

CERT Advisory CA-1994-05 MD5 Checksums

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Last revised: April 28, 1998
Updated information on obtaining RFCs.

A complete revision history is at the end of this file. This advisory gives the MD5 checksums for a number of SunOS files, along with a tool for checking them. The checksums can be used to assure the integrity of those files.

The CERT Coordination Center is distributing these checksums because of an increasing number of incidents in which intruders who gain root access are modifying system files to install Trojan horses.

Moreover, intruders are modifying files so that they have the same checksum as the original file. This is possible because the standard "sum" program that comes with most UNIX systems was designed to detect accidental modifications to files and is not strong enough to prevent deliberate attempts to yield a specific checksum. The MD5 algorithm by RSA Data Security, Inc. is specifically designed to provide checksums that cannot be deliberately spoofed. We strongly recommend that sites install the MD5 software and use it to validate system software. More information on obtaining MD5 is given below.

The list of checksums in Appendix B of this advisory is provided for your convenience. In addition, we are providing a program that can assist you in checking your MD5 output against the values in the database. This checksum list is not complete. We have begun with a number of the more common locations for Trojan horses that we have seen in connection with the continuing "sniffer" attacks reported in [CA-94.01](#) "Ongoing Network Monitoring Attacks." We intend to work with all vendors to expand this list and make more MD5 checksums widely available for anonymous FTP.

Note: After we publish checksums in advisories, files are sometimes updated at individual locations because of system upgrades or patch installation. For current MD5 checksum values, we recommend that you check with your vendor.

We encourage sites to consider installing a more complete package for monitoring system integrity, such as Tripwire from the COAST project

<ftp://ftp.cs.purdue.edu/>

or the TIGER system from TAMU

<ftp://net.tamu.edu/pub/security/TAMU/>

I. Description

Intruders are installing Trojan horses by modifying system files often in such a way that a standard checksum on the file generates the same checksum as the unaltered version.

II. Impact

The Trojan horses give the intruder continued access to a system and/or hide the intruder's activities.

III. Solution

1. Obtain and install MD5.

The MD5 algorithm is in the public domain, and there are several programs available that implement it. The algorithm is documented in RFC 1321, which is available from many archives including

<ftp://ftp.isi.edu/in-notes/rfc1321.txt>

RFC 1321 itself includes source code for implementing the algorithm. For convenience, that source has been extracted and made available for anonymous FTP on <ftp.cert.org>:

<ftp://ftp.cert.org/pub/tools/md5/>

2. Run the "md5check" program listed in Appendix A of this advisory.

This program will check a number of system files and note for each one whether the checksum did or did not match the checksum of a legitimate version.

If the checksum does match, you can be confident that particular file has not been modified by an intruder. Note this does not mean the file is the most recent version for your system - only that it was in fact distributed by Sun.

If the checksum DOES NOT match, consider these possible reasons:

1. The file may be legitimate but not included in this database. (Remember, the database is not complete.) To check this possibility, compare the file against the original distribution media. You may want to add the correct checksum to your copy of the database.
 2. You may have made local modifications to the file at your site. To check this possibility, compare the file to a known good version. You may want to add the correct checksum to your copy of the database.
 3. The file may be a Trojan horse installed by an intruder. We encourage you to replace this file with a known good version, and check for additional signs of compromise.
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Appendix A: "md5check"

The following program is a "nawk" script that can be run against the list of checksums "md5_sun.v1" in Appendix B:

```
% nawk -f md5check md5_sun.v1
```

This program along with a man page and the database below, are available by anonymous FTP from info.cert.org in the "pub/tools/md5check" directory.

Filename	MD5 Checksum
-----	-----
md5check	99108ab5a6007164a910626bbcc5888f
md5_sun.v1	780a0f1f3717819c59135716e5f6a1ce

```

----- Cut Here -----
# "md5check" version 1 (3/17/94)
BEGIN { FS = "[ \t]*:[ \t]*"; }

# Print notices from the configuration file
/^##/ { print substr ($0, 3); next; }

# Only handle MD5 checksums currently
/^md5/ {
    source = sprintf("%-7s %-8s %-6s %s", $2, $3, $5, $4);
    file = $6;
    sum = hex_lower($7);
    if (md5[file] == "") {
        print "Checking", file;
        testcmd = "test -r " file;
        if ( system(testcmd) != 0 ) {
            print " Could not open", file;
            md5[file] = "x";
            next;
        } else {
            md5cmd = "md5 " file
            md5cmd | getline md5[file];
            close (md5cmd);

            # Strip off any leading text and set to lowercase
            sub(".*[ \t]", "", md5[file]);
            md5[file] = hex_lower(md5[file]);
        }
    }
    if (md5[file] == "x" || file in matched) {
        # Could not open or already matched
        next;
    }
    if (md5[file] == sum) {
        # We have a match - remember which one
        matched[file] = source;
        num_match++;
        if (file in not_matched) {
            num_no_match--;
            delete not_matched[file];
        }
    } else {
        if (!(file in not_matched)) {
            num_no_match++;
            not_matched[file] = 1;
        }
    }
}

END {
    printf "\n%d files DID NOT MATCH a known checksum\n", num_no_match;
    printf "%d files did match a known checksum\n", num_match;

    print "\nThe following files DID NOT MATCH a known checksum";
    for (filename in not_matched) {
        printf "\t%s\n", filename;
    }

    print "\nThe following files did match a known checksum";
    for (filename in matched) {
        printf "\t%s\n\t\t%s\n", filename, matched[filename];
    }
}

function hex_lower(s) {
    gsub("A","a",s); gsub("B","b",s); gsub("C","c",s);
    gsub("D","d",s); gsub("E","e",s); gsub("F","f",s);
    return s
}
----- Cut Here -----

```

Appendix B: Checksums from Vendors

Note: After we publish checksums in advisories, files are sometimes updated at individual locations because of system upgrades or patch installation. For current MD5 checksum values, we recommend that you check with your vendor.

Hewlett-Packard Company

To obtain a copy of the HP SupportLine mail service user's guide, send the following (in the TEXT PORTION OF THE MESSAGE to) to the HP SupportLine mail service.

To: support@support.mayfield.hp.com

Message Text:

send guide.txt

To obtain a patch identified within this Security Bulletin, send the following (in the TEXT PORTION OF THE MESSAGE) to the HP SupportLine mail service.

To: support@support.mayfield.hp.com

Message Text:

send xxxxxxxxxxxx

(where xxxxxxxxxxxx represents the specified patch name).

If you have concerns about security issues, please forward them to:

security-alert@hp.com

The security-alert node is monitored during working hours Pacific Daylight Time by multiple HP Security Response Team personnel. We reply to your message only if necessary to obtain additional information.

Solbourne (Grumman Systems Support)

A list of MD5 checksums for Solbourne (Grumman Systems Support) executables under 4.1C is available via anonymous ftp from <ftp.nts.gssc.com> in directory /pub/docs/, files usr.etc.md5 and bin.md5. These include the files referred to in the advisory.

The MD5 checksums for these executables are included below:

```
MD5 (bin.md5) = cf3b3d8447ae19fa7e1741939fe82ea9
MD5 (bin.md5.41b) = 7e0c1ae26eda72f1791e235ab244ae44
MD5 (usr.etc.md5) = 1727d1705cc7750b7848df60a4b5788e
MD5 (usr.etc.md5.41b) = 7e02c01cc47ec469c3210a8fabb012ff
```

Sun Microsystems, Inc.

```
## Checksum Table for Selected SunOS Binary Files (v1: 3/17/94)
##
## PLEASE NOTE: The entries included in this table do not represent complete
## coverage of all released versions of these files.
## In particular, checksum data for outdated patch releases is
## limited.
##
## Failure to match a checksum for a given file does not
## necessarily indicate the presence of a Trojan binary.
## Failure indicates that the file's checksum did not match any
## contained in this table. The file's authenticity should be
## verified against distribution media or local modifications.
##
## Success at matching a file's checksum indicates that the
## corresponding file is free from tampering.
##
# (MD5 is the RSA Data Security, Inc. Message Digest Algorithm)
#
# format of data
#
# XSUMTYPE:OSNAME:OSVERSION:SOURCE:ARCH:FILE:XSUM

#/bin/login
md5:SunOS:4.1:100201-06:sun3:/bin/login:00d95a04ecce2193b9c6e16516d37855
md5:SunOS:4.1:100201-06:sun4:/bin/login:e746fed42be0433a53cce082acfee23c
md5:SunOS:4.1:100630-01:sun3:/bin/login:11d5ed4445face25642100ec0ab1ed3c
md5:SunOS:4.1:100630-01:sun4:/bin/login:b6d013403c54949c0e476afd966ef261
md5:SunOS:4.1.1:Original Dist:sun3:/bin/login:073d378264f25245c154be8a12f208e9
md5:SunOS:4.1.1:Original Dist:sun4:/bin/login:92611eblf1f221c1e9c76db8da44a99
md5:SunOS:4.1.1:100201-06:sun3:/bin/login:00d95a04ecce2193b9c6e16516d37855
md5:SunOS:4.1.1:100201-06:sun4:/bin/login:e746fed42be0433a53cce082acfee23c
md5:SunOS:4.1.1:100630-01:sun3:/bin/login:11d5ed4445face25642100ec0ab1ed3c
md5:SunOS:4.1.1:100630-01:sun4:/bin/login:b6d013403c54949c0e476afd966ef261
md5:SunOS:4.1.1:100632-06:sun4:/bin/login:12c4b39cb94b8dcdad0a10e1c59345c6
md5:SunOS:4.1.1:100633-01:sun4:/bin/login:9634cda7a353d0043a22ad2b0eebaab2
md5:SunOS:4.1.2:Original Dist:sun4:/bin/login:637503c0e2b46791820609d87629db91
md5:SunOS:4.1.2:100630-01:sun4:/bin/login:b6d013403c54949c0e476afd966ef261
md5:SunOS:4.1.2:100631-01:sun3:/bin/login:65d1e270fbb13984f5e0036b9e4a1011
md5:SunOS:4.1.2:100631-01:sun4:/bin/login:976a0431dbd23ec1535c1679e215095b
```

md5:SunOS:4.1.2:100632-06:sun4:/bin/login:12c4b39cb94b8dcdad0a10e1c59345c6
md5:SunOS:4.1.2:100633-01:sun4:/bin/login:9634cda7a353d0043a22ad2b0eabaab2
md5:SunOS:4.1.3:100630-02:sun3:/bin/login:11d5ed4445face25642100ec0abled3c
md5:SunOS:4.1.3:100630-02:sun4:/bin/login:b6d013403c54949c0e476afd966ef261
md5:SunOS:4.1.3:100632-06:sun4:/bin/login:12c4b39cb94b8dcdad0a10e1c59345c6
md5:SunOS:4.1.3:Original Dist:sun4:/bin/login:e88e84d228d05e8f54a0d57d62d0710d
md5:SunOS:4.1.3c:Original Dist:sun4:/bin/login:e88e84d228d05e8f54a0d57d62d0710d
md5:SunOS:4.1.3_ul:Original Dist:sun4:/bin/login:4e437a85e05f886ff5082ac58108d882

#/usr/kvm/ps

md5:SunOS:4.1.1:Original Dist:sun3x:/usr/kvm/ps:ac96820499c2da78d65700e230f66df2
md5:SunOS:4.1.1:Original Dist:sun3:/usr/kvm/ps:b4633eed82815a233d2ca8d8df8d655e
md5:SunOS:4.1.1:Original Dist:sun4:/usr/kvm/ps:390ef406ba27b1d591ba6f281986369b
md5:SunOS:4.1.1:Original Dist:sun4c:/usr/kvm/ps:cb58a8259ff580389b115b7861793b48
md5:SunOS:4.1.2:Original Dist:sun4:/usr/kvm/ps:efca4ca10a088e557c6c69695dadcfaf6
md5:SunOS:4.1.2:Original Dist:sun4c:/usr/kvm/ps:9d489c87d709a540aced718a04e38e11
md5:SunOS:4.1.2:Original Dist:sun4m:/usr/kvm/ps:e9e364f3936a5b16d7e2fb812d11e475
md5:SunOS:4.1.2:100981-02:sun4:/usr/kvm/ps:86b8b5eb7212c94c9c570cd20c9af2ae
md5:SunOS:4.1.2:100981-02:sun4c:/usr/kvm/ps:4871287498c0ab7b17d97848ebe34d15
md5:SunOS:4.1.2:100981-02:sun4m:/usr/kvm/ps:97cc063bafa6aaf032cb1b67b444c5a8
md5:SunOS:4.1.3:Original Dist:sun4:/usr/kvm/ps:226ab466429f5d4de4f6a108bae1c518
md5:SunOS:4.1.3:Original Dist:sun4c:/usr/kvm/ps:83b369e5d8c34db4d5d6725140d0b216
md5:SunOS:4.1.3:100981-02:sun4:/usr/kvm/ps:a4809a70e66b415bae8a165dc4ffb185
md5:SunOS:4.1.3:100981-02:sun4c:/usr/kvm/ps:cf10e206de67755e801e4c9d96c239a9
md5:SunOS:4.1.3:100981-02:sun4m:/usr/kvm/ps:d6237550748855bee17ce96465cd1331
md5:SunOS:4.1.3_ul:Original Dist:sun4m:/usr/kvm/ps:92c3b1495ab80446ddb6979c890cee58
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/kvm/ps:b14b75017dfe75ea1b89d147c6b49cb7
md5:SunOS:4.1.3_ul:Original Dist:sun4c:/usr/kvm/ps:e24eab973f1b1cfd6bf5b54310a2207f
md5:SunOS:4.1.3_ul:101442-01:sun4:/usr/kvm/ps:174731efb1802dadce9f205ad04a4bf

#/usr/etc/in.telnetd

md5:SunOS:4.0.3:100125-05:sun3:/usr/etc/in.telnetd:dce91901f9fd15f7f6f6c94fb7824428
md5:SunOS:4.0.3:100125-05:sun4:/usr/etc/in.telnetd:2e67031ad7984c22cfacc8a0b4c3d6ee
md5:SunOS:4.0.3c:100125-05:sun4c:/usr/etc/in.telnetd:943574a9befb9fac3fce2fc111f68d51
md5:SunOS:4.1:100125-05:sun3:/usr/etc/in.telnetd:2544753907d24a699c9cdfddcab0d2e3
md5:SunOS:4.1:100125-05:sun3x:/usr/etc/in.telnetd:3af506b9b02b6a299f5e081c3abfcef1f
md5:SunOS:4.1:100125-05:sun4:/usr/etc/in.telnetd:5448303462518cca8390a84b5f312abe
md5:SunOS:4.1.1:Original Dist:sun3:/usr/etc/in.telnetd:333ffc49f21e675f3099772661549b7d
md5:SunOS:4.1.1:Original Dist:sun4:/usr/etc/in.telnetd:7706ba7270a28f3470ccbe965f8fc7a1
md5:SunOS:4.1.1:100125-05:sun3:/usr/etc/in.telnetd:c4dca8a653f60feaed63a25786aee2ed
md5:SunOS:4.1.1:100125-05:sun3x:/usr/etc/in.telnetd:6c409bd315711aae29b8285ffcc4bb90c
md5:SunOS:4.1.1:100125-05:sun4:/usr/etc/in.telnetd:29f24e09ffebc36fb14f9fee4bf2d6fc
md5:SunOS:4.1.1:Original Dist:sun3x:/usr/etc/in.telnetd:503be2c540d03281fdada476d5b0b247
md5:SunOS:4.1.1:Original Dist:sun3:/usr/etc/in.telnetd:333ffc49f21e675f3099772661549b7d
md5:SunOS:4.1.1:Original Dist:sun4c:/usr/etc/in.telnetd:503be2c540d03281fdada476d5b0b247
md5:SunOS:4.1.2:Original Dist:sun4:/usr/etc/in.telnetd:913095f91bbf06e98635f964951e0e2d
md5:SunOS:4.1.2:Original Dist:sun4c:/usr/etc/in.telnetd:503be2c540d03281fdada476d5b0b247
md5:SunOS:4.1.2:Original Dist:sun4m:/usr/etc/in.telnetd:503be2c540d03281fdada476d5b0b247
md5:SunOS:4.1.3:Original Dist:sun4:/usr/etc/in.telnetd:b94ac90e4fe63f1c7a0199a27a7c4d80
md5:SunOS:4.1.3:Original Dist:sun4c:/usr/etc/in.telnetd:503be2c540d03281fdada476d5b0b247
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/etc/in.telnetd:b94ac90e4fe63f1c7a0199a27a7c4d80
md5:SunOS:4.1.3c:Original Dist:sun4m:/usr/etc/in.telnetd:503be2c540d03281fdada476d5b0b247
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/etc/in.telnetd:831c59628b1197c612f19289a786eaeab

#/usr/etc/ifconfig

md5:SunOS:4.1.1:Original Dist:sun3x:/usr/etc/ifconfig:c9fe06259a49a58edfc6f1fe68665990
md5:SunOS:4.1.1:Original Dist:sun3:/usr/etc/ifconfig:0da82be29c7173759316f51417fb420a
md5:SunOS:4.1.1:Original Dist:sun4:/usr/etc/ifconfig:c9fe06259a49a58edfc6f1fe68665990
md5:SunOS:4.1.2:Original Dist:sun4:/usr/etc/ifconfig:47d6e495207cc2b7037bd94a12cf565b
md5:SunOS:4.1.2:Original Dist:sun4c:/usr/etc/ifconfig:c9fe06259a49a58edfc6f1fe68665990
md5:SunOS:4.1.2:Original Dist:sun4m:/usr/etc/ifconfig:c9fe06259a49a58edfc6f1fe68665990
md5:SunOS:4.1.3:Original Dist:sun4:/usr/etc/ifconfig:de44e217c94fa4f4c6fdfbcae419cb8b
md5:SunOS:4.1.3:Original Dist:sun4c:/usr/etc/ifconfig:c9fe06259a49a58edfc6f1fe68665990
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/etc/ifconfig:de44e217c94fa4f4c6fdfbcae419cb8b
md5:SunOS:4.1.3c:Original Dist:sun4m:/usr/etc/ifconfig:c9fe06259a49a58edfc6f1fe68665990
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/etc/ifconfig:22d9340368aec82bedd63518613bc6ab

#/usr/lib/libc.a

md5:SunOS:4.1.1:100267-09:sun3:/usr/5lib/libc.a:af8a721ca332754cdf2af1b74b8e8f
md5:SunOS:4.1.1:100267-09:sun3:/usr/5lib/libc_p.a:1b930986afb11494b4e10fd4f9540b0
md5:SunOS:4.1.1:100267-09:sun3:/usr/lib/libc.a:6b0ff2e11f3042d453ee502787ac29d7
md5:SunOS:4.1.1:100267-09:sun3:/usr/lib/libc_p.a:ad9bd3c42db06fb0c45674eaaaf5c4f8
md5:SunOS:4.1.1:100267-09:sun4:/usr/5lib/libc.a:8c396b0695abb59fea66bc6615d9ff101
md5:SunOS:4.1.1:100267-09:sun4:/usr/5lib/libc_p.a:d98a993e3f6c308f3679690dd4f5e8d7
md5:SunOS:4.1.1:100267-09:sun4:/usr/lib/libc.a:da7c2504a1cb5073d7e9bb7de580db32
md5:SunOS:4.1.1:100267-09:sun4:/usr/lib/libc_p.a:9879d72df71d9956f62f058ddf70d0f8
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/5lib/libc.a:4daced1b1335f613bf7a5792bfeff77
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/5lib/libc_p.a:bd2037193776678e48324f523064b95b
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/lib/libc.a:ae4bcb481e7267c1def082ed6acf4bd9
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/lib/libc_p.a:696c03eb30c696b712f38907d3c2ee45
md5:SunOS:4.1.1:Original Dist:sun4:/usr/5lib/libc.a:68686e4ed99b5d9c98ac4e3350ff6645
md5:SunOS:4.1.1:Original Dist:sun4:/usr/lib/libc.a:cbba2b6e294f0087a0b9116290946d46
md5:SunOS:4.1.1:Original Dist:sun3:/usr/5lib/libc.a:89b9040707c28810554dfaca6993e7d0
md5:SunOS:4.1.1:Original Dist:sun3:/usr/lib/libc.a:15d385b850be70a30077e66b67dc5f09

md5:SunOS:4.1.2:Original Dist:sun4:/usr/5lib/libc.a:e7ab3d2658611114833f25a4279db158
md5:SunOS:4.1.2:Original Dist:sun4:/usr/lib/libc.a:f95fabcdbaaf34ac3da6174e635724e3
md5:SunOS:4.1.3:Original Dist:sun4:/usr/5lib/libc.a:c6669804e4def2e1e49ad5628c52ee75
md5:SunOS:4.1.3:Original Dist:sun4:/usr/lib/libc.a:ab06bfd723df7802d25291576736ce23
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/5lib/libc.a:5ef2ccf958dc6734c3e412127884c559
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/5lib/libc.a:6f5d5c343b262c03a3f976d2830f4d06
md5:SunOS:4.1.1:Original Dist:sun4:/usr/5lib/libc_p.a:21766ed7fdb431bb0435e48ea0764d42
md5:SunOS:4.1.1:Original Dist:sun4:/usr/lib/libc_p.a:709d9a093b637e64234a03f1c48583e7
md5:SunOS:4.1.1:Original Dist:sun3:/usr/5lib/libc_p.a:3e3fcdfe1636c708f1a2fec14c13b9f
md5:SunOS:4.1.1:Original Dist:sun3:/usr/lib/libc_p.a:18f6043209f019ec58e50ab4f4771d40
md5:SunOS:4.1.2:Original Dist:sun4:/usr/5lib/libc_p.a:c0b13f61038a198e6be3c09e137dee0e
md5:SunOS:4.1.2:Original Dist:sun4:/usr/lib/libc_p.a:a40b2af6cde4734289f06d8325c8cf2e
md5:SunOS:4.1.3:Original Dist:sun4:/usr/5lib/libc_p.a:bb06ddd972dd5549a3d6cc38a9537893
md5:SunOS:4.1.3:Original Dist:sun4:/usr/lib/libc_p.a:72c8bee2000b2562225077784ea61bac
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/5lib/libc_p.a:8ccee0cc285a298c713b8bace38da815
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/lib/libc_p.a:157a7dc7a8fc77f1a5a06a85d3bab16c

#/usr/kvm/pstat

md5:SunOS:4.1.1:Original Dist:sun3x:/usr/kvm/pstat:a131828d02092ab56e98ac8d63b1125d
md5:SunOS:4.1.1:Original Dist:sun4:/usr/kvm/pstat:6de82bb539b54c2bd0be79dfc7712507
md5:SunOS:4.1.1:Original Dist:sun4c:/usr/kvm/pstat:5e6058397f8e86df7456e36ad54f9b1e
md5:SunOS:4.1.2:Original Dist:sun4c:/usr/kvm/pstat:alcf4f23be423aede09e23cbcf6268a
md5:SunOS:4.1.2:Original Dist:sun4m:/usr/kvm/pstat:c2abc2313450cfd72ccd93448fef967b
md5:SunOS:4.1.3:Original Dist:sun4:/usr/kvm/pstat:0076043c06cd24ae927128f02da9b935
md5:SunOS:4.1.3:Original Dist:sun4c:/usr/kvm/pstat:225d4542b70f15af39c96a4d3b48a631
md5:SunOS:4.1.3c:Original Dist:sun4m:/usr/kvm/pstat:e3a519a93a8b6a02fd6c64a6b3db476d
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/kvm/pstat:2a1cbf06988208179adf132349c3a403
md5:SunOS:4.1.3_ul:Original Dist:sun4m:/usr/kvm/pstat:2f3af3afbfa5942575bbcb02b13ebac1
md5:SunOS:4.1.3_ul:Original Dist:sun4c:/usr/kvm/pstat:d15776947e0d60fc7d5ae755f65e779b

#/usr/etc/in.ftpd

md5:SunOS:4.1.1:Original Dist:sun3x:/usr/etc/in.ftpd:c95b40609c510cfcc65504972d1f3ae1
md5:SunOS:4.1.1:Original Dist:sun3:/usr/etc/in.ftpd:7ff869b0d0eeec61b08a81a085759681
md5:SunOS:4.1.1:Original Dist:sun4:/usr/etc/in.ftpd:7a17e92251d08c56d001alf5654fcb35
md5:SunOS:4.1.1:Original Dist:sun4c:/usr/etc/in.ftpd:c95b40609c510cfcc65504972d1f3ae1
md5:SunOS:4.1.2:Original Dist:sun4:/usr/etc/in.ftpd:8blbfb5ba15d2898fffa373b1005e7ff
md5:SunOS:4.1.2:Original Dist:sun4c:/usr/etc/in.ftpd:c95b40609c510cfcc65504972d1f3ae1
md5:SunOS:4.1.2:Original Dist:sun4m:/usr/etc/in.ftpd:c95b40609c510cfcc65504972d1f3ae1
md5:SunOS:4.1.3:Original Dist:sun4:/usr/etc/in.ftpd:79a29ae3f1deb02efb743d9cd39f6f2f
md5:SunOS:4.1.3:Original Dist:sun4c:/usr/etc/in.ftpd:c95b40609c510cfcc65504972d1f3ae1
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/etc/in.ftpd:79a29ae3f1deb02efb743d9cd39f6f2f
md5:SunOS:4.1.3c:Original Dist:sun4m:/usr/etc/in.ftpd:c95b40609c510cfcc65504972d1f3ae1
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/etc/in.ftpd:3e8f757252dd562ad80ae79e78d06fb7

#/usr/etc/in.rexecd

md5:SunOS:4.1.1:Original Dist:sun3x:/usr/etc/in.rexecd:fd51458be842565c712f8d57cf5a6f28
md5:SunOS:4.1.1:Original Dist:sun3:/usr/etc/in.rexecd:4d9811877f622348dd454172fbb40a66
md5:SunOS:4.1.1:Original Dist:sun4:/usr/etc/in.rexecd:fd51458be842565c712f8d57cf5a6f28
md5:SunOS:4.1.2:Original Dist:sun4:/usr/etc/in.rexecd:6d9f39193ac39bc9680a4fb44fdfb50f
md5:SunOS:4.1.2:Original Dist:sun4c:/usr/etc/in.rexecd:fd51458be842565c712f8d57cf5a6f28
md5:SunOS:4.1.2:Original Dist:sun4m:/usr/etc/in.rexecd:fd51458be842565c712f8d57cf5a6f28
md5:SunOS:4.1.3:Original Dist:sun4:/usr/etc/in.rexecd:37316f4d63faa445ea448ec7c670f94f
md5:SunOS:4.1.3:Original Dist:sun4c:/usr/etc/in.rexecd:fd51458be842565c712f8d57cf5a6f28
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/etc/in.rexecd:37316f4d63faa445ea448ec7c670f94f
md5:SunOS:4.1.3c:Original Dist:sun4m:/usr/etc/in.rexecd:fd51458be842565c712f8d57cf5a6f28
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/etc/in.rexecd:be66f45bb60f31aaa23377f23c66caca

#/usr/etc/in.rshd

md5:SunOS:4.1.1:Original Dist:sun3x:/usr/etc/in.rshd:3d81a586add92ef033088d928c7ae7dc
md5:SunOS:4.1.1:Original Dist:sun3:/usr/etc/in.rshd:17f91e72bbf70d5cf3e75a3068d5c461
md5:SunOS:4.1.1:Original Dist:sun4:/usr/etc/in.rshd:a4eb9385df064b9a751ede87fd0804a2
md5:SunOS:4.1.1:Original Dist:sun4c:/usr/etc/in.rshd:3d81a586add92ef033088d928c7ae7dc
md5:SunOS:4.1.2:Original Dist:sun4:/usr/etc/in.rshd:e45ab7d2dc4c3e7346292f85259c0432
md5:SunOS:4.1.2:Original Dist:sun4c:/usr/etc/in.rshd:3d81a586add92ef033088d928c7ae7dc
md5:SunOS:4.1.2:Original Dist:sun4m:/usr/etc/in.rshd:3d81a586add92ef033088d928c7ae7dc
md5:SunOS:4.1.3:Original Dist:sun4c:/usr/etc/in.rshd:3d81a586add92ef033088d928c7ae7dc
md5:SunOS:4.1.3:Original Dist:sun4:/usr/etc/in.rshd:686c2bb25752e6bec5090e2732a46207
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/etc/in.rshd:686c2bb25752e6bec5090e2732a46207
md5:SunOS:4.1.3c:Original Dist:sun4m:/usr/etc/in.rshd:3d81a586add92ef033088d928c7ae7dc
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/etc/in.rshd:e5ca89c51427d917690fbcc1395507b4

#/usr/etc/in.tftpd

md5:SunOS:4.1.1:Original Dist:sun3x:/usr/etc/in.tftpd:73ea84bdcff54ace0e601f5c3d2f90b0
md5:SunOS:4.1.1:Original Dist:sun3:/usr/etc/in.tftpd:ccce1773e5945a0b8397a74ec07112df
md5:SunOS:4.1.1:Original Dist:sun4:/usr/etc/in.tftpd:e6b495aec9b8a24f5e58ebc19fd1eec7
md5:SunOS:4.1.1:Original Dist:sun4c:/usr/etc/in.tftpd:73ea84bdcff54ace0e601f5c3d2f90b0
md5:SunOS:4.1.2:Original Dist:sun4:/usr/etc/in.tftpd:4b924bdal2c61674771c84caa0fale80
md5:SunOS:4.1.2:Original Dist:sun4c:/usr/etc/in.tftpd:73ea84bdcff54ace0e601f5c3d2f90b0
md5:SunOS:4.1.2:Original Dist:sun4m:/usr/etc/in.tftpd:73ea84bdcff54ace0e601f5c3d2f90b0
md5:SunOS:4.1.3:Original Dist:sun4:/usr/etc/in.tftpd:bfaf449223126181ca9333220cbcf02
md5:SunOS:4.1.3:Original Dist:sun4c:/usr/etc/in.tftpd:73ea84bdcff54ace0e601f5c3d2f90b0
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/etc/in.tftpd:bfaf449223126181ca9333220cbcf02
md5:SunOS:4.1.3c:Original Dist:sun4m:/usr/etc/in.tftpd:73ea84bdcff54ace0e601f5c3d2f90b0
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/etc/in.tftpd:0ff3883f2b99f06d4f897347c58a79d9

```

#/usr/etc/inetd
md5:SunOS:4.1.1:Original Dist:sun3x:/usr/etc/inetd:c3a0f2bb985babcd43a438ce53de54ae
md5:SunOS:4.1.1:Original Dist:sun3:/usr/etc/inetd:0764c23ac95b4ea5a8683c8761337485
md5:SunOS:4.1.1:Original Dist:sun4:/usr/etc/inetd:c3a0f2bb985babcd43a438ce53de54ae
md5:SunOS:4.1.2:Original Dist:sun4:/usr/etc/inetd:e6054cbb343d21791c6457e78822d5f1
md5:SunOS:4.1.2:Original Dist:sun4c:/usr/etc/inetd:c3a0f2bb985babcd43a438ce53de54ae
md5:SunOS:4.1.2:Original Dist:sun4m:/usr/etc/inetd:c3a0f2bb985babcd43a438ce53de54ae
md5:SunOS:4.1.3:Original Dist:sun4:/usr/etc/inetd:c3a923cbf5023b48ffdef3d043190a81
md5:SunOS:4.1.3:Original Dist:sun4c:/usr/etc/inetd:c3a0f2bb985babcd43a438ce53de54ae
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/etc/inetd:c3a923cbf5023b48ffdef3d043190a81
md5:SunOS:4.1.3c:Original Dist:sun4m:/usr/etc/inetd:c3a0f2bb985babcd43a438ce53de54ae
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/etc/inetd:722d3e46a2f8e52ffadd7450fbbd1438

#/usr/bin/newgrp
md5:SunOS:4.1.1:Original Dist:sun3:/usr/bin/newgrp:e3d6e9d43345372f5aa0d5c96570b155
md5:SunOS:4.1.1:Original Dist:sun4:/usr/bin/newgrp:d3749b2a6e99f14feede9430d1feee46
md5:SunOS:4.1.2:Original Dist:sun4:/usr/bin/newgrp:875e7cf58cec91c6fb44ec6e5d89ef0f
md5:SunOS:4.1.3:Original Dist:sun4:/usr/bin/newgrp:7c0aad251ccb8de9c050d53c823f334f
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/bin/newgrp:7c0aad251ccb8de9c050d53c823f334f
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/bin/newgrp:04edbbb4d06bf056c4959d3b85560fe6

#/usr/bin/passwd
md5:SunOS:4.1.1:Original Dist:sun3:/usr/bin/passwd:11499df2dfc4f75c5466e09b64fe1097
md5:SunOS:4.1.1:Original Dist:sun4:/usr/bin/passwd:d4e3ee198d6e3934bc2356ce495e77c7
md5:SunOS:4.1.2:Original Dist:sun4:/usr/bin/passwd:2dcec1f0e106354a85058f4c2c66e2bd
md5:SunOS:4.1.3:Original Dist:sun4:/usr/bin/passwd:6fdb875b621de4dbffab6f6782ec2ba3
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/bin/passwd:6fdb875b621de4dbffab6f6782ec2ba3
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/bin/passwd:97f3231b48d6e29b829357b72043aad

#/usr/bin/su
md5:SunOS:4.1.1:Original Dist:sun3:/usr/bin/su:829e4e39edc3a8d299f5525c866dc324
md5:SunOS:4.1.1:Original Dist:sun4:/usr/bin/su:94b0bc99dcb9dcdcb3e8ece7e127a906
md5:SunOS:4.1.2:Original Dist:sun4:/usr/bin/su:23fe0a40ec522c5add89cd6ab2731170
md5:SunOS:4.1.3:Original Dist:sun4:/usr/bin/su:0d2f5665c9befdf2f7aeafa4d77266bb
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/bin/su:0d2f5665c9befdf2f7aeafa4d77266bb
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/bin/su:c49812d55df4712194f832f099d40aa7

#Shared Libraries
md5:SunOS:4.1.1:Original Dist:sun4:/usr/5lib/libc.so.2.6:1d66abbac68785d6f8fa8ff53200845e
md5:SunOS:4.1.1:Original Dist:sun4:/usr/lib/libc.so.1.6:d4dc2514248834d95ee6b5c77a7eda86
md5:SunOS:4.1.1:Original Dist:sun3:/usr/5lib/libc.so.1.15:26c5c2e8b147f3f6d96bdff369853cad
md5:SunOS:4.1.1:Original Dist:sun3:/usr/lib/libc.so.0.15:2262f263e711bfff2bd4d9d6f87ea5edd
md5:SunOS:4.1.2:Original Dist:sun4:/usr/5lib/libc.so.2.7:b1e624d4293907511e4ee9e8e77e74dd
md5:SunOS:4.1.2:Original Dist:sun4:/usr/lib/libc.so.1.7:76c095597088ee5bc82a2c1ce0a419ce
md5:SunOS:4.1.3:Original Dist:sun4:/usr/5lib/libc.so.2.8:d3c8366dca51488864cc8d80c106f190
md5:SunOS:4.1.3:Original Dist:sun4:/usr/lib/libc.so.1.8:aabfb3300f2d872cdc6d9fb10514e246
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/5lib/libc.so.2.8:af3584319d80525c2ca8e8ea8920d131
md5:SunOS:4.1.3c:Original Dist:sun4:/usr/lib/libc.so.1.8:91a8dde1c328e474ec08557c211a4dcb
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/5lib/libc.so.2.9:722852b7e5df15de70e3c1alf96c04d9
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/lib/libc.so.1.9:2d5bc65422472f7d4119712ccf795bf3

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Revision History

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Apr. 28, 1998 Updated information on obtaining RFCs.
Sep. 19, 1997 Updated copyright statement
Aug. 30, 1996 Information previously in the README was inserted
into the advisory. Updated URL format.
Sep. 18, 1995 Intro. and Appendix B - Added note about checking with
vendors for current checksum values.
(as received) Appendix B, Hewlett-Packard & Solbourne
- added checksums
Sun - corrected one line of Sun entry:
md5:SunOS:4.1.3_ul:Original Dist:sun4:/usr/bin/login"
is now "md5:SunOS:4.1.3_ul:Original
Dist:sun4:bin/login" and has a new checksum
Sept. 18, 1995 - Intro. - Updated the URL for Tripwire.

```