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

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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 compared with the command line ldapsearch using the same search parameters.

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 utilitization 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

Solaris Operating Environment(TM) Software Version 7 (Solaris 7) or later.

Refer to the *IBM Directory Server Version 4.1 Installation and Configuration Guide for Multiplatforms* for additional patch requirements.

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_DIR2/bin/ldapdelete
$INSTALL_DIR2/bin/ldapdeleted
$INSTALL_DIR2/bin/ldapmodify
$INSTALL_DIR2/bin/ldapmodifyd
$INSTALL_DIR2/bin/ldapmodrdn
$INSTALL_DIR2/bin/ldapmodrdnd
$INSTALL_DIR2/bin/ldapsearch
$INSTALL_DIR2/bin/ldapsearchd
$INSTALL_DIR1/bin/ldapcfg
$INSTALL_DIR1/bin/slapdd
$INSTALL_DIR1/bin/task_dbback
$INSTALL_DIR1/config/LDAPCfg.jar
$INSTALL_DIR2/include/ldapssl.h
$INSTALL_DIR1/lib/libslapi.so
$INSTALL_DIR1/lib/libback-rdbm.so
$INSTALL_DIR1/lib/libutils.so
$INSTALL_DIR1/lib/libcl.so
$INSTALL_DIR1/lib/libadmin.so
$INSTALL_DIR1/lib/libldacfg.so
$INSTALL_DIR1/lib/libldapaudit.so
$INSTALL_DIR2/lib/libibmldap.so
$INSTALL_DIR2/lib/libibmldapd.so
$INSTALL_DIR2/lib/libldapstatic.a
$INSTALL_DIR2/lib/libldapstaticd.a
$INSTALL_DIR2/lib/libldif.a
$INSTALL_DIR1/lib/libtransys.so
$INSTALL_DIR1/sbin/ldif
$INSTALL_DIR1/sbin/ldif2db
$INSTALL_DIR1/sbin/db2ldif
$INSTALL_DIR1/sbin/bulkload
$INSTALL_DIR1/sbin/runstats
$INSTALL_DIR1/sbin/miglen
$INSTALL_DIR1/web/cgi-bin/ldacgie.exe
$INSTALL_DIR1/web/cgi-bin/ldacgi3e.exe

$INSTALL_DIR1/web/buildno.txt
```

The default for INSTALL_DIR1 is /opt/IBMldaps.

The default for INSTALL_DIR2 is /opt/IBMldapc.

eFix contents

The archive for this eFix is named 3.2.2-SWD-001-SOL-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/ldapcfg
- The file bin/slapdd
- The file bin/task_dbback
- The file config/LDAPCfg.jar
- The file include/ldapssl.h
- The file lib/libslapi.so
- The file lib/libback-rdbm.so
- The file lib/libutils.so
- The file lib/libcl.so
- The file lib/libadmin.so
- The file lib/libldacfg.so
- The file lib/libldapaudit.so
- The file lib/libibmldap.so
- The file lib/libibmldapd.so
- The file lib/libldapstatic.a
- The file lib/libldapstaticd.a
- The file lib/libldif.a
- The file lib/libtransys.so
- 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 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-SOL-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. 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 install version locations for each file are:

```
$INSTALL_DIR2/bin/ldapdelete
$INSTALL_DIR2/bin/ldapdeleted      (For 128-bit version only)
$INSTALL_DIR2/bin/ldapmodify
$INSTALL_DIR2/bin/ldapmodifyd      (For 128-bit version only)
$INSTALL_DIR2/bin/ldapmodrdn
$INSTALL_DIR2/bin/ldapmodrdnd      (For 128-bit version only)
$INSTALL_DIR2/bin/ldapsearch
$INSTALL_DIR2/bin/ldapsearchd      (For 128-bit version only)
$INSTALL_DIR1/bin/ldapcfg
$INSTALL_DIR1/bin/slapdd
$INSTALL_DIR1/bin/task_dbback
$INSTALL_DIR1/config/LDAPCfg.jar
$INSTALL_DIR2/include/ldapssl.h
$INSTALL_DIR1/lib/libslapi.so
$INSTALL_DIR1/lib/libback-rdbm.so
$INSTALL_DIR1/lib/libutils.so
$INSTALL_DIR1/lib/libcl.so
$INSTALL_DIR1/lib/libadmin.so
$INSTALL_DIR1/lib/libldacfg.so
$INSTALL_DIR1/lib/libldapaudit.so
$INSTALL_DIR2/lib/libibmldap.so
$INSTALL_DIR2/lib/libibmldapd.so   (Supports 128-bit encryption)
$INSTALL_DIR2/lib/libldapstatic.a
$INSTALL_DIR2/lib/libldapstaticd.a (Supports 128-bit encryption)
$INSTALL_DIR2/lib/libldif.a
$INSTALL_DIR1/lib/libtransys.so
$INSTALL_DIR1/sbin/ldif
$INSTALL_DIR1/sbin/ldif2db
$INSTALL_DIR1/sbin/db2ldif
$INSTALL_DIR1/sbin/bulkload
$INSTALL_DIR1/sbin/runstats
$INSTALL_DIR1/sbin/miglen
$INSTALL_DIR1/web/cgi-bin/ldacgie.exe
$INSTALL_DIR1/web/cgi-bin/ldacgi3e.exe

$INSTALL_DIR1/web/buildno.txt      (For level tracking purposes)
```

Again, the default for INSTALL_DIR1 is /opt/IBMldaps and for
INSTALL_DIR2 is /opt/IBMldapc

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/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_DIR2/bin/ldapdelete                    755
        $INSTALL_DIR2/bin/ldapdeleted                   755
        $INSTALL_DIR2/bin/ldapmodify                    755
        $INSTALL_DIR2/bin/ldapmodifyd                   755
        $INSTALL_DIR2/bin/ldapmodrdn                    755
        $INSTALL_DIR2/bin/ldapmodrdnd                   755
        $INSTALL_DIR2/bin/ldapsearch                    755
        $INSTALL_DIR2/bin/ldapsearchd                   755
        $INSTALL_DIR1/bin/ldapcfg                       755
        $INSTALL_DIR1/bin/slapdd                        755
        $INSTALL_DIR1/bin/task_dbback                   750
```

```
$INSTALL_DIR1/config/LDAPCfg.jar              644
$INSTALL_DIR2/include/ldapssl.h               755
$INSTALL_DIR1/lib/libslapi.so                 755
$INSTALL_DIR1/lib/libback-rdbm.so             755
$INSTALL_DIR1/lib/libutils.so                 755
$INSTALL_DIR1/lib/libcl.so                    755
$INSTALL_DIR1/lib/libadmin.so                 644
$INSTALL_DIR1/lib/libldacfg.so                644
$INSTALL_DIR1/lib/libldapaudit.so             755
$INSTALL_DIR2/lib/libibmldap.so               755
$INSTALL_DIR2/lib/libibmldapd.so              755
$INSTALL_DIR2/lib/libldapstatic.a             755
$INSTALL_DIR2/lib/libldapstaticd.a            755
$INSTALL_DIR2/lib/libldif.a                   755
$INSTALL_DIR1/lib/libtransys.so               755
$INSTALL_DIR1/sbin/ldif                       755
$INSTALL_DIR1/sbin/ldif2db                    755
$INSTALL_DIR1/sbin/db2ldif                    755
$INSTALL_DIR1/sbin/bulkload                   755
$INSTALL_DIR1/sbin/runstats                   755
$INSTALL_DIR1/sbin/miglen                     755
$INSTALL_DIR1/web/cgi-bin/ldacgie.exe        4755
$INSTALL_DIR1/web/cgi-bin/ldacgi3e.exe       4755
```

Note: It is critical that the **sticky bit** for the replaced files in
$INSTALL_DIR1/web/cgi-bin is set. So make sure the value used in the
chmod command is 4755 (as stated).

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     21184
- Filesize for bin/ldapdeleted         is     21236
- Filesize for bin/ldapmodify          is     46108
- Filesize for bin/ldapmodifyd         is     46168
- Filesize for bin/ldapmodrdn          is     22108
- Filesize for bin/ldapmodrdnd         is     22168
- Filesize for bin/ldapsearch          is     42604
- Filesize for bin/ldapsearchd         is     42664
- Filesize for bin/ldapcfg             is     12042
- Filesize for bin/slapdd              is   1053356
- Filesize for bin/task_dbback         is    488960
- Filesize for config/LDAPCfg.jar      is    524826
- Filesize for include/ldapssl.h       is     15677
- Filesize for lib/libslapi.so         is    121156
- Filesize for lib/libback-rdbm.so     is   1086264
- Filesize for lib/libutils.so         is   5552468
- Filesize for lib/libcl.so            is     34460
- Filesize for lib/libadmin.so         is    204364
- Filesize for lib/libldacfg.so        is     32908
- Filesize for lib/libldapaudit.so     is     45268
- Filesize for lib/libibmldap.so       is    918884
- Filesize for lib/libibmldapd.so      is    919204
- Filesize for lib/libldapstatic.a     is    750312
- Filesize for lib/libldapstaticd.a    is    750636
- Filesize for lib/libldif.a           is     17684
- Filesize for lib/libtransys.so       is    111752
- Filesize for sbin/ldif               is     18028
```

```
          - Filesize for sbin/ldif2db             is    733984
          - Filesize for sbin/db2ldif             is    728932
          - Filesize for sbin/bulkload            is    863212
          - Filesize for sbin/runstats            is    711672
          - Filesize for sbin/miglen              is    741692
          - Filesize for web/cgi-bin/ldacgie.exe  is   6353632
          - Filesize for web/cgi-bin/ldacgi3e.exe is   1997072

          - sum -r  bin/ldapdelete          results are:   33254  xxxx
          - sum -r  bin/ldapdeleted         results are:   02973  xxxx
          - sum -r  bin/ldapmodify          results are:   53531  xxxx
          - sum -r  bin/ldapmodifyd         results are:   37169  xxxx
          - sum -r  bin/ldapmodrdn          results are:   27350  xxxx
          - sum -r  bin/ldapmodrdnd         results are:   59513  xxxx
          - sum -r  bin/ldapsearch          results are:   63570  xxxx
          - sum -r  bin/ldapsearchd         results are:   53653  xxxx
          - sum -r  bin/ldapcfg             results are:   25868  xxxx
          - sum -r  bin/slapdd              results are:   16454  xxxx
          - sum -r  bin/task_dbback         results are:   47402  xxxx
          - sum -r  config/LDAPCfg.jar      results are:   11176  xxxx
          - sum -r  include/ldapssl.h       results are:   17457  xxxx
          - sum -r  lib/libslapi.so         results are:   43429  xxxx
          - sum -r  lib/libback-rdbm.so     results are:   63998  xxxx
          - sum -r  lib/libutils.so         results are:   53994  xxxx
          - sum -r  lib/libcl.so            results are:   27307  xxxx
          - sum -r  lib/libadmin.so         results are:   24080  xxxx
          - sum -r  lib/libldacfg.so        results are:   37903  xxxx
          - sum -r  lib/libldapaudit.so     results are:   13883  xxxx
          - sum -r  lib/libibmldap.so       results are:   44122  xxxx
          - sum -r  lib/libibmldapd.so      results are:   24486  xxxx
          - sum -r  lib/libldapstatic.a     results are:   46081  xxxx
          - sum -r  lib/libldapstaticd.a    results are:   42952  xxxx
          - sum -r  lib/libldif.a           results are:   15977  xxxx
          - sum -r  lib/libtransys.so       results are:   11994  xxxx
          - sum -r  sbin/ldif               results are:   44368  xxxx
          - sum -r  sbin/ldif2db            results are:   46235  xxxx
          - sum -r  sbin/db2ldif            results are:   51622  xxxx
          - sum -r  sbin/bulkload           results are:   01380  xxxx
          - sum -r  sbin/runstats           results are:   09107  xxxx
          - sum -r  sbin/miglen             results are:   32101  xxxx
          - sum -r  web/cgi-bin/ldacgie.exe results are:   20014  xxxx
          - sum -r  web/cgi-bin/ldacgi3e.exe results are:  10223  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
```

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