the Technical Support group by phone or online at www.symantec.com/techsupp.

Customers with Platinum support may reach the Platinum Web site at: <https://www-secure.symantec.com/platinum/login.html>.

When contacting the Technical Support group, please have the following:

- Product release level
- Hardware information
- Available memory, disk space, NIC information
- Operating system
- Version and patch level
- Network topology
- Router, gateway, and IP address information
- Problem description
 - Error messages/log files
 - Troubleshooting performed prior to contacting Symantec
 - Recent software configuration changes and/or network changes

Customer Service

To contact Enterprise Customer Service online, go to www.symantec.com, select the appropriate Global Site for your country, then choose Service and Support. Customer Service is available to assist with the following types of issues:

- Questions regarding product licensing or serialization
- Product registration updates such as address or name changes
- General product information (features, language availability, local dealers)
- Latest information on product updates and upgrades
- Information on upgrade insurance and maintenance contracts
- Information on Symantec Value License Program
- Advice on Symantec's technical support options
- Nontechnical presales questions
- Missing or defective CD-ROMs or manuals

SYMANTEC NETRECON SOFTWARE LICENSE AGREEMENT

SYMANTEC CORPORATION, AND/OR ITS SUBSIDIARIES ("LICENSOR") IS WILLING TO LICENSE THE SOFTWARE TO YOU AS AN INDIVIDUAL OR THE COMPANY OR LEGAL ENTITY THAT WILL BE UTILIZING PRODUCT AND THAT YOU REPRESENT AS AN EMPLOYEE OR AUTHORIZED AGENT ("YOU OR YOUR") ONLY ON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS OF THIS LICENSE AGREEMENT. READ THE TERMS AND CONDITIONS OF THIS LICENSE CAREFULLY BEFORE USING THE SOFTWARE. THIS IS A LEGAL AND ENFORCEABLE CONTRACT BETWEEN YOU AND LICENSOR. BY OPENING THIS PACKAGE, BREAKING THE SEAL, CLICKING ON THE "I DO AGREE" OR "YES" BUTTON OR LOADING THE PRODUCT, YOU AGREE TO THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THESE TERMS AND CONDITION, CLICK ON THE "I DO NOT AGREE" OR "NO" BUTTON AND DO NOT USE THE SOFTWARE.

1. **License to Use.** Licensor grants You a non-exclusive and non-transferable license (the "License") to use the number of licenses authorized by Your license key of Licensor's software in machine readable form and accompanying documentation (the "Product") on Your computer systems or those authorized by Licensor. The License governs any releases, revisions or enhancements to the Product, which Licensor may furnish to You. You may use Product only to scan networks and computer systems for security-related information to detect actual and potential security flaws and vulnerabilities. You may use the Product only to scan or test computer networks, systems or devices owned by You or which You have express permission to access that you have sufficiently backed-up in case of damage caused by this Product. MISUSE OF THE PRODUCT OR DATA GENERATED BY THE PRODUCT IS STRICTLY PROHIBITED BY LICENSOR, MAY VIOLATE U.S. AND OTHER LAWS AND MAY SUBJECT YOU TO SUBSTANTIAL LIABILITY. You are solely responsible for any misuse of the Product Licensed under this Agreement, and You agree to indemnify Licensor for any liability or damage related in any way to Your use of the Product in violation of this Agreement or the rights of any owner or operator of a computer network, system or device. You are also responsible for using the Product in accordance with the limitations of the license You acquired. The types of licenses are as follows: 1) Evaluation License: You may scan an unlimited number of network resources from one system. Each scan is limited to ten minutes unless otherwise authorized by Licensor, and the evaluation license expires in fifteen days unless otherwise authorized by Licensor. 2) Limited License: You may scan Your small network (up to 254 unique network resources) from one system. 3) Unlimited License: You may scan Your large network (an unlimited number of network resources) from one system. 4) Consultant License: You may scan multiple networks belonging to Your customers as long as permission is obtained before such scan, but such scan shall last for no longer than seven days per customer and Product must be removed thereafter. 5) Not For Resell (NFR) License: You may scan multiple networks belonging to Your customers so long as permission is obtained before such scan, but such scan shall last for no longer than fifteen minutes per customer and Product must be removed thereafter. 6) Single Engagement (SE) License: You may scan multiple networks belonging to a single customer for no longer than thirty (30) days. This license is good for use on one of Your customers only and you must obtain permission before any scan is performed. Such scan may only be for delivering assessment services. You will indemnify and hold Licensor harmless for any claims arising out of the use of Product on machines belonging to any of Your customers or any third party that has been provided access to Product or is scanned by You, except to the extent those claims arise out of Licensor's breach of this license.

2. **Restrictions.** The Product is owned by Licensor, contains valuable trade secrets of Licensor and is protected by copyright, trademark and trade secret laws and international treaties. You agree to use Product only for Your business purposes, and You agree not to provide any other person with a copy of, or access to, any part of Product unless authorized by Your type of license. You may make one copy of Product for back-up, archive or disaster recovery purposes. You may only make copies of documentation as needed for Your internal use of the Product. Each copy of any part of the Product made by or for You must contain all of Licensor's proprietary markings and copyright notices without alteration. You may not sell, transfer, sublicense, lend, or rent Product to any other person or allow any other person to use Product for any reason, including by making it available for timesharing, service bureau or on-line use. Use by persons to which You have contracted any of Your data processing services is permitted only if each contractor (and its associated employees) is subject to a valid written agreement prohibiting the reproduction or disclosure to other persons of software products and associated Documentation to which they have access and such prohibitions apply to Product. You may not decompile, disassemble, reverse engineer, modify or attempt to discover the source code of Product except as expressly permitted by the laws of the jurisdiction in which You are located, and You may not copy, transfer, or otherwise use Product except as expressly permitted by this license. Use of Product in conjunction with any software product that decompiles or recompiles the Product or in any way creates a derivative or modified copy of Product is an unauthorized use and is prohibited.

3. **Limited Warranty.** Licensor will replace, at no charge, defective media and product materials that are returned within 30 days of shipment. Licensor warrants, for a period of 30 days the shipment date, that Product will perform in substantial compliance with the written materials accompanying the Product on that hardware and operating system software for which it was designed, as stated in the documentation. Use of Product with hardware and/or operating system software other than that for which it was designed and voids this applicable warranty. If, within 30 days of shipment, You report to Licensor that Product is not performing as described above, and Licensor is unable to correct it within 30 days of the date You report it, You may return Product, and Licensor will refund the License fee. If You promptly notify Licensor of an infringement claim based on an existing U.S. patent, copyright, trademark or trade secret, Licensor will indemnify You and hold You harmless against such claim, and shall control any defense or settlement. This warranty is null and void if You have modified Product, combined the Product with any software or portion thereof owned by any third party that is not specifically authorized or failed promptly to install any version of Product provided to You that is non-infringing. If commercially reasonable, Licensor will either obtain the right for You to use the Product or will modify Product to make it non-infringing. The remedies above are Your exclusive remedies for Licensor's breach of any warranty contained herein.

4. **Limitation of Remedies.** You understand that the operation of Program may cause problems on or failures of computer networks, systems and devices, which may result in loss of data, unavailability of computing resources or other damage. You represent to Licensor that You own or are authorized to use Product on any computer networks, systems or devices on which Product may be used or that may be tested by Product, You accept all risk of any such damage or loss, any You hereby waive all rights, remedies and causes of action that may arise therefrom. IN NO EVENT WILL LICENSOR OR ITS REPRESENTATIVES BE LIABLE ANY SUCH DAMAGES OR LOSSES WHATSOEVER, INCLUDING ANY LOSS OF PROFITS, LOST

SAVINGS, LOSS OF DATA OR LOSS OF USE OR COMPUTER HARDWARE OR SOFTWARE MALFUNCTION OR OTHER SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF YOUR USE OF OR INABILITY TO USE THE PRODUCT, EVEN IF LICENSOR OR ITS REPRESENTATIVES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSSES OR DAMAGES. LICENSOR AND ITS REPRESENTATIVES WILL NOT BE LIABLE FOR ANY LOSSES OR DAMAGES CAUSED BY USE OF THE PRODUCT NOT PERMITTED BY THIS AGREEMENT. IN NO EVENT SHALL LICENSOR'S TOTAL LIABILITY UNDER THIS AGREEMENT EXCEED THE AMOUNT PAID FOR THE PRODUCT. BECAUSE SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU. No action or claim arising out of or relating to this Agreement may be brought by You more than one (1) year after the cause of action is first discovered.

5. Confidentiality. You agree that all information relating to the Product is confidential property of the Licensor ("Proprietary Information"). You will not disclose any Proprietary Information to any third party except to the extent You can document that any such Proprietary Information is in the public domain and generally available for use and disclosure by the general public without any charge or license. If you have obtained a Consultant or NFR license, disclosure to Your clients is permitted only if they have executed a confidentiality agreement that encompasses non-disclosure of Proprietary Information with protections as strict as those contained herein, and such disclosure shall not last longer than allowed by restrictions on use under such license. You recognize and agree that there is no adequate remedy at law for a breach of this section, that such a breach would irreparably harm Licensor and that Licensor is entitled to equitable relief (including, without limitation, injunctive relief) with respect to any such breach or potential breach, in addition to any other remedies available at law.

6. Export Regulation. You agree to comply strictly with all US export control laws, including the US Export Administration Act and its associated regulations and acknowledge Your responsibility to obtain licenses to export, re-export or import the Product. These products are prohibited for export or re-export to Cuba, North Korea, Iran, Iraq, Libya, Syria or Sudan.

7. US Government Restricted Rights. If You are acquiring the Product or its accompanying documentation on behalf of the US Government, it is classified as "Commercial Computer Product" and "Commercial Computer Documentation" developed at private expense, contains confidential information and trade secrets of Licensor and its licensors, and is subject to "Restricted Rights" as that term is defined in the Federal Acquisition Regulations ("FARs"). Contractor/Manufacturer is: Symantec Corporation., and its subsidiaries, Cupertino, CA, USA.

8. Miscellaneous. This License is made under the laws of the State of California, USA, excluding the choice of law and conflict of law provisions. This License is the entire License between You and Licensor relating to the Product and: (i) supersedes all prior or contemporaneous oral or written communications, proposals, and representations with respect to its subject matter; and (ii) prevails over any conflicting or additional terms of any quote, order, acknowledgment, or similar communication between the parties during the term of this License. Notwithstanding the foregoing, some Product or products of Licensor may require Licensee to agree to additional terms through Licensor's on-line "click-wrap" license, and

such terms shall supplement this Agreement. If any provision of this License is held invalid, all other provisions shall remain valid unless such validity would frustrate the purpose of this License, and this License shall be enforced to the full extent allowable under applicable law. No modification to this License is binding, unless in writing and signed by a duly authorized representative of each party. The License granted hereunder shall terminate upon Your breach of any term herein and you shall cease use of and destroy all copies of Product. Any Product purchased by You after the purchase of the Product which is the subject of this License shall be subject to all of the terms of this License. All of Symantec Corporation's and its subsidiaries' licensors are direct and intended third-party beneficiaries of this License and may enforce it against you.

Revision February 21, 2001

Contents

Release Notes

Security Update 7

New objectives	3
New vulnerability detection	3

Security Update 6

New objectives	5
Known Issues	5
New state detection	5
New vulnerability detection	6

Security Update 5

New vulnerability detection	22
-----------------------------------	----

Security Update 4

New vulnerability detection	24
-----------------------------------	----

Security Update 3

New vulnerability detection	33
Current installation of Microsoft Jet database engine	41
Integration with Symantec Enterprise Security Manager	42
Cisco vulnerabilities	42
802.11x Wireless vulnerabilities	42
Lotus Domino vulnerabilities	43

Security Update 2

New vulnerability detection	44
Vulnerability name changes	45

Security Update 1

New vulnerability detection	46
Command line interface (CLI) enhancements	48

Release Notes

Security Update 7

Symantec NetRecon 3.6 Security Update 7 (SU7) adds:

- Enhanced detection and reporting of the Microsoft DCOM RPC vulnerability.
- Detection and reporting of five new Apache vulnerabilities.
- One new scan objective.

New objectives

- **Discover vulnerable DCOM RPC services**
This objective communicates directly with the RPC service and analyzes the response to detect systems that are vulnerable to exploits such as the Blaster worm and its variants.

New vulnerability detection

Microsoft Windows

- **DCOM RPC service vulnerable to the Blaster worm found**
Microsoft Windows is prone to a buffer overrun vulnerability through the DCOM RPC interface. This can allow execution of arbitrary code. Remote attackers may execute malicious code, potentially resulting in full system compromise. Worms exploiting this vulnerability are currently in the wild. The vulnerable DCOM RPC service is detected by creating a RPC connection to the target and analyzing the response.

Apache Web Server

■ Apache HTTP Server Multiple Vulnerabilities

Apache HTTP Server version 1.3.28 has been released in response to multiple discovered vulnerabilities. Apache is vulnerable to three potential security issues. The impact of these vulnerabilities includes denial of service, file descriptor leakage, and logging failures.

■ Apache Web Server Type-Map Recursive Loop Denial Of Service Vulnerability

Apache content negotiation functionality is reportedly prone to a denial of service vulnerability. Under certain circumstances a local attacker may cause an Apache server to fall into an infinite loop, consuming resources exponentially and effectively denying service to legitimate system users.

■ Apache Web Server FTP Proxy IPV6 Denial Of Service Vulnerability

A denial of service vulnerability has been reported by the vendor to effect the Apache FTP proxy component. Reportedly an attacker may specify a target server that has an IPV6 address format. This may result in a denial of service to legitimate users.

■ Apache Web Server Prefork MPM Denial Of Service Vulnerability

The Apache Software Foundation has reported a vulnerability in the prefork MPM (Multi-Processing Module) that could result in a temporary denial of service.

■ Apache Web Server SSLCipherSuite Weak CipherSuite Renegotiation Weakness

The Apache Software Foundation has reported an issue that may occur when the SSLCipherSuite directive is used to upgrade a cipher suite. Particular sequences of per-directory renegotiations may cause this condition to occur, resulting in a weaker cipher suite being used in place of the upgraded one.

Security Update 6

Symantec NetRecon 3.6 Security Update 6 (SU6) detects any Windows 2000 and Windows XP systems susceptible to the “Blaster” worm.

Symantec NetRecon 3.6 Security Update 6 (SU6) adds detection and reporting of three states for Symantec Enterprise Security Architecture (SESA) and 78 vulnerabilities for Windows 2000 and Windows XP (1), Apache Web server (29), Hypertext Preprocessor (PHP) (16), Tomcat (18), and SSL (13).

New objectives

With the addition of SU6, Symantec NetRecon has four new objectives:

- Discover HTTPS vulnerabilities
- Discover network resources running SESA Manager
- Discover network resources running SESA Agents
- Discover network resources not running SESA Agents

Known Issues

Microsoft Internet Explorer 6.0 or newer is required for the following objectives to run properly:

- Discover HTTP Vulnerabilities
- Discover network resources running SESA Manager

New state detection

With the addition of SU6, Symantec NetRecon can now detect and report the following states:

- **SESA Agent not detected**

A system that may be able to run a SESA Agent was detected.

- **SESA Agent identified**

A SESA Agent was detected.

- **SESA Manager detected**

A SESA Manager is running.

New vulnerability detection

Microsoft Windows 2000 and Windows XP

■ **Microsoft Windows DCOM RPC Interface Buffer Overrun Vulnerability**

Microsoft Windows is prone to a buffer overrun vulnerability via the DCOM RPC interface that could allow execution of arbitrary code. Remote attackers may execute malicious code on a vulnerable system, resulting in full system compromise. A worm exploiting this vulnerability is currently in the wild. Initial analysis suggests that the worm's executable file is named msblast.exe. SU6 detects UDP/TCP open ports 135, 139, and 445.

Apache Web Server

■ **Apache APR_PSPrintf Memory Corruption Vulnerability**

The Apache Software Foundation has released version 2.0.46, which addresses a vulnerability in the Web server. This is due to a potential memory management issue in the apr_pprintf() Apache Portable Runtime (APR) library. Exploitation could occur through mod_dav or other components. It is possible that

exploitation could allow for execution of arbitrary code. Further details regarding this issue are pending from the vendor.

■ **Apache Basic Authentication Module Valid User Login Denial Of Service**

It has been reported that Apache 2.0 does not properly use specific thread-safe functions. Because of this, an attacker may be able to create a circumstance that prevents users from logging into restricted areas with valid user credentials.

■ **Apache AB.C Web Benchmarking Buffer Overflow Vulnerability**

A buffer overflow condition has been reported in the ab.c web benchmarking support utility that is provided with Apache Web server. It may be possible for a malicious attacker to exploit this overflow condition. The vulnerability is the result of improper bounds checking when processing command line options to ab. Since the program is not setuid, this vulnerability does not have a local impact. However, this may be an issue if the program is called from a CGI script. An attacker may be able to supply malformed command line parameters to the program, which will cause the overflow to occur. This vulnerability was originally discussed in BugTraq ID 5887. It is now being assigned an individual Bugtraq ID.

- **Apache AB.C Web Benchmarking Read_Connection() Buffer Overflow Vulnerability**

A buffer overflow condition has been reported in the ab.c web benchmarking support utility that is provided with Apache Web server. It may be possible for a malicious Web server to exploit this overflow condition when the benchmarking utility is run against it. Data sent by a malicious server during the benchmarking process could cause memory to be corrupted with attacker-supplied values.

- **Apache Web Server Scoreboard Memory Segment Overwriting SIGUSR1 Sending**

Apache is a freely available Web server for Unix and Linux variants, as well as Microsoft operating systems. A vulnerability in the handling of the Apache scorecard has been reported. A user with the privileges of the Apache user could attach to an httpd process and overwrite the parent[].pid and parent[].last_rtime shared memory segments. By overwriting these, a signal may be sent to an arbitrary process with administrative privileges.

- **Apache Server Side Includes Cross-Site Scripting Vulnerability**

Apache is reported to be vulnerable to cross-site scripting attacks. This vulnerability is due to the SSI error pages of the Web server not being properly sanitized of malicious HTML code. Attacker-supplied HTML and script code may be executed on a Web client that is visiting the malicious link in the context of the Web server. Attacks of this nature may make it possible for attackers to manipulate Web content or to steal cookie-based authentication credentials. It may be possible to take arbitrary actions as the victim user.

- **Apache Web Server OS2 Filestat Denial Of Service Vulnerability**

The Apache Software Foundation has reported a denial of service vulnerability on Apache for OS2 platforms. It is reported that device names can fault the OS2 worker process, which could result in a denial of service condition.

- **Apache Web Server File Descriptor Leakage Vulnerability**

A vulnerability has been reported for Apache Web servers that may result in the disclosure of sensitive information. The vulnerability occurs due to the file descriptors being improperly inherited by child processes. Exploitation of this vulnerability may result in attackers being able to access sensitive log information.

- **Apache Web Server Linefeed Memory Allocation Denial Of Service Vulnerability**

Apache Web servers are prone to a denial of service condition. This is due to how Apache handles excessive amounts of consecutive linefeed characters, which may

cause the server to allocate large amounts of memory, resulting in a denial of service.

■ **Apache 2 WebDAV CGI POST Request Information Disclosure Vulnerability**

An information disclosure vulnerability has been reported for Apache. The vulnerability occurs due to inadequate checks being performed on CGI scripts. This vulnerability exists only when both WebDAV and CGI are enabled for folders. An attacker can exploit this vulnerability by making a POST request to a CGI script. Due to improper interaction between WebDAV and CGI scripts, this will result in the Web server returning the contents of the CGI script to the remote attacker.

■ **Apache Web Server MIME Boundary Information Disclosure Vulnerability**

A vulnerability has been discovered in the Apache Web server that may result in the disclosure of sensitive information. Specifically, sensitive process information is used within generated MIME message boundaries. Access to this information may aid an attacker in launching further attacks against target services. OpenBSD has released a patch that addresses this issue. MIME boundaries are now generated by the server using BASE64 encoded random numbers.

■ **Apache Web Server ETag Header Information Disclosure Weakness**

A weakness has been discovered in Apache Web servers that are configured to use the FileETag directive. Due to the way in which Apache generates ETag response headers, it may be possible for an attacker to obtain sensitive information regarding server files. Specifically, ETag header fields that are returned to a client contain the file's inode number. Exploitation of this issue may provide an attacker with information that may be used to launch further attacks against a target network. OpenBSD has released a patch that addresses this issue. Inode numbers that are returned from the server are now encoded using a private hash to avoid the release of sensitive information.

■ **Apache Web Server Default Script Mapping Bypass Vulnerability**

A vulnerability has been reported in the Apache Web browser that may result in the server bypassing existing default mappings when serving files. The vulnerability exists when making requests for files in directories with extensions. The vulnerability may cause the Web server to incorrectly parse the requested file. Instead of parsing the file "test" as a text file, the following request to `www.target.com/folder.php/test` results in Apache interpreting "test" as a PHP script.

■ Apache Web Server MS-DOS Device Name Denial Of Service Vulnerability

A vulnerability has been reported in Apache Web server for Microsoft Windows. The vulnerability exists in the way some HTTP requests are handled by the Apache Web server. Specifically, HTTP GET requests that involve reserved MS-DOS device names may cause the Apache Web server to crash.

■ Apache Web Server MS-DOS Device Name Arbitrary Code Execution Vulnerability

A vulnerability has been reported in Apache Web server for Microsoft Windows. The vulnerability exists in the way some HTTP requests are handled by the Apache Web server. Specifically, HTTP requests that involve MS-DOS device names may cause the Apache Web server to execute malicious attacker-supplied code. This exists if a malicious POST request is made to a CGI residing in a directory that is enabled with ScriptAlias.

■ Apache Web Server Illegal Character HTTP Request File Disclosure Vulnerability

A vulnerability has been reported in Apache Web server for Microsoft Windows 9x/Me operating environments. The vulnerability exists in the way some HTTP requests are handled by the Apache server. Any HTTP requests that end in some illegal characters will cause the server to disclose the contents of certain files to a remote attacker.

■ Apache HTPasswd Insecure Temporary File Vulnerability

Apache creates temporary files insecurely for htpasswd. As a result, it is possible for local attackers to read or corrupt the Apache password file. If the attacker can write custom-data to the password file, it may be possible to gain unauthorized access to resources that are protected by htpasswd. Alternatively, an attacker could reportedly read the password file and gain unauthorized access to credentials.

■ Apache /tmp File Race Vulnerability

Apache Web server is a popular http daemon, distributed with many variants of the UNIX Operating System and maintained by the Apache Project. Immunix is a hardened Linux distribution maintained by the Immunix team at the WireX Corporation. A problem has been discovered in the Apache httpd that is distributed with the Immunix Linux distribution, a distribution based off the RedHat Linux distribution. Apache programs htdigest and htpasswd are used to offer advanced features to users of the Web server. However, these two helper programs insecurely create files in the /tmp directory, which could allow for /tmp file guessing. This makes it possible for a user with malicious motives to symlink attack files that are writable by the UID of the Apache process.

■ Multiple Apache HTDdigest Buffer Overflow Vulnerabilities

Buffer overflow vulnerabilities have been reported to exist in the htdigest utility that is included with Apache. The vulnerability is due to improper bounds checking when copying user-supplied data into local buffers. This may be an issue if htdigest is called from a CGI script. An attacker may be able to supply malformed data to the program, which will cause the overflow to occur.

■ Apache HTDdigest Arbitrary Command Execution Vulnerability

A vulnerability has been reported for Apache. Reportedly, the htdigest utility may be prone to a command execution vulnerability. The vulnerability is due to insecure system() calls when processing command line options. This may reportedly be an issue in circumstances where htdigest is called from a CGI script.

■ Multiple Apache HTDdigest and HTPassWD Component Vulnerabilities

Apache is a freely available, open source Web server software package. It is distributed and maintained by the Apache Group. Multiple problems with Apache may lead to potential security vulnerabilities. The problems are in the htdigest.c and htpasswd.c files.

■ Apache 2 mod_dav Denial Of Service Vulnerability

A vulnerability has been discovered in the mod_dav component of Apache Web server. It has been reported that, under certain Apache configurations, it may be possible for an attacker to issue a malicious HTTP request that can result in a denial of service.

■ Apache Oversized STDERR Buffer Denial Of Service Vulnerability

Apache is prone to a denial of service condition when an excessive amount of data is written to stderr. This condition reportedly occurs when the amount of data that is written to stderr is more than the default amount that is allowed by the operating system. This may potentially be an issue in Web applications that write user-supplied data to stderr. Additionally, locally based attackers may exploit this issue. This issue has been confirmed in Apache 2.0.39/2.0.40 on Linux operating systems. Apache on other platforms may also be affected. This issue does not appear to be present in versions prior to 2.0.x.

■ Apache 2.0 CGI Path Disclosure Vulnerability

A path disclosure vulnerability has been reported in Apache 2.0.x. Apache will disclose the absolute path to a script whenever the server fails to invoke the script. If an attacker can create circumstances where the server will fail to invoke the script, then path information can be ascertained. Additionally, this information may be disclosed to arbitrary Web users whenever this type of error occurs.

■ Apache 2.0 Path Disclosure Vulnerability

A path disclosure vulnerability has been reported in Apache 2.0.x. It is possible to reproduce this condition on vulnerable systems by making a request for certain types of files (such as error documents) that have been mapped by the server by type but fail to be served due to failure of MIME negotiation.

■ Apache 2.0 Encoded Backslash Directory Traversal Vulnerability

A directory traversal vulnerability exists in Apache versions 2.0.39 and earlier on non-UNIX platforms (potentially including Apache compiled with CYGWIN). Platforms that may be affected by this include Windows, OS2, and Netware. The issue is related to the failure to properly process the backslash "\" character, which may be used as a directory delimiter under these platforms. By using the URL encoded sequence "%2e%2e%5c", the webroot directory may be escaped. Exploitation may result in the disclosure of sensitive information. Additionally, arbitrary local programs may be executed with attacker-supplied parameters if directory traversal techniques are used to escape the cgi-bin directory.

■ Apache httpd 2.0 CGI Error Path Disclosure Vulnerability

A minor information disclosure vulnerability has been reported in Apache httpd versions 2.0 to 2.0.35. A bug in the implementation of the `ap_log_rerror()` procedure, used to log server errors, may result in disclosure of absolute path information to remote clients. An absolute path on the Web server may be considered sensitive information. According to Apache, the vulnerability can be triggered by faulty CGI scripts.

Hypertext Preprocessor (PHP)

■ PHP Transparent Session ID Cross-Site Scripting Vulnerability

A cross-site scripting vulnerability has been discovered in PHP. The problem occurs due to insufficient sanitization of the `PHPSESSID` URI parameter. An attacker may be capable of exploiting this vulnerability by constructing a malicious link containing script code that is embedded within this variable. Successful exploitation of this issue would allow an attacker to execute arbitrary script code in a victim's browser within the context of the visited Web site. This may allow for the theft of sensitive information or other attacks.

■ PHP `STR_Repeat` Boundary Condition Error Vulnerability

It has been reported that a buffer overrun exists in the PHP program. Because of this, an attacker may be able to execute arbitrary code.

■ PHP `array_pad()` Integer Overflow Memory Corruption Vulnerability

A vulnerability has been reported in PHP. The problem occurs in the `array_pad()` function and may allow an attacker to corrupt memory. The affected function

reportedly fails to ensure that proper boundary checks are performed on values that are supplied by a malicious user. This may result in an integer overflow when `array_pad()` is called with an overly long value for its second argument. Further details of this vulnerability are currently unknown. This BID will be updated as more information becomes available.

■ PHP PHPInfo Cross-Site Scripting Vulnerability

Scripts that include the PHP `phpinfo()` debugging function may be prone to cross-site scripting attacks. This could permit remote attackers to create a malicious link to a vulnerable PHP script that includes hostile client-side script code or HTML. If this link is visited, the attacker-supplied code may be rendered in the browser of the user who visits the malicious link.

■ PHP Post File Upload Buffer Overflow Vulnerabilities

PHP is a widely deployed scripting language, designed for Web-based development and CGI programming. PHP does not perform proper bounds checking on functions that are related to Form-based File Uploads in HTML (RFC1867). Specifically, this problem occurs in the functions that are used to decode MIME encoded files. As a result, it may be possible to overrun the buffer that is used for the vulnerable functions to cause arbitrary attacker-supplied instructions to be executed. PHP is invoked through Web servers remotely. It may be possible for remote attackers to execute this vulnerability to gain access to target systems. A vulnerable PHP interpreter module is available for Apache servers that is often enabled by default.

■ PHP SafeMode Arbitrary File Execution Vulnerability

PHP is the Personal HomePage development toolkit, distributed by PHP.net, and maintained by the PHP development team in public domain. A problem with the toolkit could allow elevated privileges and potentially unauthorized access to restricted resources. A local user may upload a malicious php script and execute it with a custom query string. This makes it possible for a local user to execute commands as the HTTP process UID and potentially gain access with the same privileges of the HTTP UID. It has been reported that the proposed fix does not entirely fix the problem, as it's possible to pass command line parameters to `sendmail` when `safe_mode` is enabled. This may be done through the fifth argument permitted by `safe_mode`.

■ PHP MySQL Safe_Mode Filesystem Circumvention Vulnerability

PHP is a server side scripting language, which is designed to be embedded within HTML files. It is available for Windows, Linux, and many UNIX-based operating systems. It is commonly used for Web development and is very widely deployed. The `safe_mode` feature in PHP may be used to restrict access to certain areas of a file system by PHP scripts. However, a problem has been discovered that may

allow an attacker to bypass these restrictions to gain unauthorized access to areas of the file system that were restricted when PHP `safe_mode` was enabled. In particular, the MySQL client library that ships with PHP does not properly honor `safe_mode`. As a result, it is possible to use a `LOAD DATA` statement to read files that exist in restricted areas of the file system (as determined by PHP `safe_mode`).

■ PHP `openlog()` Buffer Overflow Vulnerability

A buffer overflow has been reported in the PHP `openlog()` function. By passing an argument of excessive size to the function, it may be possible for an attacker to overwrite memory, resulting in a denial of service. Although it has not been confirmed, it may be possible for an attacker to execute arbitrary commands within the PHP interpreter.

■ PHP `emalloc()` Unspecified Integer Overflow Memory Corruption Vulnerability

A vulnerability has been reported in PHP version 4.3.1 and earlier. The problem occurs in the `emalloc()` function and may allow an attacker to corrupt memory. The affected function reportedly fails to ensure that proper boundary checks are performed on values that are supplied by a malicious user. This may result in an integer overflow when `emalloc()` attempts to allocate memory. Further details of this vulnerability are currently unknown. This BID will be updated as more information becomes available.

■ PHP `socket_recvfrom()` Signed Integer Memory Corruption Vulnerability

A vulnerability has been reported in PHP versions 4.3.1 and earlier. The problem occurs in the `socket_recvfrom()` and may allow an attacker to corrupt memory. Specifically, the affected function fails to carry out sanity checks on user-supplied argument values, making it prone to an integer overflow. This may make it possible for an attacker to trigger a denial of service. Although it has not been confirmed, it may also be possible to exploit this issue to execute arbitrary code. It should be noted that socket functionality is included in PHP only if compiled with the `--enable-sockets` option.

■ PHP `socket_recv()` Signed Integer Memory Corruption Vulnerability

A vulnerability has been reported in PHP versions 4.3.1 and earlier. The problem occurs in the `socket_recv()` and may allow an attacker to corrupt memory. Specifically, the affected function fails to carry out sanity checks on user-supplied argument values, making it prone to an integer overflow. This may make it possible for an attacker to trigger a denial of service. Although it has not been confirmed, it may also be possible to exploit this issue to execute arbitrary code. It should be noted that socket functionality is included in PHP only if compiled with the `--enable-sockets` option.

■ PHP socket_iovec_alloc() Integer Overflow Vulnerability

A vulnerability has been reported in PHP versions 4.3.1 and earlier. The problem occurs in the `socket_iovec_alloc()` and may allow an attacker to corrupt memory. Specifically, the affected function fails to carry out sanity checks on user-supplied argument values, making it prone to an integer overflow. This may make it possible for an attacker to trigger a denial of service. Although it has not been confirmed, it may also be possible to exploit this issue to execute arbitrary code. It should be noted that socket functionality is included in PHP only if compiled with the "--enable-sockets" option.

■ PHP Mail Function ASCII Control Character Header Spoofing Vulnerability

PHP is the Personal HomePage development toolkit, distributed by PHP.net, and maintained by the PHP development team in public domain. The PHP mail function does not properly sanitize user input. Because of this, a user may pass ASCII control characters to the `mail()` function that could alter the headers of email. This could result in spoofed mail headers.

■ PHP wordwrap() Heap Corruption Vulnerability

A vulnerability has been discovered in PHP. A buffer overflow has been found in the `wordwrap()` function that may cause heap corruption when triggered. Memory corrupted by this issue may be later referenced by the calling Web server. It may be possible for a remote attacker to exploit this issue to overwrite an arbitrary word in memory. By redirecting program flow to point to malicious instructions, it may be possible for an attacker to execute arbitrary commands with the privileges of the vulnerable Web server.

■ PHP CGI SAPI Code Execution Vulnerability

The PHP CGI SAPI contains an unspecified bug that renders options for preventing direct access to the CGI binary useless. The configuration option "--enable-force-cgi-redirect" and the `php.ini` option "cgi.force_redirect" could be disabled by this bug, allowing an attacker to gain access to any file that is readable by the Web server user. Arbitrary PHP code could also be executed.

■ PHP 4.0.3 IMAP Module Buffer Overflow Vulnerability

A vulnerability has been discovered in PHP 4.0.3. The problem occurs in the `imap` module when calling the `imap_open()` function. Exploitation of this issue may result in the target application crashing. Although it has not been confirmed, it may be possible to exploit this vulnerability to execute arbitrary code in the context of an application that uses the vulnerable function.

Tomcat

■ Apache Tomcat Insecure Directory Permissions Vulnerability

Apache Tomcat may be installed with insecure permissions for the `/opt/tomcat/` directory. Files in this directory may contain sensitive information, such as authentication credentials. This issue was reported for Apache Tomcat versions prior to 4.1.24 on Gentoo Linux. It is not known if other distributions are similarly affected.

■ Apache Tomcat Invoker Servlet File Disclosure Vulnerability

An information disclosure vulnerability has been reported to exist in Apache Tomcat. The vulnerability allows an attacker to cause Tomcat to return the unprocessed source of a JSP page or, in certain circumstances, a resource that would have otherwise been secured. The vulnerability exists when using the invoker servlet in conjunction with the default servlet. This issue is a variant of the vulnerability that is described in BID 5786.

■ Apache Tomcat Example Web Application Cross-Site Scripting Vulnerability

A vulnerability has been reported for Apache Tomcat. Reportedly, it is possible for an attacker to launch a cross-site scripting attack. The cross-site scripting vulnerabilities exist in some sample Web applications that are distributed with Apache Tomcat 3.3.1a and earlier. This may enable a remote attacker to steal cookie-based authentication credentials from legitimate users of a host running Tomcat. Other attacks are also possible.

■ Apache Tomcat Web.XML File Contents Disclosure Vulnerability

Apache Tomcat is prone to a file disclosure vulnerability when used with JDK 1.3.1 or earlier. Apache Tomcat may permit malicious Web applications to read the contents of some files. It is possible to create a malicious "web.xml" file that is capable of reading parts of files. Any files that have content that can be read as part of an XML document would be disclosed to an attacker. This could result in disclosure of sensitive information.

■ Apache Tomcat Null Byte Directory/File Disclosure Vulnerability

Apache Tomcat is prone to a directory/file disclosure vulnerability when used with JDK 1.3.1 or earlier. It has been reported that remote attackers may view directory contents (even with an "index.html" or other welcome file). It is also possible for remote attackers to disclose the contents of files. This vulnerability is due to improper handling of null bytes (`%00`) and backslash (`"\"`) characters in requests for Web resources.

■ Multiple Vendor HTTP CONNECT TCP Tunnel Vulnerability

Multiple software and integrated server packages that function as Web proxies may be used as open TCP proxies. This is through the usage of the HTTP CONNECT method by default. This method is detailed in RFC 2817, where it is used to build generic Transit Layer Security over HTTP. Upon receiving a CONNECT request, vulnerable products act as a TCP proxy, tunneling the conversation. This can be used to launch attacks against internal machines or to use an internal mail server as an open relay. In many cases, this behavior may be controlled through the server configuration. Often it is related to support for tunneling or SSL-related functionality. The issue may also introduce an additional threat. Trusted, internal hosts may be able to proxy unauthorized connections to arbitrary ports on external hosts, which may violate security policy.

■ Apache Tomcat DefaultServlet File Disclosure Vulnerability

The servlet "org.apache.catalina.servlets.DefaultServlet" is included with Apache Tomcat by default. It is possible to use this servlet to view contents of files within the webroot directory. This includes JSP source code, which may contain sensitive data such as database user names and passwords.

■ Apache Tomcat 3.2 Directory Disclosure Vulnerability

Apache Tomcat is reported to be prone to a vulnerability that may enable remote attackers to disclose the contents of directories. This issue is reported to affect Apache Tomcat 3.2.x on HP-UX 11.04 (VVOS) systems. It is not known whether other systems are also affected.

■ Apache Tomcat 4.1 JSP Request Cross-Site Scripting Vulnerability

Jakarta Tomcat is a Java Servlet and JSP server that is produced by the Apache Software Foundation. Tomcat is available for Microsoft Windows, Linux, and other UNIX-based operating systems. A cross-site scripting vulnerability has been reported in some versions of Tomcat. Reportedly, if an HTTP request is made for a JSP, malicious script code that is embedded in the URI may be included in a page that is generated by Tomcat. This may be related to the issues that are discussed in BID 2982. This has not, however, been confirmed.

■ Apache Tomcat Servlet Mapping Cross-Site Scripting Vulnerability

A vulnerability has been reported for Apache Tomcat 4.0.3 on Microsoft Windows and Linux platforms. Reportedly, it is possible for an attacker to launch a cross-site scripting attack. When servlet mapping is enabled, it is possible to invoke various servlets and classes and cause Apache Tomcat to throw an exception. This will make cross-site scripting attacks possible.

■ Apache Tomcat Null Character Malformed Request Denial Of Service Vulnerability

A vulnerability has been reported for Apache Tomcat 4.0.3 on a Microsoft Windows platform. Reportedly, it is possible for a remote attacker to make requests consisting of a large number of null characters to Tomcat that will cause the Web service to stop responding. By making numerous malformed requests, the attacker is able to exhaust all available threads for Tomcat, leading to the denial of service condition.

■ Apache Tomcat Web Root Path Disclosure Vulnerability

A vulnerability has been reported for Apache Tomcat on a Microsoft Windows platform. Reportedly, it is possible for a remote attacker to make requests that will result in Apache Tomcat returning an error page containing information that includes the absolute path to the server's webroot directory. For example, submitting a request for LPT9 to Tomcat will result in the following error message: "java.io.FileNotFoundException: C:\Program Files\Apache Tomcat 4.0\webapps\ROOT\lpt9 (the system cannot find the file specified)."

■ Apache Tomcat Example Files Web Root Path Disclosure Vulnerability

Apache Tomcat is a freely available, open source Web server that is maintained by the Apache Foundation. When Apache Tomcat is installed with a default configuration, several example files are also installed. When some of these example files are requested without any input, they will return an error containing the absolute path to the server's webroot directory.

■ Apache Tomcat JSP Engine Denial of Service Vulnerability

A vulnerability has been reported in Apache Tomcat for Windows that results in a denial of service condition. The vulnerability occurs when Tomcat encounters a malicious JSP page. The following snippet of code is reported to crash the Tomcat JSP engine: `new WPrinterJob().pageSetup(null,null);`

■ Apache Tomcat Source.JSP Malformed Request Information Disclosure Vulnerability

Apache Tomcat is a freely available, open source Web server that is maintained by the Apache Foundation. Under some circumstances, Tomcat may yield sensitive information about the Web server configuration. When the source.jsp page is passed a malformed request, it may leak information. This information may include the webroot directory and possibly a directory listing.

- **Apache Tomcat RealPath.JSP Malformed Request Information Disclosure**

Apache Tomcat is a freely available open source Web server maintained by the Apache Foundation. Under some circumstances, Tomcat may yield sensitive information about the Web server configuration. The `realPath.jsp` page may leak information when it is accessed. The `realPath.jsp` page displays the web root directory of the Tomcat implementation.

- **Apache Tomcat Servlet Path Disclosure Vulnerability**

Apache Tomcat is a servlet container for use with the Java Servlet and JavaServer Pages technologies. Tomcat may be run on most UNIX and Linux variants as well as Microsoft Windows operating systems. Apache Tomcat ships with a number of example classes (`SnoopServlet` and `TroubleShooter`) which may reveal the absolute path of the Tomcat installation when requested. Disclosure of this type of sensitive information may aid in further attacks against the host running the vulnerable software.

- **Apache Tomcat System Path Information Disclosure Vulnerability**

An issue has been reported in Apache Tomcat 4.1, which could reveal system path information to remote users. Submitting malformed requests may reveal an error message containing the absolute path to the webroot. Requests that allegedly cause the condition: `http://target/+/file.jsp` `http://target/>/file.jsp` `http://target/</file.jsp` `http://target/%20/file.jsp`

SSL

- **OpenSSL Bad Version Oracle Side Channel Attack Vulnerability**

A problem with OpenSSL may leak sensitive information. A user could abuse the response of vulnerable servers to act as an oracle. By sending a large number of adaptive attacks, the possibility exists for a remote user to create a choice of ciphertext that is encrypted with the private key of the server.

- **OpenSSL Timing Attack RSA Private Key Information Disclosure Vulnerability**

A side-channel attack in the OpenSSL implementation has been published in a recent paper that may ultimately result in an active adversary gaining the RSA private key of a target server. The attack involves analysis of the timing of certain operations during client-server session key negotiation. Through this attack, it may be possible for a malicious client to discover the RSA private key of a server using the vulnerable software.

■ OpenSSL CBC Error Information Leakage Weakness

A side-channel attack against implementations of SSL exists that, through analysis of the timing of certain operations, can reveal sensitive information to an active adversary. The information that is leaked by vulnerable implementations is reportedly sufficient for an adaptive attack that ultimately obtains plaintext of a target block of ciphertext. The information loss was reduced in OpenSSL versions 0.9.6i and 0.9.7a. It is not known if other implementations are vulnerable to this or similar weaknesses. It should be noted that this attack is reportedly difficult to exploit and requires that the adversary be a man-in-the-middle.

■ Mod_SSL Wildcard DNS Cross-Site Scripting Vulnerability

A vulnerability has been discovered in the mod_ssl module for Apache. It should be noted that the existence of this vulnerability is limited to configurations with both the "UseCanonicalName" option turned off and wildcard DNS enabled. It has been reported that Apache v1.x, when using the mod_ssl module will return an unescaped server name in response to HTTP requests on SSL ports. If all of these circumstances are met, an attacker may be able to exploit this issue via a malicious link containing arbitrary HTML and script code as part of the host name. When the malicious link is clicked by an unsuspecting user, the attacker-supplied HTML and script code will be executed by their Web client. This will occur because the server will echo back the malicious host name supplied in the client's request, without sufficiently escaping HTML and script code. Attacks of this nature may make it possible for attackers to manipulate Web content or to steal cookie-based authentication credentials. It may be possible to take arbitrary actions as the victim user.

■ OpenSSL SSLv2 Malformed . Overflow Vulnerability

OpenSSL is an open source implementation of the SSL protocol. It is used by a number of other projects, including but not restricted to Apache, Sendmail, Bind, etc. It is commonly found on Linux and UNIX-based systems. A buffer overflow vulnerability has been reported in some versions of OpenSSL. A buffer overflow has been reported in the handling of the client key value during the negotiation of the SSLv2 protocol. A malicious client may be able to exploit this vulnerability to execute arbitrary code as the vulnerable server process or possibly to create a denial of service condition. UPDATE: A worm has been discovered propagating in the wild that likely exploits this vulnerability. Additionally, this code includes peer-to-peer and distributed denial of service capabilities. There are have been numerous reports of intrusions in Europe. It is not yet confirmed whether this vulnerability is in OpenSSL, mod_ssl, or another component. Administrators are advised to upgrade to the most recent versions or disable Apache, if possible, until more information is available.

■ **OpenSSL SSLv3 Session ID Buffer Overflow Vulnerability**

A vulnerability has been reported for OpenSSL. The vulnerability affects SSLv3 session IDs. Reportedly when a an oversized SSL version 3 session ID is supplied to a client from a malicious server, it is possible to overflow a buffer on the remote system. This could result in key memory areas on the vulnerable, remote system being overwritten and possibly lead to the execution of arbitrary code as the client process.

■ **OpenSSL ASN.1 Parsing Error Denial Of Service Vulnerability**

A remotely exploitable denial of service condition has been reported in the OpenSSL ASN.1 library. This vulnerability is due to parsing errors and affects SSL, TLS, S/MIME, PKCS#7 and certificate creation routines. In particular, malformed certificate encodings could cause a denial of service to server and client implementations that depend on OpenSSL.

■ **OpenSSL Kerberos Enabled SSLv3 Master Key Exchange Buffer Overflow**

A vulnerability has been reported for OpenSSL 0.9.7 pre-release versions. When initiating contact between a SSLv3 server, master keys are exchanged between the client and the server. When an oversized master key is supplied to a SSL version 3 server by a malicious client, it may cause a buffer to overflow on the vulnerable system. Execution of arbitrary code as the server process may be possible. This vulnerability is present only when Kerberos is enabled for a system using SSL version 3.

■ **OpenSSL ASCII Representation Of Integers Buffer Overflow Vulnerability**

Remotely exploitable buffer overflow conditions have been reported in OpenSSL. This issue is due to insufficient checking of bounds with regards to ASCII representations of integers on 64 bit platforms. It is possible to overflow these buffers on a vulnerable system if overly large values are submitted by a malicious attacker. Exploitation of this vulnerability may allow execution of arbitrary code with the privileges of the vulnerable application, service, or client.

■ **Mod_SSL Off-By-One HTAccess Buffer Overflow Vulnerability**

An off-by-one issue exists in mod_ssl that affects Apache when handling certain types of long entries in a .htaccess file. Though this capability within the Web server is not enabled by default, it is popular because it allows non-privileged users to create Web access control schemes for hosted sites and is enabled through the "AllowOverride" configuration variable in Apache. A .htaccess file with 10,000 or more bytes set into the variable DATE_LOCALE results in a buffer overflow within the Web server process handling the request.

■ Apache mod_ssl/Apache-SSL Buffer Overflow Vulnerability

Mod_SSL and Apache-SSL are implementations of SSL (Secure Socket Layer) for the Apache Web server. A buffer overflow vulnerability exists in mod_ssl and Apache-SSL that may allow for attackers to execute arbitrary code. The overflow exists when the modules attempt to cache SSL sessions. Vulnerable versions of mod_ssl and Apache-SSL are incapable of handling large session representations. To exploit this vulnerability, the attacker must somehow increase the size of the data representing the session. This may be accomplished through the use of an extremely large client certificate. This is possible only if verification of client certificates is enabled and if the certificate is verified by a CA trusted by the Web server. Though these requirements make this vulnerability theoretical, administrators are still urged to upgrade.

■ OpenSSL PRNG Internal State Disclosure Vulnerability

The randomness pool and associated mixing function that are used by the OpenSSL PRNG (pseudo-random number generator) suffer from a flaw that could enable an attacker to reconstruct the generator's internal state. The flaw exists because the data quantum used for generator output is derived from a hash value to which the same portion of secret internal state data was input. In general, this means the state data can no longer be considered secret. The number of requested PRNG output bytes can be as low as one, allowing for brute-force analysis of all possible cases. If an attacker is able to gain knowledge of the generator's state, it may be possible for that attacker to predict future results. The impact of this vulnerability depends on the nature of the target application or protocol. It is relatively unlikely for data to be retrieved from the OpenSSL PRNG in a pattern allowing for attacks. No vulnerable applications are currently known.

■ OpenSSL Unseeded Random Number Generator Vulnerability

A design error exists in some versions of OpenSSL that may lead to the disclosure of sensitive information. The problem exists because the SSL_connect() function, which is used to initiate the TLS/SSL handshake with a server, does not ensure that the underlying pseudo-random number generator is properly seeded before initiating a SSL connection. This may lead to the disclosure of sensitive information by applications using the OpenSSL toolkit if the random number generator is not initialized. This problem is known to affect qmail's unofficial "tls.patch" patch, which fails to seed the random number generator.

Security Update 5

Symantec NetRecon 3.6 Security Update 5 (SU5) adds detection and reporting of four new wireless access point vulnerabilities

New vulnerability detection

With the addition of SU5, Symantec NetRecon can now detect and report the following vulnerabilities:

■ Corega Wireless Access Point Identified

A Corega wireless access point could reveal sensitive vendor information. Vendor information can assist an attacker in discovering default login credentials or known vulnerabilities.

■ IOData Wireless Access Point Identified

A IOData wireless access point could reveal sensitive vendor information. Vendor information can assist an attacker in discovering default login credentials or known vulnerabilities.

■ Melco Wireless Access Point Identified

A Melco wireless access point could reveal sensitive vendor information. Vendor information can assist an attacker in discovering default login credentials or known vulnerabilities.

■ Melco Wireless Access Point Identified via SNMP

A Melco wireless access point via SNMP could reveal sensitive vendor information. Vendor information can assist an attacker in discovering default login credentials or known vulnerabilities. SNMP is also considered an insecure protocol.

Security Update 4

Symantec NetRecon 3.6 Security Update 4 (SU4) adds detection and reporting of fifty-one new vulnerabilities for Samba (14), sendmail (13), MySQL (18), Cisco (4), and Microsoft (2).

New vulnerability detection

With the addition of SU4, Symantec NetRecon can now detect and report the following vulnerabilities:

Samba vulnerabilities

- **Samba call_trans2open Remote Buffer Overflow Vulnerability**

A buffer overflow vulnerability in Samba 2.2.8 and earlier and in Samba-TNG 0.3.1 and earlier could let an attacker execute arbitrary commands with the privileges of the Samba process. When copying user-supplied data into a static buffer, passing excessive data to an affected Samba server could let an anonymous user corrupt sensitive locations in memory.

- **Samba Multiple Unspecified Remote Buffer Overflow Vulnerabilities**

Multiple remote buffer overflow vulnerabilities in Samba 2.2.8 and Samba-TNG 0.3.1 could let an attacker execute arbitrary code with the privileges of Samba, typically root.

- **Samba-TNG Unspecified Remote Privilege Escalation Vulnerability**

A privilege escalation vulnerability in Samba-TNG could let an anonymous remote attacker gain root privileges.

- **Samba SMB/CIFS Packet Assembling Buffer Overflow Vulnerability**

A buffer overflow vulnerability in Samba could let an attacker create a specially formatted SMB/CIFS packet that could cause smbd to overwrite sensitive areas of memory with attacker-supplied values. This vulnerability is especially severe because the smbd service runs with root privileges.

- **Samba REG File Writing Race Condition Vulnerability**

A race condition vulnerability in Samba could let an attacker corrupt local files with custom data and gain elevated privileges. An attacker could create a symbolic link at a crucial point of program execution that would overwrite Samba reg files. This can only occur if the files are writable by the Samba process.

■ Samba Server Encrypted Password Buffer Overrun Vulnerability

A buffer overflow vulnerability in the password change request routine used in Samba could let an attacker execute arbitrary code with superuser privileges. Insufficient bounds checking of user supplied input could let an attacker pass an encrypted password of excessive length to smbd. Applications implementing the pam_smbpass PAM module can be locally exploited. This condition could also be exploited remotely, potentially resulting in the execution of arbitrary code with superuser privileges.

■ Samba Improperly Terminated Struct Buffer Overflow Vulnerability

A buffer overflow vulnerability in Samba version 2.2.4, due to improper termination of memory structures, could result in the execution of arbitrary code.

■ Samba Remote Arbitrary File Creation Vulnerability

A vulnerability in Samba could let a remote or local user overwrite files, gain elevated privileges, and deny service to legitimate users. The smbd service does not sufficiently check NetBIOS name input.

■ Samba Insecure TMP file Symbolic Link Vulnerability

A vulnerability in Samba could let an attacker cause a denial of service and gain elevated privileges. A user could create a symbolic link to files owned by privileged users in the system and write data to those files, such as system device files.

■ Samba SWAT Symlink Vulnerability

A vulnerability in Samba SWAT (Samba Web Administration Tool) could let local users gain root access. By default, SWAT logs to /tmp/cgi.log. An attacker could use symlink to overwrite files such as /etc/passwd with user specified data.

■ Samba SWAT Logging Failure Vulnerability

A vulnerability in Samba SWAT (Samba Web Administration Tool) could let remote users gain access to the network. Certain versions of SWAT do not log bad login attempts if the remote user enters a correct user name but wrong password. This lets remote users continuously guess passwords without being logged or locked out.

■ Samba SWAT Logfile Permissions Vulnerability

A vulnerability in Samba SWAT (Samba Web Administration Tool) could let local users gain root access. Poor permission settings in SWAT's log files (/tmp/cgi.log by default) could let attackers read user name and password data that SWAT records for remote users.

■ Samba Pre-2.0.5 Vulnerabilities

Several vulnerabilities in versions of Samba prior to 2.0.5 could let an attacker perpetrate a denial of service or buffer overflow attack.

Nmbd (the NetBIOS name service or daemon) could be exploited for a denial of service. A function in the messaging system of smbd could let an attacker execute arbitrary code as root if the message command is set in smb.conf, creating a buffer overflow. And a race condition vulnerability could let an attacker mount arbitrary points in the file system if smbmount is setuid root.

■ Samba Long Password Buffer Overflow Vulnerability

A vulnerability in the password function of the authentication mechanism in older versions of Samba could let an attacker supply an overly long password to the Samba server, triggering a buffer overflow.

Sendmail vulnerabilities

■ Sendmail Address Prescan Memory Corruption Vulnerability

A logic vulnerability in the conversion of a character to an integer value during the prescan() procedure of sendmail versions prior to 8.12.9 could let a remote attacker execute arbitrary code.

■ Sendmail check_relay Access Bypassing Vulnerability

A vulnerability in sendmail could let attackers use bogus DNS data to bypass the access restrictions imposed by the access_db FEATURE when used with the check_relay ruleset, allowing unauthorized access.

■ Sendmail Trojan Horse Vulnerability

The sendmail ftp server (ftp.sendmail.org) was compromised. Sendmail source code that was downloaded from ftp.sendmail.org between September 28, 2002 and October 6, 2002 likely contains trojan horse code. Versions of sendmail downloaded via HTTP was not affected.

■ Sendmail SMRSH Double Pipe Access Validation Vulnerability

A vulnerability in smrsh (restricted shell for sendmail) could let an attacker execute commands outside of the restricted environment. When commands are entered using either double pipes (||) or a mixture of dot (.) and slash (/) characters, a user could bypass the checks performed by smrsh.

■ Sendmail Long Ident Logging Circumvention Weakness

A vulnerability in the way sendmail handles long indents could let an attacker attempt certain commands without the attacking IP address being logged.

■ Sendmail DNS Map TXT Record Buffer Overflow Vulnerability

A vulnerability in sendmail's DNS handling code could let a malicious nameserver send a string of arbitrary length, resulting in a buffer overflow and the execution of arbitrary code. When sendmail attempts to map an address using a TXT query type, it does not properly check bounds on data returned from the nameserver.

■ Sendmail File Locking Denial Of Service Vulnerability

A vulnerability in sendmail could let a user acquire an exclusive lock on files that sendmail requires for operation, resulting in a denial of service.

■ Sendmail Inadequate Privilege Lowering Vulnerability

A vulnerability in the config file parser of sendmail version 8.12.0 could let an attacker re-acquire higher privileges through the effective group. In this version, the sendmail utility is setgid instead of setuid. The code that drops privileges does not lower the saved groupid making it possible to reclaim the effective groupid if an attacker can force the process to call setregid().

■ Sendmail Queue Processing Data Loss/DoS Vulnerability

A vulnerability in sendmail could let attackers cause a loss of data or a denial of service. Sendmail users could change key configuration variables (such as setting the message hop count to a value greater than the limit imposed by sendmail) causing mail in the queue to be dropped.

■ Sendmail Debugger Arbitrary Code Execution Vulnerability

An input validation error in sendmail's debugging functionality could let an attacker gain full access to the network.

Sendmail's `tTflag()` function processes arguments supplied from the command line with the `-d` switch and writes the values to its internal trace vector. Supplying a large numeric value for the category part of the debugger arguments could cause a signed integer overflow. The numeric value is used as an index for the trace vector. If a negative value is given, an attacker could write to a certain range of process memory. Because the `-d` switch is processed before the program drops its elevated privileges, this could lead to a full system compromise.

■ Sendmail Unsafe Signal Handling Race Condition Vulnerability

Several race condition vulnerabilities in sendmail, using non-atomic or non-reentrant operations in signal handling functions, could cause undesired or unexpected behavior.

■ Sendmail ETRN Denial of Service Vulnerability

A vulnerability in sendmail could let an attacker cause a low-bandwidth denial of service or a reboot of the server. When a client connects to the sendmail smtpd and sends an ETRN command to the server, the server fork()s and sleeps for 5 seconds. If many ETRN commands are sent to a server, it is possible to exhaust system resources.

■ Sendmail Aliases Database Regeneration Vulnerability

A vulnerability in sendmail could let a malicious user corrupt the aliases database. To regenerate the sendmail aliases database, sendmail is run locally with the `-bi` parameters. No checks are made against the user privileges to determine whether they are authorized. It is therefore possible to regenerate the aliases database and then interrupt it, corrupting the database.

MySQL vulnerabilities

■ MySQL Weak Password Encryption Vulnerability

A weak password encryption algorithm in MySQL could let an attacker gain access to passwords and other encrypted information. The function used to encrypt MySQL passwords makes only one pass over the password and employs a weak left shift based cipher. The hash could be cracked easily using a brute force method.

■ MySQL mysqld Privilege Escalation Vulnerability

A vulnerability in MySQL could let an attacker use the mysqld service with elevated privileges. If `DATADIR/my.cnf` includes the line `user=root` under the `[mysqld]` option section, the mysqld service runs as root user rather than the default user.

■ MySQL Double Free Heap Corruption Vulnerability

A vulnerability in MySQL could let an attacker cause a denial of service. A malicious MySQL client could force MySQL to attempt to free the same memory twice.

■ MySQL COM_CHANGE_USER Password Memory Corruption Vulnerability

A memory corruption vulnerability in the `COM_CHANGE_USER` command of MySQL could let an attacker execute arbitrary code in the security context of the MySQL server process. A lack of sufficient bounds checking for client responses to password authentication challenges could let the attacker overwrite the saved instruction pointer on the stack with bytes generated by the random number generator of the password verification algorithm.

- **MySQL COM_CHANGE_USER Password Length Account Compromise Vulnerability**

A vulnerability in the password authentication mechanism for MySQL could let an authenticated database user compromise the accounts of other database users. When the COM_CHANGE_USER command is issued to iterate through a comparison during authentication, MySQL uses a string returned by the client. Attackers could authenticate as another database user if they can successfully guess the first character of the correct password for that user. The range of the valid character set for passwords is 32 characters, which means that a malicious user can authenticate after a maximum of 32 attempts if they cycle through all of the valid characters.

- **MySQL libmysqlclient Library Read_Rows Buffer Overflow Vulnerability**

A buffer overflow vulnerability in the read_rows function of the MySQL libmysqlclient library could let an attacker cause a denial of service or possibly execute arbitrary code in the security context of the MySQL client. The MySQL client does not verify that the stored row sizes are smaller than the destination buffer. Anything that is linked against libmysql could also be affected by this vulnerability.

- **MySQL libmysqlclient Library Read_One_Row Buffer Overflow Vulnerability**

A buffer overflow vulnerability in the read_one_row function of the MySQL libmysqlclient library could let an attacker cause a denial of service. The MySQL client does not verify that the stored row sizes are smaller than the destination buffer.

- **MySQL COM_TABLE_DUMP Memory Corruption Vulnerability**

A memory corruption vulnerability in MySQL could let an attacker cause a denial of service by causing a malformed COM_TABLE_DUMP server command to be issued with malformed parameters.

- **MySQL DataDir Parameter Local Buffer Overflow Vulnerability**

A buffer overflow vulnerability in MySQL could let an attacker corrupt memory and possibly execute arbitrary commands within the context of the SYSTEM user.

- **MySQL Logging Not Enabled Weak Default Configuration Vulnerability**

A weak default configuration in MySQL could let a user attack the database undetected by the administrator. By default, most logging is disabled in MySQL.

■ **MySQL Null Root Password Weak Default Configuration Vulnerability**

A weak default configuration in the Windows binary release of MySQL could let an attacker gain root access to the database. The root user of the database is defined with no password and is granted login privileges from any host.

■ **MySQL Bind Address Not Enabled Weak Default Configuration Vulnerability**

A weak default configuration in the Windows binary release of MySQL could let a remote attacker gain access to default installations of the server. By default, MySQL does not enable the bind-address configuration directive.

■ **MySQL Root Operation Symbolic Link File Overwriting Vulnerability**

A vulnerability in MySQL databases that are configured with a uid of root could let users with the CREATE TABLE privilege overwrite sensitive system files and possibly gain elevated privileges. By using a symbolic link in the /var/tmp directory and linking it to a file that is write-accessible by root, a user could log into the database with their account and create a table with a name corresponding to that of the symbolic link. The creation of the table overwrites the linked file and any data created within the table is written to the file that has been symbolically linked.

■ **MySQL SHOW GRANTS Password Hash Disclosure Vulnerability**

A vulnerability in MySQL could let an attacker using the SHOW grants query obtain encrypted passwords. Using a dictionary attack, an attacker could read these password hashes and further compromise user accounts.

■ **MySQL Local Buffer Overflow Vulnerability**

A buffer overflow vulnerability in MySQL could let an attacker overwrite critical parts of the stack frame such as the calling function's return address. Supplying an excessively long string as an argument for a SELECT statement could let a local attacker overflow the MySQL query string buffer.

■ **MySQL Unauthenticated Remote Access Vulnerability**

A vulnerability in the password verification scheme in MySQL could let unauthorized users access the database. Once MySQL grants access to a machine, any user on that machine can connect to the database. Instead of having to know an account name and password, the attacker need only know a legitimate account name.

■ **MySQL Authentication Algorithm Vulnerability**

An authentication vulnerability in MySQL could let an attacker gain unauthorized access to the server. There are arithmetic properties in MySQL authentication check-strings that are consistent throughout multiple

authentications. If multiple client authentications are observed by an attacker, the password hash can be deduced.

■ MySQL GRANT Global Password Changing Vulnerability

A vulnerability in MySQL could let users with GRANT access change passwords in the database (including the superuser password). In addition, MySQL ships with a test account with GRANT privileges and that is not protected with a password. These two problems combined can result in a total, remote (and probably anonymous) database compromise. The database can be compromised even if the test account is disabled (given a local user account with GRANT privileges).

Cisco vulnerabilities

■ Cisco Catalyst CatOS Authentication Bypass Vulnerability

A vulnerability in Cisco Catalyst switches could let an attacker with command line access gain unauthorized access to the enable mode without a password.

■ Cisco Catalyst Unicast Traffic Broadcast Vulnerability

A vulnerability in Cisco Catalyst could let an attacker cause a denial of service. Cisco Catalyst does not always capture the MAC address until after several packets are sent to the unknown host. Unicast traffic could be broadcast to all systems connected to the switch.

■ Cisco Catalyst ssh Protocol Mismatch Denial of Service Vulnerability

A vulnerability in versions 6.1(1), 6.1(1a) and 6.1(1b) of Catalyst 4000, 5000, and 6000 devices with SSH enabled and supporting 3 DES encryption could let an attacker cause a denial of service. If a connection is made to the SSH service on a vulnerable Catalyst device and the protocol mismatch error occurs, the device will reset. The supervisor engine will fail and be unable to handle the error.

■ Cisco Catalyst Enable Password Bypass Vulnerability

A vulnerability in Cisco Catalyst could let a user gain unauthorized access. Users who already have access to the device can elevate their current access to enable mode without a password. Once enable mode is obtained users can access the configuration mode and commit unauthorized configuration changes from the console itself or via a remote Telnet session.

Microsoft vulnerabilities

■ Microsoft Windows RPC Service Denial of Service Vulnerability

A vulnerability in the RPC service of Microsoft Windows 2000, Windows NT 4.0, and Windows XP could let a remote attacker cause a denial of service. Sending a specifically malformed packet to TCP port 135 could disable the RPC service.

■ Microsoft IIS WebDAV Denial Of Service Vulnerability

A vulnerability in Microsoft IIS 5 and 5.1 could let an attacker cause a denial of service. Specially crafted WebDAV requests could result in IIS allocating an extremely large amount of memory on the server.

Security Update 3

Symantec NetRecon 3.6 Security Update 3 (SU3) adds detection and reporting of seven Microsoft Internet Explorer vulnerabilities, twenty-one Cisco vulnerabilities, eleven IBM Lotus Domino vulnerabilities, ten wireless network vulnerabilities, and vulnerabilities that relate to Microsoft Exchange Server and VPN.

New vulnerability detection

With the addition of SU3, Symantec NetRecon can now detect and report the following vulnerabilities:

- **IE is vulnerable to arbitrary code injection through malformed header fields**

A vulnerability in Internet Explorer 5.01 and 6.0 could let remote attackers execute arbitrary code using malformed content-disposition and content-type header fields. This could let the application for the spoofed file type pass the file back to the operating system for handling instead of producing an error message.
- **System Attendant on Exchange Server 2000 grants unauthorized registry access**

System Attendant on Microsoft Exchange Server 2000 grants Everyone privileges to the WinReg key, letting remote attackers read or modify registry keys.
- **Microsoft IE Arbitrary File Execution Vulnerability**

Microsoft Internet Explorer mishandles conflicting information in some HTTP headers that are used to describe non-HTML content. A malicious Web server could provide content with misleading values in the content-type and content-disposition header fields. Under these circumstances, IE could automatically download and execute arbitrary programs. This vulnerability can also be exploited through HTML formatted email.
- **Microsoft IE HTTP Request Encoding Vulnerability**

A vulnerability in Microsoft Internet Explorer could let an attacker craft a URL that redirects a user to a third-party Web site. This redirection could also include commands that would appear to have come from the user.
- **Microsoft IE Zone Spoofing Vulnerability**

A vulnerability in Microsoft Internet Explorer in the way it handles Web sites that are accessed using the NetBIOS protocol could allow malicious Web sites to be viewed in the Local Intranet Zone. A maliciously crafted Web page could trick IE into opening the page as a trusted site.

■ **Microsoft IE Arbitrary Program Execution Vulnerability**

A vulnerability in Microsoft Internet Explorer could let malicious Web sites execute programs on client systems. If an object is embedded in HTML with a non-zero CLASSID value and the CODEBASE parameter is set to the path of an executable on the client system, the specified program will execute.

Later versions of IE included a fix for this vulnerability, but IE may still be vulnerable. If objects with a CODEBASE value that is set to execute on the client system are embedded in new objects using `window.PoPup()` or `window.Open()`, the specified program will execute.

Also, it may be possible for an attacker to execute programs on target systems originating from remote machines. Programs on shares could be downloaded and executed on client systems automatically. For example, an attacker could conceivably place a trojan program on a host with a world-accessible share. If the address of the share and the path of this program are set as the CODEBASE value, the program may execute.

■ **Microsoft IE Same Origin Policy Violation Vulnerability**

A vulnerability in Microsoft Internet Explorer could let users circumvent the “same origin policy.” In modern browsers, script code executing in the context of one Web site should not be able to access the properties of another. This security feature is known as the “same origin policy,” and it aims to prevent malicious Web sites from interacting with and possibly stealing sensitive information from other sites in different windows.

When one Web site (“parent”) opens another Web site in a new window (“child”) using the `document.Open()` method, script code in the parent Web site could interact with properties of the child Web site.

■ **Microsoft IE Forced Script Execution Vulnerability**

A vulnerability in Microsoft Internet Explorer could allow script code to be executed despite properly configured security settings. IE does not check all event handlers. Script code could execute if it is embedded in Web content as handlers for asynchronous events. Setting “Active Scripting” to “Disable” will not prevent the execution of the script.

■ **VPN service enabled**

A Virtual Private Network (VPN) server usually implements Point to Point Tunneling Protocol (PPTP), allowing remote users to access the internal network.

■ **Cisco IOS TFTP Server Long File Name Buffer Overflow Vulnerability**

A buffer overflow vulnerability in older versions of Cisco IOS (before version 12.0) could result in denial of service and malicious code execution. Due to insufficient bounds checking on requested file names, a request for a file name of 700 or more bytes could cause the router to crash and reboot.

- **Cisco IOS ILMI SNMP Community String Vulnerability**

A vulnerability in Cisco IOS versions 11.x and 12.0 could let an unauthorized user access certain Cisco configuration variables. The ILMI SNMP community string allows read and write access to system objects in the MIB-II community group. A malicious remote user could change configuration objects within the MIB-II community, rename the system, change the location name in the system, and change the contact information for the system.
- **Cisco IOS Malformed PPTP Packet Denial of Service Vulnerability**

A vulnerability in Cisco IOS versions that support the Point to Point Tunneling Protocol (PPTP) could let remote users disable a Cisco router. If a malformed PPTP packet is sent to port 1723 on a vulnerable router, the router must be reset to regain normal functionality.
- **Multiple Vendor Session Initiation Protocol Vulnerabilities**

Vulnerabilities related to handling of SIP INVITE messages in Session Initiation Protocol (SIP) implementations could be exploited to cause a denial of service and may allow unauthorized access.
- **Cisco CatOS CiscoView HTTP Server Buffer Overflow Vulnerability**

A buffer overflow vulnerability in versions 5.4 through 7.4 of Cisco CatOS HTTP Server could be exploited for a denial of service if the Cisco image name contains “cv.”
- **Cisco Switch Router with Fast Ethernet Cards ACL Bypass/DoS Vulnerabilities**

A vulnerability in Cisco Gigabit Switch Routers (GSRs), when used with configured Fast Ethernet/Gigabit Ethernet cards, could let attackers bypass access control lists (ACLs). An attacker could prevent the interface on the target GSR from stopping the forwarding of packets, resulting in a denial of service. All versions of IOS greater than 11.2 on GSRs are assumed to be vulnerable.
- **Cisco IOS Router Scan Software Reloading Vulnerability**

A vulnerability in Cisco IOS could result in an arbitrary reload of the router configuration, and potentially a denial of service. A TCP scan against Cisco routers (3100-3999, 5100-5999, 7100-7999, and 10100-10999) can cause the router to become unstable and suffer memory corruption. A subsequent attempt to access the configuration could cause the router to reload the configuration.
- **Cisco Catalyst 802.1x Frame Forwarding Vulnerability**

A vulnerability in the 5000 and 2900 series Cisco Catalyst Switch could be exploited for a denial of service. Sending an 802.1x frame to a switch with

spanning tree protocol blocked port could result in a storm of 802.1x frames being forwarded to the VLAN that is managed by the switch.

■ **Cisco Catalyst Memory Leak Denial of Service Vulnerability**

A vulnerability in the telnet server that is shipped with Catalyst firmware could be exploited for a denial of service. Each time that the telnet service is started, memory resources are used without being freed. Connecting multiple clients to the Catalyst telnet server depletes memory, leaving the device unable to function properly and vulnerable to a denial of service until the device is manually reset.

■ **Cisco SSH Denial of Service Vulnerability**

While addressing previous vulnerabilities, a denial of service condition was inadvertently introduced into firmware upgrades for Cisco routers and switches (IOS). Catalyst 6000 switches running CatOS, Cisco PIX Firewall, and Cisco 11000 Content Service Switch devices may be vulnerable.

Scanning for SSH vulnerabilities on affected devices can cause excessive CPU consumption due to a failure of the Cisco SSH implementation to properly process large SSH packets. Repeated and concurrent attacks can result in a denial of service.

■ **Cisco Local Interface ARP Denial of Service Vulnerability**

A vulnerability in Cisco IOS could facilitate a denial of service by a user on a system that is local to the router. When multiple ARP requests are sent to the router, it makes an entry for its own MAC address as the received address. Afterwards, the router discontinues all other ARP entries.

■ **Cisco IOS Cisco Express Forwarding Session Information Leakage Vulnerability**

If Cisco Express Forwarding is enabled, a vulnerability in Cisco IOS could expose packet information to unintended recipients. If a packet that is sent to a router has a MAC layer packet length that is shorter than that specified in the IP layer length, the packet is padded by the router before being routed. The data that are used to pad the packet are taken from previously routed packets that are still in the router's memory.

■ **Cisco 12000 Series Internet Router Denial Of Service Vulnerability**

A vulnerability in Cisco 12000 Series Internet Routers could result in a denial of service. Sending large numbers of ICMP unreachable packets could overburden CPU resources and prevent the forwarding of packets. This condition may occur when the router is "Black Hole" filtering.

■ **Cisco Access Control List Fragment Non-blocking Vulnerability**

A vulnerability in IOS on Cisco 12000 series routers with Engine 2 based cards could let users communicate with protected hosts, bypassing the

security policy. Affected routers do not properly filter fragmented packets with access control entries. Non-initial fragmented packets that are sent to a protected host can bypass the ACL.

- **Cisco 12000 Series Internet Router ACL Failure To Drop Packets Vulnerability**

A vulnerability in Cisco 12000 Series Internet Routers with line cards that are based on Engine 2 could let restricted traffic into the network. When an outgoing access control list (ACL) is exactly 448 lines and the last statement is not explicitly a “deny ip any any” rule, some packets are not properly dropped.

- **Cisco Outbound Access Control List Bypass Vulnerability**

A vulnerability in IOS on Cisco 12000 series routers with Engine 2 based cards could fail to block traffic using outbound ACLs. Routers are vulnerable when the input ACL is configured on some, but not all, of the interfaces on the card. Routers are vulnerable only when the packets in question are not blocked by an inbound ACL on the ingress port. An ACL that is applied to incoming packets will still behave as expected.

- **Cisco 12000 Outgoing ACL Fragmented Packet Vulnerability**

A vulnerability in IOS on Cisco 12000 series routers with Engine 2 based cards could fail to block traffic using outgoing ACLs. Outgoing ACLs do not support the keyword “fragment” and will ignore it. If the keyword is included in the ACL, fragmented packets are not evaluated against the associated rules, possibly bypassing the security policy.

- **Cisco Fragment Keyword Outgoing Access Control Vulnerability**

A vulnerability in IOS on Cisco 12000 series routers could let a remote user send unauthorized packets to a protected network. IOS for the Cisco 12000 has only recently added the ability to filter fragmented packets in outgoing traffic. If a ‘fragment’ rule in an outgoing ACL exists in a version without this feature, attackers could send fragmented packets to a protected network, thereby bypassing security policy.

- **Cisco 12000 Series Turbo ACL Fragment Bypass Vulnerability**

A vulnerability in IOS on Cisco 12000 series routers could let a remote user send unauthorized packets to a protected network. The keyword ‘fragment’ in a compiled (turbo) ACL is ignored when evaluating packets that are addressed to the router itself.

- **Ntpd Remote Buffer Overflow Vulnerability**

A buffer overflow vulnerability in the Network Time Protocol (NTP) could let a remote user gain root access, execute arbitrary code, or cause a denial of service. NTP is used to synchronize the time between a computer and

another system or time reference, using UDP as a transport protocol. There are two protocol versions in use, NTP v3 and NTP v4. The ntp daemon implementing version 3 is called xntp3, and the version implementing version 4 is called ntp.

■ **Cisco IOS OSPF Neighbor Buffer Overflow Vulnerability**

A buffer overflow vulnerability in Cisco IOS when handling OSPF (Open Shortest Path First) packets could result in a denial of service or the execution of malicious code. Vulnerable versions are affected whenever more than 255 OSPF neighbors are announced.

■ **Cisco IOS ICMP Redirect Routing Table Modification Vulnerability**

A vulnerability in the Cisco IOS routing table could let remote users modify the table. If IP routing is disabled on a vulnerable router, the router will accept malicious ICMP redirect packets and modify its routing table accordingly. ICMP redirect messages are normally sent to indicate inefficient routing, a new route, or a routing change. A malicious user could specify a default gateway on the local network that does not exist, thus denying service to the affected router for traffic destined to any location outside the local subnet.

■ **Cisco IOS EIGRP Announcement ARP Denial Of Service Vulnerability**

A vulnerability in Cisco IOS allows spoofed EIGRP announcements to be sent via unicast. A neighbor announcement that is received by routers on a given network segment will cause an address resolution protocol (ARP) storm, filling network capacity while routers attempt to contact the announcing neighbor and resulting in a denial of service. Additionally, resources on the router will become bound while the router attempts to reach the announcing neighbor.

■ **IBM Lotus Domino HTTP Redirect Buffer Overflow Vulnerability**

A buffer overflow vulnerability when IBM Lotus Domino 6 constructs an HTTP redirect response could let malicious clients gain control of the server. This vulnerability is reportedly fixed in Notes/Domino release 6.0.1.

■ **Lotus Domino iNotes s_ViewName/Foldername Buffer Overflow Vulnerability**

A buffer overflow vulnerability in IBM Lotus Domino iNotes Web server when handling client-supplied request parameters could allow the execution of malicious code. This vulnerability is reportedly fixed in Lotus Domino 6.0.1.

- **IBM Lotus Domino Web Server HTTP POST Denial Of Service Vulnerability**

A vulnerability in IBM Lotus Domino server could result in a denial of service. Specially crafted POST requests can cause the server to behave in an unpredictable manner.
- **Lotus Domino NSF Banner Information Disclosure Vulnerability**

A vulnerability in IBM Lotus Domino server with DominoNoBanner set to a value of 1 could let remote users discover information about the layout of the file system. When a non-existent NSF database is requested, sensitive banner information could be disclosed.
- **Lotus Domino HTTP Authentication Logging Buffer Overflow Vulnerability**

A buffer overflow vulnerability in IBM Lotus Domino could let a remote user corrupt sensitive regions of memory with attacker-supplied values and possibly execute arbitrary code. This can occur because of insufficient bounds checking when HTTP Authentication data is logged to the DOMLOG.NSF database.
- **Lotus Domino MS-DOS Device Path Disclosure Vulnerability**

A vulnerability in IBM Lotus Domino could give a remote user access to sensitive path information. Using specially crafted requests for MS-DOS devices could reveal information that could aid the attacker in further attacks. This issue was reported for Lotus Domino v5.0.9a on Microsoft Windows. Earlier versions may also be affected.
- **Lotus Domino Banner Information Disclosure Vulnerability**

A vulnerability in IBM Lotus Domino server with NoBanner set to 1 could let a malicious user view the full path to the Web root. If a user submits an HTTP request for a non-existent Perl script, the server may return a 500 error page containing the full path of the file and possibly other system information.
- **Lotus Domino MS-Dos Device Name Denial Of Service Vulnerability**

A vulnerability in IBM Lotus Domino server could be exploited for a denial of service. Invoking MS-DOS devices (such as CON, AUX, PRN, etc.) in multiple Web requests could halt service, requiring a manual restart to regain normal functionality.
- **Lotus Domino Remote Authentication Bypass Vulnerability**

A vulnerability in IBM Lotus Domino server could let a malicious user bypass the authentication process. If a remote request for the file is submitted with a maliciously constructed file name, the authentication process may be bypassed. This issue is reportedly fixed in Domino 5.0.9.

- **Lotus Domino DOS Device Extension Denial of Service Vulnerability**

A vulnerability in versions of IBM Lotus Domino server prior to 5.0.9a running on Windows 2000 could be exploited for a denial of service. If a request for a DOS device from CGI-BIN has an extension of 220 characters, the server executes a cmd.exe session to run nul.pif. The server will launch a pop-up window asking for a program association with which to run nul.pif. If this is done approximately 400 times, the server runs out of working threads thus causing a denial of service.
- **Lotus Domino Username Enumeration Vulnerability**

A vulnerability in IBM Lotus Domino server could let remote users determine the validity of a user name existing on a host. If a remote user submits a GET request for a user account, the server returns an HTTP 200 OK message when given a valid user name. If the user name is not valid, a 404 File not Found error message is returned.
- **Embedded Web server identified**

Embedded Web servers are usually found in network hardware such as routers, switches, and wireless access points. An attacker could discover an exploit or guess the password and gain access to the device, and thus be able to reconfigure or disable the device.
- **Wireless Access Point identified**

The configuration interface of a wireless access point could allow unauthorized access to your network.
- **D-Link Wireless Access Point Identified**

A D-link wireless access point could reveal sensitive vendor information. Vendor information can assist an attacker in discovering default login credentials or known vulnerabilities.
- **Netgear Wireless Access Point Identified**

A Netgear wireless access point could reveal sensitive vendor information. Vendor information can assist an attacker in discovering default login credentials or known vulnerabilities.
- **Linksys Wireless Access Point Identified**

A Linksys wireless access point could reveal sensitive vendor information. Vendor information can assist an attacker in discovering default login credentials or known vulnerabilities.
- **SMC Wireless Access Point Identified**

An SMC wireless access point could reveal sensitive vendor information. Vendor information can assist an attacker in discovering default login credentials or known vulnerabilities.

- **Cisco-Aironet Wireless Access Point Identified**
A Cisco-Aironet wireless access point could reveal sensitive vendor information. Vendor information can assist an attacker in discovering default login credentials or known vulnerabilities.
- **Cisco-Aironet Wireless Access Point Identified via SNMP**
A Cisco-Aironet wireless access point via SNMP could reveal sensitive vendor information. Vendor information can assist an attacker in discovering default login credentials or known vulnerabilities. SNMP is also considered an insecure protocol.
- **Embedded Web server in device is vulnerable to Cross-Site Scripting**
A vulnerability in a device running a ZyXel-RomPager Web server could let a malicious user gain unauthorized administrative access to the router (cross-site scripting attack). An attacker who knows the internal IP address of the router could execute arbitrary script code and possibly steal cookie-based authentication credentials from a user who has access to the administrative interface.
- **Allegro RomPager Malformed URL Request DoS Vulnerability**
A vulnerability in Allegro RomPager could be exploited for a denial of service. A specifically-malformed request that is sent to RomPager could disable the device and possibly the parent device as well.

Current installation of Microsoft Jet database engine

Microsoft Data Access Components (MDAC) versions 2.6 and 2.7 do not include Microsoft Jet, Microsoft Jet OLE DB Provider, and the ODBC Desktop Database Drivers.

Symantec NetRecon requires these Microsoft Jet components to function properly. If you do not have the latest Jet components, you might get the following error message:

“Symantec NetRecon cannot connect to the database it uses to store information. A Windows NT Service Pack or application installation may have overwritten the Microsoft Database Access Components required by Symantec NetRecon. Please reinstall NetRecon. If reinstalling the product does not resolve this problem, contact your Symantec NetRecon customer support representative.”

To solve this problem, install the latest Jet database engine. For more information on this issue and for instructions on installing the latest Jet database engine, see <http://support.microsoft.com/default.aspx?scid=kb;EN-US;271908>.

Integration with Symantec Enterprise Security Manager

Symantec NetRecon customers who also use Symantec ESM can detect vulnerabilities using the remote registry service. To take advantage of this functionality, the Enterprise Security Agent Service must be configured to run using an account that is part of the Domain Admins group rather than the Local System account.

To change the Enterprise Security Agent account

- 1 Access the Services control panel by clicking on the Windows **Start** button and selecting **Settings > Control Panel > Administrative Tools > Services**.
- 2 Find **Enterprise Security Agent** in the list of Windows Services.
- 3 Right-click on **Enterprise Security Agent** and select **Properties**.
- 4 Select the **Log On** tab.
- 5 Select the **This account** radio button.
- 6 Enter the name and password for an account that is in the Domain Admins group.
- 7 Click **OK**.
- 8 Right-click on **Enterprise Security Agent** and select **Restart**.

Cisco vulnerabilities

All of the Cisco vulnerabilities are currently detected via the SNMP service. Please ensure that the SNMP service is running on your Cisco devices. You will also need to add your read-only community strings, (if they are not already there) to c:\Program Files\Symantec\Netrecon 3.6\nrsnmpnames.inf if you want to detect your Cisco switches and routers successfully. If enabling SNMP presents a security risk, you can disable it after your scan is finished.

802.11x Wireless vulnerabilities

All of the wireless vulnerabilities are detected through your internal network. It is not required to purchase a wireless card in order to detect these vulnerabilities. The wireless access points will be detected based on whether the administrative web interface is enabled (usually TCP port 80). The main goal is to ensure that users have not plugged in a wireless access point into your corporate network thus exposing your network physically to the outside or airwave range.

Lotus Domino vulnerabilities

The Lotus Domino vulnerabilities are based on the web server advertising its version number in the HTTP banner. Even though it is not recommended to enable the server to display the version information, you can do it by editing the notes.ini file and adding DominoNoBanner=0. This setting is enabled by default in earlier versions.

Security Update 2

Symantec NetRecon 3.6 SU2 adds detection and reporting of four Microsoft SQL Server vulnerabilities and the sendmail header processing buffer overflow. Several SQL Server vulnerabilities have also been renamed.

New vulnerability detection

With the addition of SU2, Symantec NetRecon can now detect and report the following vulnerabilities:

- **Microsoft Windows 2000 ntdll.dll Buffer Overflow Vulnerability**
The Windows ntdll.dll system component vulnerable to a buffer overrun when passed data from certain functions; remote code execution is possible. The Windows 2000 library ntdll.dll includes a function that does not perform sufficient bounds checking. The vulnerability is present in the RtlDosPathNameToNtPathName_U function and may be exploited through other programs that use the library if an attack vector permits it. One of these programs is the implementation of WebDAV that ships with IIS. The vector allows for the vulnerability in ntdll.dll to be exploited by a remote attacker.
- **Microsoft Data Access Components RDS Buffer Overflow Vulnerability**
MDAC contains a buffer overflow that could lead to arbitrary code execution in MSIE and on vulnerable IIS servers.
- **Microsoft Windows Locator Service Buffer Overflow Vulnerability**
The Locator service for Windows domain controller systems is prone to a buffer overflow condition. Arbitrary code execution is possible.
- **Microsoft SQL Server 2000 SQLXML Buffer Overflow Vulnerability**
Attackers can initiate SQL Server 2000 buffer overflows by connecting to a host through HTTP, then submitting malformed data directly to the SQLXML HTTP component. The overflow condition occurs when an overly long value is given to the contentType=parameter.
- **Microsoft SQL Server 2000 SQLXML Script Injection Vulnerability**
SQLXML components are prone to script injection attacks via an unchecked parameter in XML tags. Under some circumstances it is possible to inject arbitrary script code in XML tags. This lets an attacker execute script code in the context of the Internet Explorer Security Zone associated with the IIS server running the vulnerable components.
- **Microsoft SQL Server 2000 lets remote attackers mount a DoS**
SQL Server 2000 lets remote attackers mount a denial of service attack through a malformed 0x08 packet that is missing a colon separator.

- **Microsoft SQL Server 2000 OpenDataSource buffer overflow**
 Buffer overflow in the OpenDataSource function of the Jet engine on SQL Server 2000 lets remote attackers execute arbitrary code.
- **Sendmail Header Processing Buffer Overflow Vulnerability**
 A buffer overflow vulnerability in the SMTP header-parsing component of sendmail (versions 5.2 through 8.12.7) could let malicious users gain control of the server. This vulnerability could be exploited locally if the sendmail binary is setuid/setgid.

Vulnerability name changes

In SU2 the following Symantec NetRecon vulnerability names are changed:

Table 2-1 Vulnerability name changes

Old name	New name
SQL Server 7.0 Remote Data Source function contains unchecked buffers	Microsoft SQL Server 7.0 OLE DB Provider Name Buffer Overflow
SQL Server 2000 Remote Data Source function contains unchecked buffers	Microsoft SQL Server 2000 OLE DB Provider Name Buffer Overflow Vulnerability
SQL 7.0 extended stored procedures vulnerable to buffer overflow and DoS	Microsoft SQL Server 7.0 Multiple Extended Stored Procedure Buffer Overflow
SQL 2000 extended stored procedures vulnerable to buffer overflow and DoS	Microsoft SQL Server 2000 Multiple Extended Stored Procedure Buffer Overflow
SQL 2000 password encryption procedure vulnerable to buffer overflow attacks	Microsoft SQL Server 2000 Password Encrypt Procedure Buffer Overflow
SQL 2000 Resolution Service allows remote DoS or execution of arbitrary code	Microsoft SQL Server 2000 Resolution Service Heap Overflow Vulnerability
SQL Server 2000 sp_MScoptscript stored procedure fails to validate input	Microsoft SQL Server 2000 sp_MScoptscript stored procedure validation
SQL Server 7.0 authentication engine vulnerable to buffer overflow attacks	Microsoft SQL Server 7.0 authentication engine vulnerable to buffer overflow
Server 2000 authentication engine vulnerable to buffer overflow attacks	Microsoft SQL Server 2000 authentication engine vulnerable to buffer overflow
MSSQL Buffer Overflow vulnerable to W32.Slammer worm attack	Microsoft SQL Server 2000 Resolution Service Stack Overflow Vulnerability

Security Update 1

New vulnerability detection

Note: The names of SU1 vulnerabilities were changed in SU2. The current (SU2+) names are used below. For the names that were used in SU1, see [“Vulnerability name changes”](#) on page 45.

- **Microsoft SQL Server 7.0 OLE DB Provider Name Buffer Overflow Vulnerability**
Symantec NetRecon can identify a buffer overflow in Microsoft SQL 7.0 that may let remote attackers execute arbitrary code on the system or gain privileged access to the SQL database.
- **Microsoft SQL Server 2000 OLE DB Provider Name Buffer Overflow Vulnerability**
Symantec NetRecon can identify a buffer overflow in Microsoft SQL 2000 that may let remote attackers execute arbitrary code on the system or gain privileged access to the SQL database.
- **Microsoft SQL Server 7.0 Multiple Extended Stored Procedure Buffer Overflow**
Symantec NetRecon can identify Microsoft SQL Server 7.0 extended stored procedures that fail to validate input correctly, which may allow buffer overflow attacks and denial of service (DoS) attacks.
- **Microsoft SQL Server 2000 Multiple Extended Stored Procedure Buffer Overflow**
Symantec NetRecon can identify Microsoft SQL Server 2000 extended stored procedures that fail to validate input correctly, which may allow buffer overflow attacks and denial of service (DoS) attacks.
- **Microsoft SQL Server 2000 Password Encrypt Procedure Buffer Overflow**
Symantec NetRecon can identify a Microsoft SQL Server 2000 credential encryption procedure that is vulnerable to a buffer overflow attack, which could compromise control of the database and possibly the server. The SQL 2000 Resolution Service may allow remote DoS or execution of arbitrary code.
- **Microsoft SQL Server 2000 Resolution Service Heap Overflow Vulnerability**
Symantec NetRecon can identify the Microsoft SQL Server 2000 Resolution Services that contain multiple vulnerabilities. These vulnerabilities allow

denial of service attacks as well as possible execution of arbitrary code through buffer overflow attacks.

- **Microsoft SQL Server 2000 sp_MSscopyscript stored procedure validation**
Symantec NetRecon can identify the Microsoft SQL Server 2000 sp_MSscopyscript on network resources. Microsoft SQL Server 2000 fails to validate input, which may allow attackers to execute arbitrary code and gain privileged access to stored procedures in the SQL database.
- **Microsoft SQL Server 7.0 authentication engine vulnerable to buffer overflow**
Symantec NetRecon can identify the authentication engine for the Microsoft SQL Server 7.0. The authentication engine is vulnerable to buffer overflow attacks that may let attackers execute arbitrary code and gain privileged access to the stored procedure, or cause a denial of service for the SQL service.
- **Microsoft SQL Server 2000 authentication engine vulnerable to buffer overflow**
Symantec NetRecon can identify the authentication engine for the Microsoft SQL Server 2000. The authentication engine is vulnerable to buffer overflow attacks that may let attackers execute arbitrary code and gain privileged access to the stored procedure, or cause a denial of service for the SQL service.
- **Microsoft SQL Server 2000 Resolution Service Stack Overflow Vulnerability**
Symantec NetRecon can identify a problem with the Microsoft SQL Server 2000 Resolution Service, which may make it possible for a remote user to execute arbitrary code on a vulnerable host. An attacker could exploit a stack-based overflow in the Resolution Service by sending a maliciously crafted UDP packet to port 1434. A vulnerable version of Microsoft SQL Server 2000 Desktop Engine is automatically installed with Internet Explorer 6 on .NET servers.
- **MSSQL Server detected**
MSSQL Server has been detected.

Command line interface (CLI) enhancements

License key

The Symantec NetRecon command line interface (CLI) can now accept license key information. Four options are required to successfully register the license key using the CLI.

Table 2-2 License key options

Option	Description
-license [-l]	Specify the Symantec NetRecon license key.
-company [-c]	Specify the company name that is associated with the license.
-serial [-s]	Specify the serial number that is associated with the license.
-type [-t]	Specify the type that is associated with the license.

Note: If an error occurs during the license registration, Symantec NetRecon places an error message in the errors.log file.

Symantec NetRecon data (.nrd) files

You must now use the following options to specify .nrd files in the command line interface.

Table 2-3 nrd file options

Option	Description
-nrdir [-i]	Specify the .nrd input file.
-nrdir [-o]	Specify the .nrd output file.

Note: It is not necessary to submit .nrd files to change the license. However, if you omit one or both of the .nrd files, Symantec NetRecon will not attempt a scan.

CLI formatting and syntax are fully documented in the Symantec NetRecon online Help system. Users who are not familiar with the CLI should read the entire Use the Command Line Interface (CLI) Help section.

To locate the Help Topic on .nrd files

- 1** On the NetRecon console menu, click **Help**.
- 2** Click **Help Topics**.
- 3** Click the topic labeled **How do I...**
- 4** Click **Use the Command Line Interface (CLI)**.
- 5** Click **Understanding .NRD Files**.

