



eFix 3.2.2-SWD-001 README for SecureWay Directory 3.2.2 AIX Server Installations



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Contents

eFix 3.2.2-SWD-001	1
General description	1
Problems fixed.	1
New fixes in 3.2.2-SWD-001	1
Platforms	3
Dependencies	3

Files replaced or added by this eFix	3
eFix contents	4
Applying the eFix	4
Confirming the eFix has been applied successfully	6
Additional usage notes	8

eFix 3.2.2-SWD-001

Date: March 31, 2002

eFix: 3.2.2-SWD-001

Component: SecureWay® Directory 3.2.2 (128-bit Encryption Server Installations)

General description

The eFix contains fixes for several problems encountered in SecureWay Directory 3.2.2. The APAR number for each problem is listed in the "Problems fixed" section. Refer to the specific APAR for more detail about each problem.

For information on changes and fixes that occurred after the product documentation had been translated, see the *SecureWay Directory Version 3.2.2 README Addendum*. This file is in English only. This file can also be found on the IBM® SecureWay Directory Library Web page using a link from <http://www.software.ibm.com/network/directory/library>. You can get to the latest information here:
<http://www-4.ibm.com/software/network/directory/library/v322/addendum322.htm>

Problems fixed

New fixes in 3.2.2-SWD-001

APAR IR46387 (CMVC 66977)

LDAPCFG fails if file libjvm.a is found elsewhere in LIBPATH.

APAR IR46765 (CMVC 67358)

Unable to debug situations where commands run from WebAdmin.

APAR IR47193 (CMVC 68302)

An entry is added to the changelog when slapd restarts. This entry must not be added. It also is not passed from peer to peer.

APAR IR47274 (CMVC 69489)

Processing for unbind can free up a connection before other operations have completed use of the connection.

APAR IR47323 (CMVC 68444)

Slapi_Search_Internal API takes a long time to return data when compared with the command line ldapsearch using the same search parameters.

APAR IR47324 (CMVC 68572)

Removing an attribute breaks access to aclEntrys and exportability using db2ldif.

APAR IR47348 (CMVC 68677)

Audit Logging fails when SSL setting is set to SSL ONLY.

APAR IR47602 (CMVC 69302)

Replication failure when performing a modify replace with no value. The request is incorrectly written into the change table.

- APAR IR47621 (CMVC 70455)**
Fix password change for custom database named ldapdb2.
- APAR IR47623 (CMVC 68531)**
Attempting a modify replace on an attribute with syntax integer or timestamp with the same value and is part of the RDN fails. This operation has worked in previous releases.
- APAR IR47624 (CMVC 68542)**
Performing an ldapdelete operation incurs a deadlock in the DB2® backend, and the LDAP server hangs.
- APAR IR47625 (CMVC 68545)**
In a high performing environment such as BluePages, the LDAP server can appear to hang for several minutes at a time.
- APAR IR47627 (CMVC 68733)**
The LDAP server encounters function sequence errors when delete operations are performed.
- APAR IR47629 (CMVC 68805)**
The LDAP server experiences a memory leak in the client controls portion of the server's operation structure.
- APAR IR47630 (CMVC 68935)**
When creating a custom database for the server's backend use, and it is configured for UTF-8 storage, the code page info is not put in slapd32.conf.
- APAR IR47631 (CMVC 69012)**
The LDAP server incurs a segmentation fault when writing an audit record with unknown-auth.
- APAR IR47633 (CMVC 69032)**
The LDAP server preoperation plugin preoperation value array is not null terminated as required by specifications.
- APAR IR47635 (CMVC 69277)**
SASL bind reports success with SSL connections even if using a keyring database label that does not reference an actual certificate.
- APAR IR47692 (CMVC 70361)**
For the ldapssl.h include file, SSL return codes must reflect same information present in the GSKIT 5 product. Equivalent items based on the GSKIT 3 product must be removed.
- APAR IR47714 (CMVC 69531)**
Replicating modify replace with no value when stored in the change table can exhibit failures.
- APAR IR47715 (CMVC 69977)**
WebAdmin - DB2 Backup error condition displays improper message.
- APAR IR47769 (CMVC 70314)**
LDAP server hangs with all worker threads waiting on ssl_read.
- APAR IR47874 (CMVC 70380)**
Bulkload utility fails if shell does not append inherited value to PATH environment variable.
- APAR IR47886 (CMVC 70068, 70493)**
Search operations fail, and dbsync process show excessive resource utilization due to default ldap_desc.deid index.

APAR IR47928 (CMVC 69750, 69774)

Memory leaks occur in the server process.

APAR IR47930 (CMVC 70538)

LDAP clients operating on Solaris can hang performing an add operation.

APAR IR48029 (CMVC 70142, 70236)

Modify ldif processing to allow for sending and receipt value identified to have zero length.

Platforms

AIX[®] Operating System versions 4.3.3 or higher, or AIX 5L[™] Version 5.1 with the following fileset installed:
X11.adt.lib 4.3.3.0 (or later)

Dependencies

SecureWay Directory 3.2.2 or 3.2.2 efix1 must be installed.

DB2 Universal Database[™] version 7.2 FixPack 5 or higher.

Files replaced or added by this eFix

With \$INSTALL_DIR representing the root of the LDAP installation, the files replaced are:

```

$INSTALL/bin/ldapdelete
$INSTALL/bin/ldapdeleted
$INSTALL/bin/ldapmodify
$INSTALL/bin/ldapmodifyd
$INSTALL/bin/ldapmodrdrn
$INSTALL/bin/ldapmodrdrnd
$INSTALL/bin/ldapsearch
$INSTALL/bin/ldapsearchd
$INSTALL/bin/slapd
$INSTALL/bin/slapdd
$INSTALL/bin/task_dbback
$INSTALL/config/LDAPCfg.jar
$INSTALL/include/ldaps1.h
$INSTALL/lib/libslapi.a
$INSTALL/lib/libback-rdbm.a
$INSTALL/lib/libutils.a
$INSTALL/lib/libc1.a
$INSTALL/lib/libadmin.a
$INSTALL/lib/libldacfg.so
$INSTALL/lib/libldapaudit.a
$INSTALL/lib/libldapjrt.a
$INSTALL/lib/libibmldap.a
$INSTALL/lib/libibmldapd.a
$INSTALL/lib/libldapstatic.a
$INSTALL/lib/libldapstaticd.a
$INSTALL/lib/libldif.a
$INSTALL/sbin/ldif
$INSTALL/sbin/ldif2db
$INSTALL/sbin/db2ldif
$INSTALL/sbin/bulkload
$INSTALL/sbin/runstats
$INSTALL/sbin/miglen
$INSTALL/sbin/uto1
$INSTALL/sbin/ltou
$INSTALL/web/cgi-bin/ldacgid.exe
$INSTALL/web/cgi-bin/ldacgi3d.exe

```

```
$INSTALL/web/cgi-bin/ldacgie.exe
$INSTALL/web/cgi-bin/ldacgi3e.exe
```

```
$INSTALL/web/buildno.txt
```

The default for INSTAL_DIR is /usr/ldap.

eFix contents

The archive for this eFix is named 3.2.2-SWD-001-AIX-US.tar. The archive for this eFix includes:

- This README file
- The file bin/ldapdelete
- The file bin/ldapdeleted
- The file bin/ldapmodify
- The file bin/ldapmodifyd
- The file bin/ldapmodrdn
- The file bin/ldapmodrdnd
- The file bin/ldapsearch
- The file bin/ldapsearchd
- The file bin/slapd
- The file bin/slapdd
- The file bin/task_dbback
- The file config/LDAPCfg.jar
- The file include/ldapssl.h
- The file lib/libslapi.a
- The file lib/libback-rdbm.a
- The file lib/libutils.a
- The file lib/libcl.a
- The file lib/libadmin.a
- The file lib/libldacfg.so
- The file lib/libldapaudit.a
- The file lib/libldapjrt.a
- The file lib/libibmldap.a
- The file lib/libibmldapd.a
- The file lib/libldapstatic.a
- The file lib/libldapstaticd.a
- The file lib/libldif.a
- The file sbin/ldif
- The file sbin/ldif2db
- The file sbin/db2ldif
- The file sbin/bulkload
- The file sbin/runstats
- The file sbin/miglen
- The file sbin/utol
- The file sbin/ltou
- The file web/cgi-bin/ldacgid.exe
- The file web/cgi-bin/ldacgi3d.exe
- The file web/cgi-bin/ldacgie.exe
- The file web/cgi-bin/ldacgi3e.exe

- The file web/buildno.txt

Applying the eFix

Note: Your replication environment must be cleaned or resynched, or both. See section 5.2 of the *IBM(R) SecureWay(R) Directory Version 3.2.2 Server Readme* at:

<http://www-4.ibm.com/software/network/directory/library/v322/server.htm>

1. Extract the eFix contents into a temporary directory. For the purpose of this release note, assume that the symbol \$TEMP points to the following directory:

```
# cd $TEMP
# tar -xvf 3.2.2-SWD-001-AIX-US.tar
```

2. For each of the master and slave server installations targeted to receive the eFix, make sure the servers are stopped prior to applying the eFix.
3. Issue the command `slibclean`. Replace the installed version of each file with the version included in the eFix. Move the currently installed file to a location outside of the LDAP installation filesystem or rename the currently installed file. Copy the extracted files to the correct locations in the install folder. The recommended replacement procedure avoids problems relating to links on files remaining active. The install version locations for each file are:

```

$INSTALL/bin/ldapdelete
$INSTALL/bin/ldapdeleted           (For 128-bit version only)
$INSTALL/bin/ldapmodify
$INSTALL/bin/ldapmodifyd         (For 128-bit version only)
$INSTALL/bin/ldapmodrdn
$INSTALL/bin/ldapmodrdnd        (For 128-bit version only)
$INSTALL/bin/ldapsearch
$INSTALL/bin/ldapsearchd       (For 128-bit version only)
$INSTALL/bin/slapd
$INSTALL/bin/slapdd             (For 128-bit version only)
$INSTALL/bin/task_dbback
$INSTALL/config/LDAPCfg.jar
$INSTALL/include/ldaps1.h
$INSTALL/lib/libslapi.a
$INSTALL/lib/libback-rdbm.a
$INSTALL/lib/libutils.a
$INSTALL/lib/libcl.a
$INSTALL/lib/libadmin.a
$INSTALL/lib/libldacfg.so
$INSTALL/lib/libldapaudit.a
$INSTALL/lib/libldapjrt.a
$INSTALL/lib/libibldap.a
$INSTALL/lib/libibldapd.a       (For 128-bit version only)
$INSTALL/lib/libldapstatic.a
$INSTALL/lib/libldapstaticd.a  (For 128-bit version only)
$INSTALL/lib/libldif.a
$INSTALL/sbin/ldif
$INSTALL/sbin/ldif2db
$INSTALL/sbin/db2ldif
$INSTALL/sbin/bulkload
$INSTALL/sbin/runstats
$INSTALL/sbin/miglen
$INSTALL/sbin/uto1
$INSTALL/sbin/ltou
$INSTALL/web/cgi-bin/ldacgid.exe  (For 128-bit version only)
$INSTALL/web/cgi-bin/ldacgi3d.exe (For 128-bit version only)
$INSTALL/web/cgi-bin/ldacgie.exe
$INSTALL/web/cgi-bin/ldacgi3e.exe

$INSTALL/web/buildno.txt        (For level tracking purposes)

```

Again, the default for `INSTALL_DIR` is `/usr/ldap`.

4. Assign the correct owner, group, and permissions to the replaced files. Assume `$OWNER` is the owner value in the installation files, and `$GROUP` is the group value. The value of `$OWNER` for the following files is root:

```

$INSTALL_DIR/web/cgi-bin/ldacgid.exe
$INSTALL_DIR/web/cgi-bin/ldacgi3d.exe
$INSTALL_DIR/web/cgi-bin/ldacgie.exe
$INSTALL_DIR/web/cgi-bin/ldacgi3e.exe

```

The value of `$OWNER` for the remaining files is `ldap`. The value for `$GROUP` for all files is `ldap`.

```

# chown $OWNER <file>
# chgrp $GROUP <file>

```

The permissions on the files must be set according to the following guide:

```
# chmod <permissions> <file>
$INSTALL/bin/ldapdelete 755
$INSTALL/bin/ldapdeleted 755
$INSTALL/bin/ldapmodify 755
$INSTALL/bin/ldapmodifyd 755
$INSTALL/bin/ldapmodrdn 755
$INSTALL/bin/ldapmodrdnd 755
$INSTALL/bin/ldapsearch 755
$INSTALL/bin/ldapsearchd 755
$INSTALL/bin/slapd 750
$INSTALL/bin/slapdd 755
$INSTALL/bin/task_dbback 750
$INSTALL/config/LDAPCfg.jar 644
$INSTALL/include/ldaps1.h 644
$INSTALL/lib/libslapi.a 644
$INSTALL/lib/libback-rdbm.a 644
$INSTALL/lib/libutils.a 644
$INSTALL/lib/libcl.a 644
$INSTALL/lib/libadmin.a 644
$INSTALL/lib/libldacfg.so 755
$INSTALL/lib/libldapaudit.a 644
$INSTALL/lib/libldapjrt.a 755
$INSTALL/lib/libibldap.a 755
$INSTALL/lib/libibldapd.a 755
$INSTALL/lib/libldapstatic.a 755
$INSTALL/lib/libldapstaticd.a 755
$INSTALL/lib/libldif.a 755
$INSTALL/sbin/ldif 755
$INSTALL/sbin/ldif2db 755
$INSTALL/sbin/db2ldif 755
$INSTALL/sbin/bulkload 755
$INSTALL/sbin/runstats 755
$INSTALL/sbin/miglen 755
$INSTALL/sbin/uto1 750
$INSTALL/sbin/ltou 750
$INSTALL/web/cgi-bin/ldacgid.exe 4755
$INSTALL/web/cgi-bin/ldacgi3d.exe 4755
$INSTALL/web/cgi-bin/ldacgie.exe 4755
$INSTALL/web/cgi-bin/ldacgi3e.exe 4755

$INSTALL/web/buildno.txt 644
```

5. Start each of the replica and master servers.

Confirming the eFix has been applied successfully

The eFix has been applied successfully if all files included in the eFix have replaced the pre-eFix files of the same names. If after applying the eFix the directory server cannot be restarted, or any other associated function is degraded, notify SecureWay Directory support personnel.

Below is some relevant information on the replacement files:

```
- Filesize for bin/ldapdelete is 23819
- Filesize for bin/ldapdeleted is 23824
- Filesize for bin/ldapmodify is 51433
- Filesize for bin/ldapmodifyd is 51436
- Filesize for bin/ldapmodrdn is 24623
- Filesize for bin/ldapmodrdnd is 24628
- Filesize for bin/ldapsearch is 51444
- Filesize for bin/ldapsearchd is 51449
- Filesize for bin/slapd is 1732575
- Filesize for bin/slapdd is 1732686
- Filesize for bin/task_dbback is 34577
- Filesize for config/LDAPCfg.jar is 788942
```

```

- Filesize for include/ldapssl.h           is 15677
- Filesize for lib/libslapi.a             is 122695
- Filesize for lib/libback-rdbm.a        is 1809093
- Filesize for lib/libutils.a           is 5123398
- Filesize for lib/libcl.a              is 40569
- Filesize for lib/libadmin.a           is 227104
- Filesize for lib/libldacfg.so         is 48717
- Filesize for lib/libldapaudit.a       is 63314
- Filesize for lib/libldapjrt.a        is 29167
- Filesize for lib/libibmldap.a        is 525824
- Filesize for lib/libibmldapd.a       is 525842
- Filesize for lib/libldapstatic.a     is 699015
- Filesize for lib/libldapstaticd.a    is 699005
- Filesize for lib/libldif.a           is 16062
- Filesize for sbin/ldif               is 25261
- Filesize for sbin/ldif2db            is 395654
- Filesize for sbin/db2ldif            is 392498
- Filesize for sbin/bulkload           is 535991
- Filesize for sbin/runstats           is 373697
- Filesize for sbin/miglen             is 82441
- Filesize for sbin/uto1               is 25848
- Filesize for sbin/ltou               is 25847
- Filesize for web/cgi-bin/ldacgid.exe  is 7623437
- Filesize for web/cgi-bin/ldacgi3d.exe is 2936208
- Filesize for web/cgi-bin/ldacgie.exe  is 7623437
- Filesize for web/cgi-bin/ldacgi3e.exe is 2936208

- sum -r bin/ldapdelete                 results are: 40952 xxxx
- sum -r bin/ldapdeleted                 results are: 54170 xxxx
- sum -r bin/ldapmodify                 results are: 37462 xxxx
- sum -r bin/ldapmodifyd                results are: 17743 xxxx
- sum -r bin/ldapmodrtn                 results are: 16468 xxxx
- sum -r bin/ldapmodrtd                 results are: 58489 xxxx
- sum -r bin/ldapsearch                 results are: 08365 xxxx
- sum -r bin/ldapsearchd                results are: 06784 xxxx
- sum -r bin/slapd                      results are: 11331 xxxx
- sum -r bin/slapdd                     results are: 61933 xxxx
- sum -r bin/task_dbback                 results are: 28997 xxxx
- sum -r config/LDAPCFG.jar              results are: 54836 xxxx
- sum -r include/ldapssl.h               results are: 17457 xxxx
- sum -r lib/libslapi.a                  results are: 07951 xxxx
- sum -r lib/libback-rdbm.a              results are: 11320 xxxx
- sum -r lib/libutils.a                  results are: 24850 xxxx
- sum -r lib/libcl.a                     results are: 49069 xxxx
- sum -r lib/libadmin.a                  results are: 27230 xxxx
- sum -r lib/libldacfg.so                 results are: 45732 xxxx
- sum -r lib/libldapaudit.a              results are: 02645 xxxx
- sum -r lib/libldapjrt.a                results are: 25283 xxxx
- sum -r lib/libibmldap.a                results are: 08930 xxxx
- sum -r lib/libibmldapd.a               results are: 14173 xxxx
- sum -r lib/libldapstatic.a             results are: 45383 xxxx
- sum -r lib/libldapstaticd.a            results are: 33548 xxxx
- sum -r lib/libldif.a                   results are: 23060 xxxx
- sum -r sbin/ldif                       results are: 50966 xxxx
- sum -r sbin/ldif2db                    results are: 13406 xxxx
- sum -r sbin/db2ldif                    results are: 03137 xxxx
- sum -r sbin/bulkload                    results are: 48512 xxxx
- sum -r sbin/runstats                    results are: 41703 xxxx
- sum -r sbin/miglen                      results are: 41667 xxxx
- sum -r sbin/uto1                       results are: 59324 xxxx
- sum -r sbin/ltou                       results are: 47897 xxxx
- sum -r web/cgi-bin/ldacgid.exe          results are: 48982 xxxx
- sum -r web/cgi-bin/ldacgi3d.exe         results are: 34886 xxxx
- sum -r web/cgi-bin/ldacgie.exe          results are: 15635 xxxx
- sum -r web/cgi-bin/ldacgi3e.exe         results are: 51393 xxxx

```

Each xxxx represents the number of blocks used by the file. This number is filesystem format dependent.

The contents of the web/buildno.txt file are:

SecureWay Directory Release: aus322ldap Build: 020315a

Additional usage notes

In the current 3.2.1 and 3.2.2 releases on AIX, there is a file (/usr/ldap/etc/dmtSearch.obj) that is used to store searches for re-use in the DMT. This file has default read/write access to all users. It is recommended that this file be modified to be only readable/writable to the owner (ldap) and group (ldap admin group) and restrict other or world read/write access. Do the following to check and modify the file access (this example uses /usr/ldap/ as the LDAP_ROOT installation directory):

On AIX, to confirm that this file exists, enter the following commands:

```
[root]==> ls -lt /usr/ldap/etc/dmtSearch.obj
-rw-rw-rw-  1 ldap  ldap          0 Mar 20 17:32  dmtSearch.obj
```

```
[root]==> chmod 660 /usr/ldap/etc/dmtSearch.obj
[root]==> ls -lt /usr/ldap/etc/dmtSearch.obj
-rw-rw----  1 ldap  ldap          0 Mar 20 17:32  dmtSearch.obj
```

After making this change:

- Guest users can only save searches when the dmtSearch.obj file has o=rw permissions. If the dmtSearch.obj file has lesser permissions or is missing, the command prompt session that started the DMT displays an exception message, and the search save is not saved. The user is not given any direct notice that the exception has occurred, other than the name the search was saved under is not added to the search tree in the DMT left panel.
- When a user that does not have UNIX[®] access to the dmtSearch.obj file attempts to read the contents (by selecting Search Names in the Navigation Window) they see a "warning message of java.lang.NullPointerException in a window Dialogue that dmt was started in.
- If the dmtSearch.obj file is deleted, the next time it is created, it has owner read/write access and group/other Read access (for example, file access is -rw-r--r--)
- The ldap user also gets exceptions for all search save attempts, except when the dmtSearch.obj file has g=rw permissions.



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