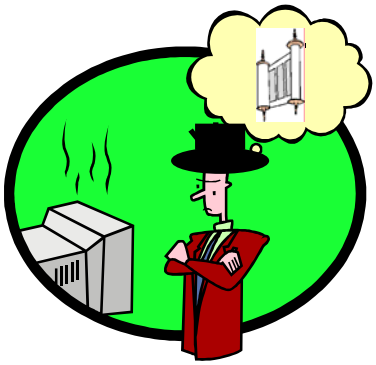
PRINTING WORKFLOW SOLUTIONS DIVISION

BS/Timna/**Timna@web** troubleshooting

(for Brisque Serve/Timna)

Revision 23 March 2006



Company Confidential

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1. Symptom Selection

1.1 The basic Checkout-Checklist

- [DB-Monitor not available when remote]
- scismit Diagnostics & Repairs
- Database messages screen
- Make sure that the application is down before you run any oncheck sessions or try to repair anything.(oninit after logout scitex)
- Login as root
- su - informix
- before anything else (especially before taking Informix Offline), run:
  onstat -l to verify LL are not full.if yes - back them up or >/dev/null.
  If you get message: "onstat: shared memory not initialized", run oninit
- **df**
- **vi /u/d0/SQLtrans.err**
- **vi /u/d0/online.log**
- **oncheck -pt directmgr:files = checks sise of a files table**
- **onstat** =status
- **onstat -d** =spaces
- **onstat -l** =logs
- **(*) oncheck -cIn directmgr** =indexes
- **(*) oncheck -cDn directmgr** =BLOBS
- **(*) oncheck -pe**

Tip: For long operations, use:
nohup cmd > tmpFile &
and hang-up phone (Where cmd is a command file and tmpFile is a file where output is directed). Call later for results.

When you finish, run:
onmode -ky =to shutdown informix before login scitex

- **(*) -** May take long time (depends on size of database)

1.2 Startup Problems

1.2.1 The FileTrak+ application doesn't start

- Macintosh computer:
  - TCP/IP - define Server in Macintosh host file, define Macintosh computer in Server Host file.
  - Ping Server, Ping Macintosh computer
  - Verify that TCP/IP process is running "lssrc -g tcpip"
  - Check FileTrak+ control panel
  - Check Archiver Access control panel
  - Remove the following folders and control panels:
    - Archiver Access (control panel)

- FileTrak+ configuration (control panel)
- scitex Ripro (folder)
- FileTrak+ log (file)
- FileTrak+ (preference)
- MAC SDSM TCP (preference)

- Check that the Timna is online (DBAdmin_mode).
- Reinstall the Timna application from CD-ROM.

1.2.2 database will not go On-Line

- Look at online.log
- onstat -d
- ls -l /dev/*DB*
- Backup of logical logs
- Diagnostics & Repairs module in scismit
- Restore from archive.
- Remember to archive after any database repair

1.3 Performance problems

1.3.1 increase buffer in onconfig to 20000

1.3.2 Install the initDB.sh

1.4 onbar problems

1.4.1 Restore DB via onbar after coldstart

The following are instructions for restoring the database via the on-bar after coldstart.

Problem:

When the restore via onbar is done after coldstart, the file where date of last archive was recorded does not present ($SCI_CONFIG/last_onbar_archive).

Furthermore, even if such file is present,it is not 100% guaranteed that last successfull archive is the archive that should be restored.

Example: database is removed by user, last backup is successfull, but for restore the previous archive is required.

Solution:

The solution is to mandatory change all the Lehago configurations where on-bar is installed to include the backup of the **/scitex/version/config/last_onbar_archive** file together with all the dataVolumes as a part of the daily backup.

Go to nwadmin ->client setup ->saveset ->add ->add

/scitex/version/config/last_onbar_archive ->save

After the unplanned coldstart first restore the Legato indexes,then restore the file **/scitex/version/config/last_onbar_archive** ,only then restore the DB via on-bar.

For the current sites where the above Legato configuration change is not yet implemented - after coldstart follow the following workarounds:

Workaround when the correct last DB archive date is known:

The user currently MUST use option "restore to specific date" in scismit.

Therefore a standart restore procedure (scismit) may be recomended in case when the engineer knows the exact date when his database was consistent and it's backup was successfull (for restore to specific date) or when he is sure that before the last DB backup the database was consistent (restore from last backup).
In both cases it's assumed that the $SCI_CONFIG/last_onbar_archive file is intact,which is not the case after coldstart.
Workaround when the correct last DB archive date is not known:
Check for the last successful DB+logical logs backup:
mminfo -av |grep INFORMIX
Choose the latest successful session - full DB+logs:
rtest10.006 rtest10 01/21/00 02:00:51 362 MB 27334 cb full INFORMIX:/ids_server
rtest10.006 rtest10 01/21/00 02:02:18 5.5 MB 27335 cb full INFORMIX:/ids_server
rtest10.006 rtest10 01/21/00 02:02:28 1.5 MB 27336 cb full INFORMIX:/ids_server
rtest10.006 rtest10 01/22/00 02:01:56 118 MB 27349 cb full INFORMIX:/ids_server
From scsismit run on-bar DB restore from a specific date ,choosing the date and time of the last logical logs backup (after the full backup -02:00:51) plus 3 minutes.
In this example the time will be 02:01:56 + 3 minutes=02:04:56
Alternatively on may run a line mode command:
#onbar -r -t 2000-01-21 02:04:56
Note:Another usefull file is /u/d0/bar_act.log where the onbar registeres all he's activities (does not exist after coldstart either...)

1.4.2 Can not restore the DB from ONBAR – case 1

Cause:
Initial checks showed that Legato is problematic - I could not browse no files via "recover".
Extensive nsrck have brought the indexes back alive.
However - resrore via ONBAR would still fail.
We had to recreate the DB from scartch,and FTC both dataVolumes and SA cassetes.However,SA volumes would fail FTC !!
Futher extensive investigation have showed the following different station names:
Legato client =/nsr/index/Ripro5000/Ripro5000_0/db
Archiver station name=Ripro5000
/etc/hosts =Ripro5000_0
This showes that some iresponsible engineer have badly played with the system and caused total misconfiguration,that could just barely work on a daily basis,but could not restore from ONBAR and FTC on SA cassetes.
Conclusion :One should never diverse from the standard system names and configuration,or it will cost a fortune for Service and the customer.

1.4.3 Can not restore the DB from ONBAR – case 2

Symptoms:

Assume that you have recreated a DB after crash and you want to recover the DB from any saveset - latest or older one.

Onbar may fail with error 147 .

Error messages:

In $SCI_LOGS/bar_act.log :

2006-03-23 12:20:20 16830 34654 There are no storage spaces/logical logs to backup/restore.
2006-03-23 12:20:37 16830 34654 SQL -25588 The appl process cannot connect to Dynamic Server 2000 ids_server.
2006-03-23 12:20:37 16830 34654 ISAM 2 No such file or directory
2006-03-23 12:21:01 16830 34654 SQL -25588 The appl process cannot connect to Dynamic Server 2000 ids_server.
2006-03-23 12:21:01 16830 34654 ISAM 2 No such file or directory
2006-03-23 12:21:13 16830 34654 /scitex/version/Manager/informix/bin/onbar_d complete, returning 147 (0x93)

From scismit : "DB recover failed with status 147"

Cause:

The problem appears to be that a newer DB backup have occurred AFTER the DB was recreated from scratch,PRIOR to the Onbar recover.This causes the Legato to backup an almost empty file (1KB)
/scitex/version/Manager/informix/etc/ixbar.1 - which is called by Legato "Onbar emergency boot file".
Then when you try to recover the DB from Onbar,it is looking for the latest copy of this file,and recovers this useless small file,which does NOT contain the info about all the rellevant older ONBAR DB backups …

Thu 13:02:07 ripro2:/scitex/version/Manager/informix/etc/ (3/23/06) starting read from backup.15 of 1 KB
Thu 13:02:14 ripro2:/scitex/version/Manager/informix/etc/ (3/23/06) done reading 1 KB

/scitex/version/Manager/informix/etc 41 % ls -la ixbar.*

-rw-rw---- 1 root informix 532 Mar 23 06:01 ixbar.1
-rw-rw---- 1 informix informix 1017982 Mar 17 06:06 ixbar.1.20060322.171833
-rw-rw---- 1 root informix 665 Mar 23 12:20 ixbar.1.20060323.123348

vi ixbar.1
"ixbar.1" 4 lines, 532 characters
ids_server dbroot R 0 1 0 1143093622 1143093623 2006-03-23 06:00:22 1 0 0 1 0 - -
ids_server dbtbls ND 0 2 0 1143093708 1143093709 2006-03-23 06:01:48 1 0 0 2 0 - -
ids_server dbblobs B 0 3 0 1143093709 1143093710 2006-03-23 06:01:49 1 0 0 3 0 - -
ids_server 4 L 0 4 0 1143093714 1143093715 2006-03-23 06:01:54 1 0 0 4 0 - -

This cause the Onbar to fail the recover,since whatever older BD backup saveset you will ask for - it will NOT be in this file !

Solution:

We have manage to find a workaround for this problem - just by deleting this redundant small saveset containing the wrong ixbar.1 file :

mminfo -av backup.15 | grep etc
backup.15 ripro2 03/23/06 06:01:58 24 KB 574215681 cb full
/scitex/version/Manager/informix/etc/

Now delete it :
nsrmm -d -S 574215681

Delete file and media index entries for save set `574215681'? y

root@ripro2:/scitex/version/Manager/informix/etc 51 % mminfo -av backup.15 | grep etc

After this ,the next recovery attemp brings a bigger (900KB) ixbar.1 file and the recovery succeedes !

1.5 Timna@web problems

1.5.1 collection option is not working after the version upgrade

Explanation: The table 'collections' was absent in the database.
Probably during installation (upgrade) the database did not work.
The DB MUST be up when upgrading the Timna@web version !!!

Workaround:To correct - please run the following scripts:

/sites/netscape/suitespot/cgi-bin/table_session.cgi
/sites/netscape/suitespot/cgi-bin/store_session.cgi
/sites/netscape/suitespot/cgi-bin/collection_log.cgi

1.5.2 When log in as macuser the customer can not find any master jobs or folders.

Explanation :The problem of the user macuser is that he is in group customer ,and should be only in group macuser.

1.5.3 Local file on the dataVolumes has a different creation date than the retrieved file

Problem: Local file on the Timna DV has a different creation date than the retrieved file from Timn@Web after unzipping
Explanation: the files retrieved from Timna will always carry new creation date.It’s impossible to change it - it will always be the last time the file was uploaded.

1.5.4 Timna@Web does not automatically launch at system startup

Symptoms

When you start Brisque Serve, Timna@Web™ Internet access software does not launch automatically, and has to be started manually.
The following is an example of a **Timnaweb** log file demonstrating this problem:

```
# Timnaweb
Timn@Web log file Information: /sites/netscape/suitespot/timnaweb.log
Starting Timn@web Tue Apr 29 09:43:47 PST 2003
Netscape Admin daemon is already running...
Timnaweb[82]: /sites/netscape/suitespot/httpd-ripro01/start: not found.
Netscape Admin daemon is already running...
Start netscape FastTrak daemon
Error Netscape http daemon is not running !
Database selected.
Routine dropped.
Routine created.
Database closed.
Clear cache now Tue APR 29 09:43:47 PST 2003
------------------------------------------------------------
Timn@web started Tue APR 29 09:43:49 PST 2003
------------------------------------------------------------
```

Cause

The customer has configured a public Internet domain name and server name for Brisque Serve or Timna that is different from the domain and server names that were initially configured when Brisque Serve or Timna was installed. The initial domain name for Brisque Serve or Timna is usually `riproxx` or something similar.

When Timna@Web software was installed:

- The installation extracts the customer's server and domain names that was entered. For example, if `timna.sdsp.net` was entered, the installation extracts the server name `timna` and the domain name `sdsm.net`.
- The Netscape Navigator® application creates start and stop executable files for `httpd daemon` in the directory of the server (name) that was configured in step 2. For example, `/sites/netscape/suitespot/httpd-timna`.

Timna@Web cannot start up automatically because the **Timnaweb** startup script requires the host name **/sites/netscape/suitespot**.

Solution

To ensure that the `httpd dameon` starts in the correct path, add a line to the **Timnaweb** start script:

1. Open the **Timnaweb** script in a text editor.
2. Comment the line **x="hostname"**. The line should read: **#**`X="hostname"`
3. Press **Enter** and type **x="timna"**.
4. Save the **Timnaweb** script, and close the text editor application.

This change does not affect other Timna@Web settings because the directory **/sites/netscape/suitespot/httpd-timna** is only used to store the start and stop files of the httpd daemon.

The following is an example of a **Timnaweb** log file with the problem corrected:

```
# Timnaweb
Timn@Web log file Information: /sites/netscape/suitespot/timnaweb.log
Starting Timn@web Tue Apr 29 09:48:41 PST 2003
Netscape Admin daemon is already running...
Netscape-FastTrack/3.01 B97.275.0903
startup: listening to http://ripro01.sdps.net, port 80 as informix
Netscape Admin daemon is already running...
Start netscape FastTrak daemon
Netscape http daemon is running...
Database selected.
```

```
Routine dropped.
Routine created.
Database closed.
Clear cache now Tue Apr 29 09:48:41 PST 2003
------------------------------------------------------------
Timn@web started Tue Apr 29 09:48:44 PST 2003
------------------------------------------------------------
```

1.6 Error messages

1.6.1 An error message appears when mirroring Informix using onspaces

An error message appears when mirroring Informix® using onspaces:
Informix Dynamic Server 2000 was initialized with no mirroring.
Cause :
An intermediate stage in the database is caused during the system disk mirroring/unmirroring process.
Solution*:*
To work around the problem:
At the command line, type onmode -kuy to shut down Informix.
Change the following in **$INFORMIXDIR/etc/onconfig**:
#MIRROR 0
MIRROR 1
#MIRRORPATH /dev/DBRootM
MIRRORPATH
Type oninit to start Informix.
Type the following command to add the mirror to the DBRoot:
"onspaces -m dbroot -p /dev/DBRoot -o 500 -m /dev/DBRootM 500 -y".
At the command line, type "onbar -b -F" to start the mirror.
Change the following in **$INFORMIXDIR/etc/onconfig**:
#MIRROR 0
MIRROR 1
MIRRORPATH /dev/DBRootM
#MIRRORPATH

1.6.2 Database lock message appears in the SQLtrans.err file in Brisque Serve

Symptoms
A database lock message appears in the **SQLtrans.err** file indicating that a database lock (an exclusive lock) has been created and prevents access to other users. The database lock message appears when you try to connect while Brisque Serve is starting, or when FTC is running.

Cause
Sometimes when Brisque Serve is starting, the DBAdmin does not respond, and users cannot connect. This is a known problem that has been fixed and a solution will be released in the next Brisque Serve version.
Solution
To work around the problem when the Informix Database is locked and you want to release it quickly, or to get more information:
At the command line, type root as user.
Type >onstat -k to display information on database locks.

Locate the row that contains a **HDR+X** lock type, which indicates an exclusive database lock, and write down the **OWNER** value.
Type >onstat -u to display information on database users.
Locate the row where **address=OWNER** (the value located in step 3), and write down the **SESSID** value (this is the session that caused the database lock).

1. Before proceeding to the next step, find the UNIX® process that created the lock:
    - Type `>onstat -g ses` to display information on database sessions.
    - Locate the row where **`Session id=SESSID`** and write down the PID (UNIX Process ID).
- Type `>ps -ef | grep pid` to display information on the UNIX process that created the lock.

Type `>onmode -z` to abort the session that created the lock. The exclusive lock is released.
Note: Aborting the process from UNIX does not assure that the database process will be aborted.

1.6.3 Reviving the rootlocs table

Symptom:
After login there are reporting problems.
An error message appears in SQLtrans log regarding the missing "**rootlocs**" table.

Cause

There is a bug in BS software startup that may cause this situation.

Solution

To work around the problem restart the DBAdmin by running the following commands :

DBAdmin-maint

DBAdmin-off

DBAdmin

Then verify that the DBadmin has started successfully by verifying that the initDB.out file is errorless :

```
cat initDB.out
```

1.7 File Search

1.7.1 Drag & Drop of file from the FileTrak+ application to the desktop fails to copy the file

- **Problem:**

Drag & Drop of file from the FileTrak+ application to the desktop fails to copy the file.

- **Solution:**

- Verify that the file resides on a fixed volume.
- Verify you can manually mount the volumes to you Macintosh computer.
- Make sure there is no password on that volume.
- Make sure there is no group assigned to that volume.

1.7.2 FileTrak+ does not display a thumbnail

- **Problem:**

The FileTrak+ application does not display a thumbnail of a specific file.

- **Solution:**

Try to manually create a thumbnail of the file (using Thumbnailer). If this operation fails to create a thumbnail then the file does not have an embedded Thumbnail inside.

1.7.3 FileTrak+ search gives an error

Check free space in filesystems **/tmp** and **$DBTEMP**.

1.8 Reporting Problems

1.8.1 Files not reported on a certain volume

- **Problem:**

sql_err does not show errors.

- **Solution:**

Force_delete the volume and recreate a volume using the FileTrak+ application.

1.8.2 Files from optical not reported

- **Solution:**

- Quit Application.
- Enter Scismit.
- Reset Devices.
- Enter Application.

1.8.3 FTC fails on certain volumes

This can happen due to some problem in the tables.
Run a good “oncheck –cDI directmgr –y” ,sometimes more then once,till you get it errors free.
Normally you will dicover errors in files or location tables.

2. Dos and Don’ts

2.1 Dos

- Follow the routine maintenance procedure (Daily, Weekly, Monthly, Half Yearly and Yearly) as described in the Administrator’s Guide.
- Define new database users only in default groups (i.e., macusers, pcusers, etc.)
- Do not add passwords to volumes (Ripro Admin)

- Use only “LAN” as scismit subnet name.
- Define at least one zone name on the Timna.

2.2 Don’t

- Do not use a comma (,) or slash (/) in a filename or a space ( ) at the end of filenames.
- Do not rename a reporting volume (all information in database will be lost).
- Do not close the progress indicator of Update DB by using the upper left close button.

3. Procedures

3.1 How to change folder status from “Under Update”

This will change folder status from RED to black (not “Under Update”) .

```
CREATE PROCEDURE updType()
    DEFINE dirCode INTEGER;
    DEFINE linkName LIKE location.link_name;

FOREACH SELECT code INTO dirCode FROM tt WHERE link_name MATCHES
"*.j"
            UPDATE dir SET dir_type = "J" WHERE code = dirCode;
            DELETE FROM tt WHERE code = dirCode;
    END FOREACH;
    FOREACH SELECT code INTO dirCode FROM tt WHERE link_name MATCHES
"*.p"
            UPDATE dir SET dir_type = "P" WHERE code = dirCode;
            DELETE FROM tt WHERE code = dirCode;
    END FOREACH;
    FOREACH SELECT code INTO dirCode FROM tt
            UPDATE dir SET dir_type = NULL WHERE code = dirCode;
    END FOREACH;

END PROCEDURE;

SELECT dir.code, link_name
 FROM dir,location, media
  WHERE dir_type = "M"
AND dir.code = link_code
AND media_code = media.code
AND location_type = 1
AND NOT ((link_name  MATCHES ".*"
              OR link_name IN ("dataVolumes", "/"))
              AND media_type = "TAPE")
INTO TEMP tt;

EXECUTE PROCEDURE updType();

DROP PROCEDURE updType;
DROP TABLE tt;
```

3.2 Manual Removal of Media

First use the following SQL to get the row from the media table:

```
select * from media where label matches "*ripro1.2.3";
```

In this example, the media.code is 4 and that the media.tag_id is "slv2.3".
Now perform the following (there are some dummy SQLs in-between — just to display messages during the execution regarding our progress):

```
select "select file_id" from housekeeping where 1=1;
    select file_id from files where media_code = 4 into temp ff;

    select "select code from dir:" from housekeeping where 1=1;
    select code from dir where media_code = 4 into temp dd;

    select "delete from files:" from housekeeping where 1=1;
    begin work;
            lock table files in exclusive mode;
            delete from files where media_code = 4;
    commit work;

    select "delete from dir:" from housekeeping where 1=1;
    delete from dir where media_code= 4;

    select "delete from pages:" from housekeeping where 1=1;
    delete from pages where tag_id="slv2.3";

    select "delete from jobs:" from housekeeping where 1=1;

    delete from jobs where tag_id="slv2.3";

    select "delete from media:" from housekeeping where 1=1;
    delete from media where tag_id="slv2.3";
    begin work;
            lock table location in exclusive mode;
            select "delete from location FILES:" from housekeeping where 1=1;
            delete from location where link_code in (select file_id from ff)
            and location_type=0;

            select "delete from location DIR:" from housekeeping where 1=1;
            delete from location where link_code in (select code from dd)
            and location_type=1;

    commit work;

    select "update devices:" from housekeeping where 1=1;
    update devices set tag_id=null,label=null,status="available" where
            tag_id="slv2.3";
```

Note: The order of SQL commands is important.

3.3 Stored procedure to fix the Dup media DAT tapes.

```
--procedure to merge duplicate tag_id to refer to one media_code

--drop procedure DatDup;
create procedure DatDup (code1 INT, code2 INT)
      define lbtime INT;

   define tag1, tag2  char(24);
   select tag_id into tag1 from media where code = code1;
   select tag_id into tag2 from media where code = code2;
   update files set media_code = code1
      where media_code = code2;
   update dir set media_code =code1
     where media_code = code2;
   select label_time into lbtime
     from media where code = code2;
   delete from media where code = code2;
   update media set label_time = lbtime
     where code = code1;

end procedure;

-- Code1 represents the code that will stay in the database, code2 will
-- be removed.

execute procedure DatDup (code1, code2);

-- Use the following sql to identify dups in the database

select code, tag_id from media
where tag_id matches "DAT00010*"
```

3.4 Removing Bad Links in Database

At some customer sites, bad links were formed in the location table in the database. This is probably due to bug(s) that we have not yet traced. The actual problem is that in the file-system representation inside the database, one or more elements (such as file(s), folder(s) or folder tree(s)) were created under a FILE instead of under a folder. The result is that files and directories may become invisible to the FileTrak+ application, and deletion of this media is impossible due to the failure of the media deletion algorithm to handle the bad links.
The remedy: Run dbaccess, and in the Query Language section, paste and run the following:

```
    CREATE PROCEDURE DelF_sons (loc_code INTEGER)

        DEFINE curr_code INTEGER;

        LET curr_code = 0;

        IF loc_code=0 THEN
              FOREACH SELECT       s.code   INTO curr_code
                    FROM location s,location p
```

```
                WHERE p.location_type=0
                AND p.code=s.parent_code
                EXECUTE PROCEDURE DelF_sons (curr_code);
        END FOREACH;
    ELSE
        FOREACH SELECT s.code INTO curr_code
                FROM location s
                WHERE parent_code=loc_code

                EXECUTE PROCEDURE DelF_sons  (curr_code);
        END FOREACH;
        DELETE FROM location WHERE code=loc_code;
    END IF;
END PROCEDURE;

EXECUTE PROCEDURE DelF_sons(0);
```

This should delete all the bad links on all the media in that database.

3.5 Recovery after System Disk Crash

After importing all data and database disks do the following:

Scismit ->Dbase ->Diag&repair ->repairs -> recovery

This will recover the database disk to working condition using the DBRootM partition.

3.6 Logical Logs are 100% Full

If the logical logs are full, use **"ontape -a"** to immediately backup all logs to tape.
If you want to get rid of LL, define destination for logicall logs = /dev/null.

3.7 Fixing corruptions in the Database (Brisque Serve only)

3.7.1 Fixing corrupted blobs

Corrupted blobs may show when running "oncheck –cD directmgr:files" command ,or in online.log /SQLtrans.logs .
We have a special script (part of Brisque Serve software) that automatically fixes bad blobs in the database. The script is called **fix_blobs.sh** .
It's purpose: Fixes corrupted blobs by saving data from files table, drops it and builds new table files with saved data . It may use pat of the dataVolumes space for the unload.
The syntax is : **fix_blobs.sh /dataVolumes/timna1.6.2**
Where you should use your largest free filesystem name as a temporary space for the script.

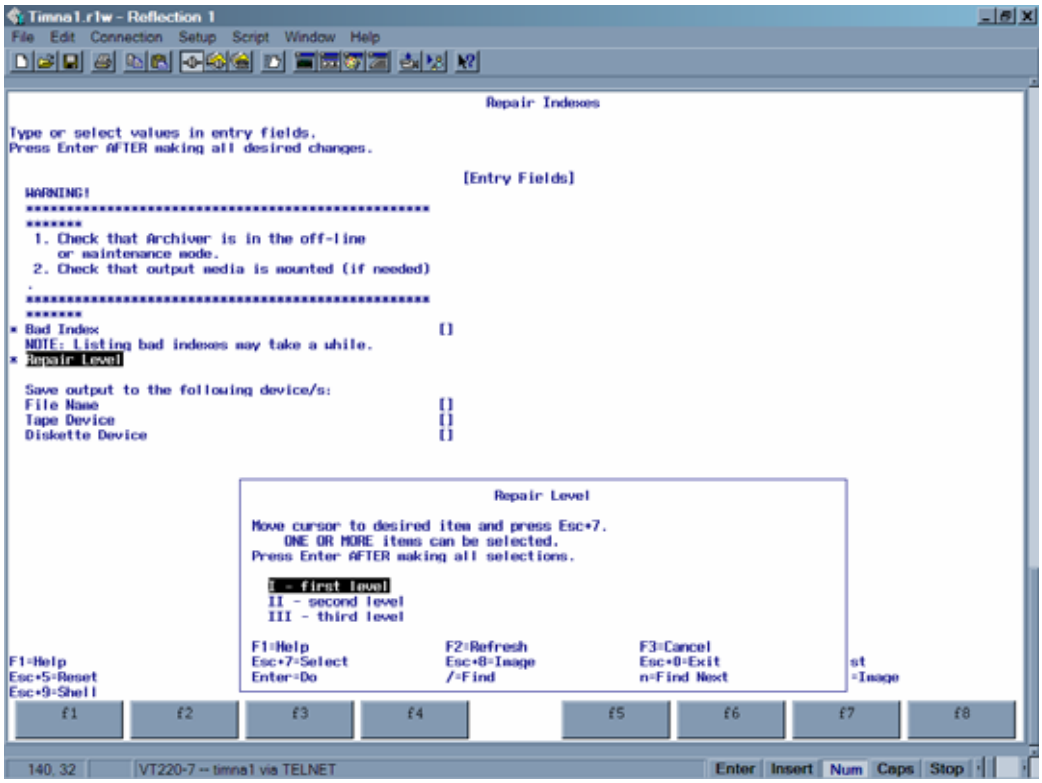
3.7.2 Fixing corrupted data

Corrupted data may show when running "**oncheck –cD directmgr**" command, or in online.log /SQLtrans.logs .
Corrupted data may be possibly fixed by running "**oncheck –cD directmgr –y**" command.
Note: if this command did not do the work – there may be a need to check the specific bad records and fix or delete each individually.

3.7.3 Fixing corrupted indexes

(also appears in detail in BS Admin guide – chapter 4)

Corrupted indexes may show when running "oncheck –cI directmgr" command .
We have a special entry in scismit that may fix the corruption:
sciscmit ->database->diagnostics & repairs->repairs->Indexes



The

One has to enter the bad index name (from oncheck command or logs – ex: files_2) .
There are 3 Index repair levels :
Index Diagnostics

First run Repair Level: I - first level on each of the bad Indexes.

Again run Diagnostics on your Indexes:

You will either get a message saying:

SUCCESS: No bad indexes are found in the Database

in which case you are done! or you will get a list of bad Indexes which you need to take note of.
Then run Repair Level: II - second level on each of the bad Indexes.

Again run Diagnostics on your Indexes: You will either get a message saying:

SUCCESS: No bad indexes are found in the Database

in which case you are done! or You will get a list of bad Indexes which you need to take note of.
Then run Repair Level: **III - third level** on each of the bad Indexes.

Again run Diagnostics on your Indexes to confirm:

SUCCESS: No bad indexes are found in the Database

If you still have bad Indexes after this procedure, you will need to recover the DB from the backup (onbar).

3.8 Checking for missing indexes and constraints

The first thing to check when there is a performance problem in a database system is to look for the indexes.

Start by looking at the schema of the files and location tables, which are the most important and impact the performance of Timna.
Can use, from the AIX command-line a command similar to:
dbschema –d directmgr –t files
and look at the index definitions. The files table, for example, should have 9 indexes, and location has 5 , so this is the first screening.

If I see anything suspicious, I compare with another Timna. You actually compare the whole schema of both databases.
The fast way to do it is to run, on each database, the following command:
dbschema –d directmgr –t all sch.sql
and this writes the whole schema into a file called sch.sql. Now I do, on each of these files, which come from both machines, the following command:
grep "index size" sch.sql
This gives me only the remark lines at the top of each CREATE TABLE statement, which includes the total size of the indexes for each row of this table, in bytes. This number is easy to compare quickly between the 2 computers, and only if I find differences – I actually check the specific details for that suspected table.

In addition to checking the indexes for missing ones, you should also check, in the dbschema for that table, if all the constraints for a suspect table are defined. They also take part in the total index size for that table.
Of course – you can just create once a sch.sql file for a system that you know to be OK, and then re-use it for future comparisons.

4. Analyzing Tool

4.1 Useful Commands

Note: The commands are written in boldface text.

Command	Description
online.log **SQLtrans.err**	Views system log files (vi under $SCI_LOGS)
Diagnostic	Fixes indexes (under Scismit/DataBase)
#**finderr *code***	Checks Informix error code
# cd $SCI_CONFIG/hotFolder **# pg ManagerReport.ans |grep TF_Path** (for list of directories) **# pg ManagerReport.ans |grep Dev_name** (for list of devices)	Checks reporting directories/devices(see Appendix D for file description)
#onmonitor	Checks database configuration (user Informix)
#onmode –ky **#onmode –m** **#onmode –z <sid>**	shutdown INFORMIX online from Quisient kills specific session
# sdsm_out.sh	Redirects Timna messages to the screen
# msgon.sh [7|10|14|22]	Opens DATABASE messages window during process. For xinit only.runs sdsm_tty+mon.sh
# $SCI_SCRIPTS/mon.sh	Activates debugger messages in /scitex/version/logs/PRINT_MESSAGES
# $SCI_ SCRIPTS /moff.sh	Deactivates debugger messages **Note:** Program linking must be on !!!
# tf.sh on/off	Creates binary buffers in /scitex/versions/logs/INPxxx (those that are sent to LIBDM)
echo "/dev/null" > $SCI_KEYS/sdsm_tty	Disables Timna messages to the screen
#oninit **#oninit – s** **#oninit -i**	Brings online Brings to Quisient mode Initialize Dbspace
#ps -el |more	Checks validation of Timna processes [managerLS, Hfdeamon, sm_srv, SQLturbo, sdsm_srv (for Whisper station), mac_srv (for Macintosh computer), DBMclient (while Ripro Admin on), DBAdmin (informix administrator)]
#ontape –a **#ontape –s L 0** **#ontape -r**	Backup LL Archive the whole Dbase level 0 archive Restore the whole system
lsps -a	list pagespace
#setDBver.sh	Verifies current DB version
#**netstat -n**	Checks that Ripro is waiting for FileTrak+ connection
#DBAdmin_mode	Shows Timna status:

	4=online, 0=offline ,1=maintenace
#DBAdmin **#DBAdmin off** **#DBAdmin maint**	Puts Timna online Puts Timna offline with Informix down Puts Timna offline with Informix up
#psp	Displays scitex product status
#ps -ef |grep mac_srv_tcp	Verifies FileTrak+ connection to server
#ps -ael	verify all processes are present
#/scitex/version/scripts/DBAlogprcnt.sh	Gives percentage of logical logs occupation
$SCI_SCRIPTS/DBAdbspaces.sh	Returns the DB Spaces and the % used: root@ripro2:/scitex/version/scripts 48 > DBAdbspaces.sh • dbroot; 251500; 46384; 205116; 18%; 82% • dbblobs; 1199496; 1169352; 30144; 97%; 3% • dbonls; 499500; 395192; 104308; 79%; 21%
#dbaccess directmgr	Accesses database
#uptime	Shows when last shutdown happend
#DBArchive.sh	Shows when LL were lately backedup
#oncheck -cIn **#oncheck -cDn** **#oncheck -cIn directmgr:jobs** **#oncheck –pT** **#oncheck –cc** **#oncheck –pe** **#oncheck –pt directmgr:files**	diagnose indexes diagnose data (BLOBS) diagnose table jobs reports ONLSpace table frgmentation !!!!! checks systables reports all tables with fragments > 8 shows No o rows+extents for table “files”
$SCI_LOGS/online.log file **#ls -l /dev/*DB***	The sources of information that are relevant in cases where **oninit** cannot start the engine
#onstat -d **#onstat -l** **#onstat -u** **#onstat –m** **#onstat –g ses** **#onstat –c** **#onstat –g sql** **#ls –la /dev |grep DB**	print dbspaces and chunks print logging print users print message log shows all sessions **(informix 7.0 only)** shows configuration showl all sql currently running **(informix 7.0 only)** lists access writes for DB devices
#import /dataVolume/ripro1.4.2 “” 3 “” &	**imports volume in background**
argv[1] - folder name/mount point for optical **argv[2] - device id (for fix device - "")** **argv[3] - update level (basic/full/with thumbnail)** **argv[4] - label and time of last format (for optical)** **argv[5] - list of all types to be imported (ALL - by default)**	A list of args that the import expects to receive in the command line

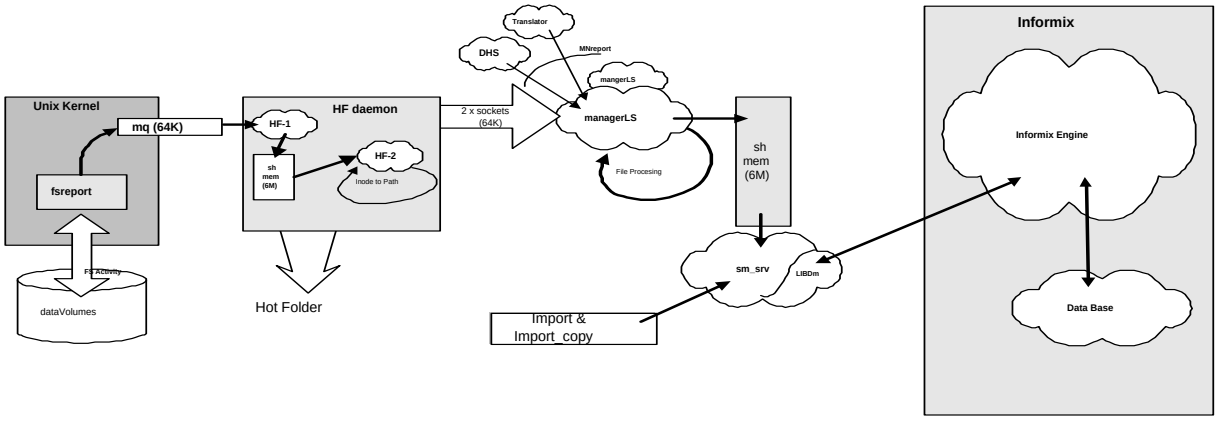
4.2 Useful Log Files to Verify Possible Fault

In **$SCI_LOGS** "**vi**" the following files

- start.scitexServers.log
- start.TimnaServers.log
- stop.scitexServers.log
- stop.TimnaServers.log
- online.log
- SQLtrans.err
- ripro_messages
- communications.log
- recovery.log
- recovery_error.log
- reset_devices.log
- /scitex/version/scripts >station_Info.scr

5. Appendix B - Timna Data Flow

The following diagram describes Timna basic data flow.



FSreport is a Unix kernel function written at scitex which receives “events” when changes are made to a file system. These events are passed to the hot folder daemon (*HFdaemon*) which filters events that are important to the Timna.

Reports are sent from the *HFdaemon, DHS,* and *Translator* to *managerLS* via TCP sockets. These sockets are written to in non-blocked mode so that the performance of the Timna functions does not affect the application work done on the scitex Ripro Server.
Both the *FSreport* and *Device Handling Server* can report related events to the *managerLS*.

managerLS receives events from the HFdaemon and from other processes such as the *Translator* and *Device Handling Server* (*DHS*). It spawns a child process to handle the event processing, which includes access to the file system for status information and actual data processing to create thumbnails.

5.1 Limitations, Bugs and Troubleshooting

- If Legato is not configured properly (e.g. there is no "ScitexArchive" group and/or pool, etc.) MessageViewer shows an error message, as if files to be archived were not found. Thus, if error message says "<folder> cannot be archived" it means that either folders/files do not exist or Legato is not configured properly.

5.2 Scheduled Archiving and Error Handling.

5.2.1 Introduction

Archive and retrieve are actually performed by shell scripts that call Legato native save/recover commands to perform requested operation. They store exit code calls and application executable “complete_service” afterwards. According to the exit code, “complete_service” issues error messages, listed below.

5.2.2 Archive error messages

Error	Error Message in MessageViewer	Comments
Nofiles	Job <job name> error : none of the items could be written to the tape	Legato pool/group are not configured properly, or archived files/folders can not be read, because they do not exist, are corrupted, etc.
Taperr	Job <job name> : tape error	-
Rqsplit	Job <job name> error : the save set was split onto two volumes. A new Legato archive job created: <job name>	The save set is split by Legato and was archived again to make sure that no file is split over volumes.
Bckerr	Job <job name> : Legato backup error	-

5.2.3 Retrieve error messages

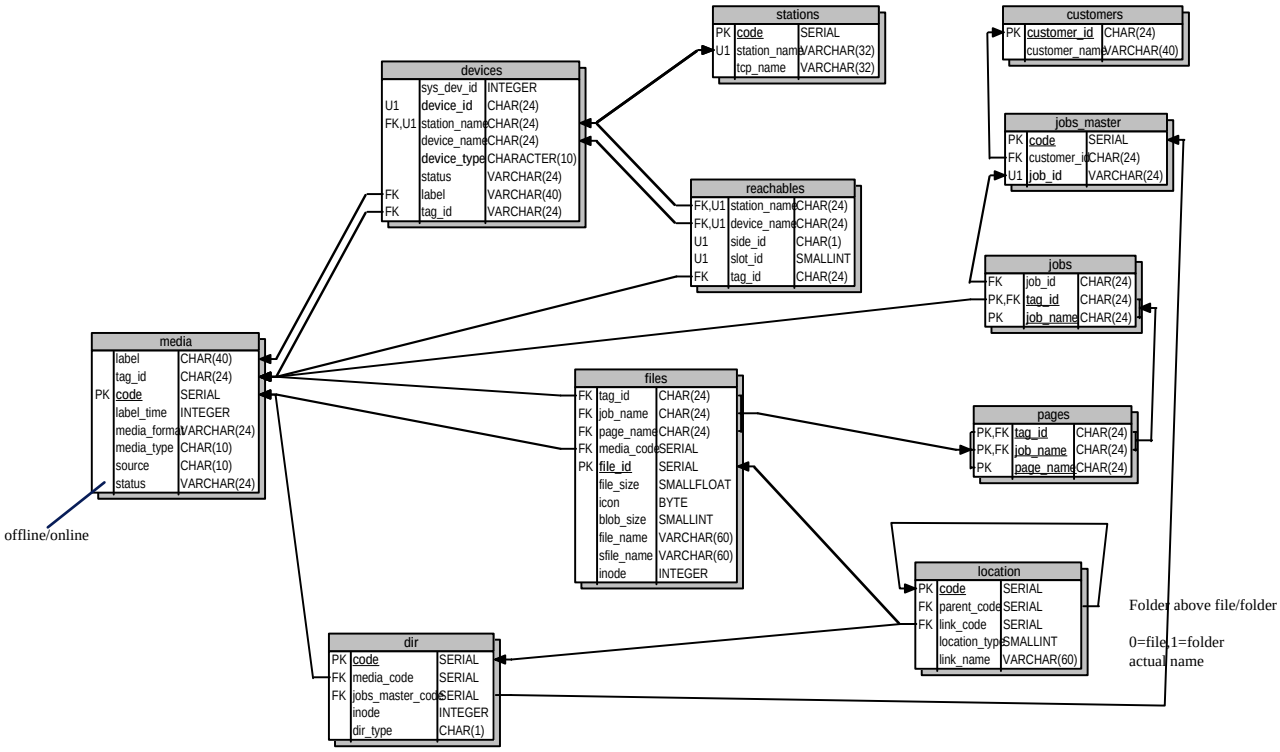
Error	Error Message in MessageViewer	Comments
Notape	Job <job name> error: the volume containing the requested save set is not in the jukebox	-
Taperr	Job <job name>: tape error	-
Nofiles	Job <job name> error: none of the items could be retrieved	Legato pool/group are not configured properly, or time parameters (date, time, time zone, DST) are misconfigured.
Dstfull	Job <job name> error: no space left on the destination	-
Nossid	The save set does not exist in the Legato database	In current implementation retrieve is performed according date and time, hence the ssid does not appear.

6. Appendix C: Reporting Configuration

$SCI_CONFIG	dbconfig	Local system DB configuration file
	cat $SCI_CONFIG/last*	Last time DB was backed up (onbar)
	onconfig.scitex	Backup for onconfig
	lsvg –l rootvg/svg3	Show content of DB Disk(s)
$SCI_CONFIG/hotFolder	ManagerReport.ans	Reporting volumes: cat $SCI_CONFIG/hotFolder/ManagerReport.ans |grep dataV
$INFORMIXDIR/etc	onconfig	Informix configuration file
	sqlhosts	#dbservername nettype hostname servicename #========== ======= ======== ========== ids_server onipcshm ripro1 ids_service

7. Appendix D: Database Definition

Logical structure of the Ripro database



Examples of SQL commands in tables:

- **update media set source = "ON LINE" where media_type matches 'TAPE'**
  Changes status of all cassettes
- **update media set source = "ON LINE" where media_code = 11**
  Changes status of a specific cassette
- **select tag_id, media_type, and source from media**
  Indicates what is on-line or off-line (see the table below)
- Select tag_id, media_type,media_format, source, status from media
  for a list of status and format

8. Appendix E: Checklist

- *lpstat* -check legato queues status
- /scitex/versions/temp - check .at_script.xxx & .failed_script
- Check for special characters in the path
- Check space availability on the destination (if a retrieve)
- Check correctly labeled volume availability (if archive)
- *nsr_watch* -check what Legato is doing
- *Nwrecover* (gui) or *recover (modem)* -try retrieving the relevant saveset/file manually,bypassing filetrack
- Check if the destination is a reporting volume (if a retrieve)

9. Utilities

9.1 ***HFmonitor*** *- utility for monitoring HFdaemon subsystem*

It's common output:

HFdaemon Monitor

fsReport Counters Status:

ERR	CREAT	OPEN	CLOSE	MKDIR	RMDIR	RENAME	REMOVE	LINK	SLINK	FID	LOOKUP	CLS_NM
0	138	2991	376	0	0	0	135	0	0	0	5449	1380

fsReport Message Queue Status:

ID	QNUM	CBYTES	QBYTES
24	0	0	65535

HFreact Message Queue Status:

ID	QNUM	CBYTES	QBYTES
23	0	0	65535

9.2 Mnstat

Condition of the managerLS's external message queues can see by "MNstat" monitor.

"MNstat -h" provides help about using MNstat.
"MNstat -s 2" - most useful option for the display refresh every 2 seconds.

proc_test
Shows existence of the some important Timna processes and their necessary numbers. If one of the characteristics is not satisfied, you get a warning.
Reporting modules – troubleshooting

#MNstat

ID KEY MODE OWNER GROUP CBYTES QNUM QBYTES LSPID LRPID STIME RTIME CTIME
Hfreactor

4111 0x480918f7 --rw-rw---- scitex scitex 0 0 65535 30162 15616 11:43:20 11:43:20 9:00:16

complete_servInv

4112 0x440918f7 --rw-rw---- scitex scitex 0 0 65535 29434 15616 11:34:06 11:34:07 9:00:16

complete_service

4113 0x540918f7 --rw-rw---- scitex scitex 0 0 65535 34868 15616 11:42:06 11:42:09 9:00:16
4114 0x470918f7 --rw-rw---- scitex scitex 0 0 65535 0 0 no-entry no-entry 9:00:16
4115 0x4d0918f7 --rw-rw---- scitex scitex 0 0 65535 0 0 no-entry no-entry 9:00:16
4116 0x520918f7 --rw-rw---- scitex scitex 0 0 65535 0 0 no-entry no-entry 9:00:16

9.3 Proc_test

#proc_test

HFdaemon - OK
HFreactor - OK
managerLS - OK
sm_srv - OK
QSserver - OK
DHserver - OK

** Data Base ONLINE, DBAdmin mode: 4 **

9.4 Gnrl_mon

```
==================================
---  SHARED MEMORY LOGFILE AND SERVERS MONITOR
==================================
---  SHARED MEMORY MONITOR  -----
EMPTY DESCRIPTORS : 100
 BUSY DESCRIPTORS :  0
   BUSY CLASTERS :  0
---  LOGFILE MONITOR  -----
RECORDS NUMBER :       157
---  ARCHIVE SERVERS MONITOR  -----
SERVER NAME   PROC.NUMBER  % VIRTUAL MEMORY
HFdaemon              1                    0
HFreactor             1                    1
managerLS             3                    3
sm_srv          1                    1
================================================
 *** STATUS FOR DATE 22/12/98  TIME 06:22:42  ***
```

The sum of these two fields should be always 100 (e.g. when system is not working there is no busy clusters, no busy descriptors and 100 empty descriptors.)

Indicates number of transactions waiting to be reported to Timna database.

10. Loggs

10.1 Message Log

Many Timna reporting modules apply their logging through a logging subsystem which allows log messages selection and analyzing on different levels, using "scismit" parameters.

scismit -> Utilities -> Archiver log -> Generate log report
Reporting modules - troubleshooting
Example:

Pattern [managerLS]
Priority [WARNING]
STARTING time (mmddhhmm) [12041350]
END time (mmddhhmm) [12041430]
Output portion [end]
Num of lines [40]

Gets last 40 "Warning" messages which arrived on December 4 of current year between 13:50 and 14:30 and contain "managerLS" pattern.

10.2 Other Logs

$SCI_LOGS	online.log	Informix DB activity log
	ripro_messages	Creo application activity log
	start.ArchiverServers.log	Reporting start up file
	start.ScitexServers.log	Cdesci start up file
	df -k	List mounted filesystems
	ARCHINFO.log	
	ARCHDEBUG.log	managerLS & unreported files
	Archiver.logout.log	
	DBAdmin.msg	
	all_updates.out	Update DB structure log
	SQLtrans.err	Error trasactions log
	error.ScitexServers.log	

11. Tools

11.1 FTC – "verify and correct"

FTC Operation

scismit database Verify and Correct

Select media type

Select mode ("verify" or "verify and correct")

Always do "verify" first

Select disk volume or TAPE archive date range

- Summary displayed in message window

- Can view detailed log with vi editor
- ftc_results in $SCI_LOGS

FTC Limitations

- Fixed disk: must not be mounted by Mac
- Optical: must be mounted, but not in use
- TAPE: should not be archiving within date range
- Must be sure that device's pending events have been reported to database
- Otherwise have synch problems with real events
- Best if system is not in use
- Not intended as a production system tool

12. Symptom selection

12.1 managerLS did not start successfully

User message: "Server: managerLS is down"
(in scismit Archiver log there is a message: "failure on mount")

- DB did not come up properly(on startup, DB must be online for mounting volumes)
  Check DB using "onstat"
- logout/login
- check SQLtrans.err for mount volumes problems
- Check double/wrong entries in media+devices tables
- Restart managerLS manualy from $SCI_PROGS/managerLS
  Verify reporting from fixed volumes is ok.

12.2 DBTemp is down

-Problem :

In online.log you see a message:

"DBTemp is down. It isn't listed in onstat."

It isn't listed in "onstat -d "either.

-Workaround :

==========
root@ripro02:/scitex/version/logs 32 % onstat -d

```
Informix Dynamic Server Version 7.30.UC3   -- On-Line -- Up 5 days 20:36:16 -- 1
00560 Kbytes

Dbspaces
address  number   flags    fchunk   nchunks  flags    owner    name
4003e13c 1        2        1        1        M        informix dbroot
4003f188 2        11       2        7        N B      informix dbblobs
4003f244 3        1        9        3        N        informix dbonls
 3 active, 2047 maximum

Chunks
address  chk/dbs offset   size     free     bpages   flags pathname
4003e1f8 1   1   125      63875    12934             PO-   /dev/DBRoot
4003e2d4 1   1   125      63875    0                 MO-   /dev/DBRootM
4003e8f0 2   2   125      499874  ~27591    249937   POB   /dev/DBBlobs
4003e9cc 3   2   125      499874  ~249690   249937   POB   /dev/DBBlobs01
4003eaa8 4   2   125      499874  ~249690   249937   POB   /dev/DBBlobs02
4003eb84 5   2   125      499874  ~249690   249937   POB   /dev/DBBlobs03
4003ec60 6   2   125      51874   ~25910    25937    POB   /dev/DBBlobs04
4003ed3c 7   2   125      499874  ~249690   249937   POB   /dev/DBBlobs05
4003ee18 8   2   125      375874  ~187751   187937   POB   /dev/DBBlobs06
4003eef4 9   3   125      499875   401450           PO-   /dev/DBOnls
4003efd0 10  3   125      499875   499872           PO-   /dev/DBOnls01
4003f0ac 11  3   125      251875   251872           PO-   /dev/DBOnls02
 11 active, 2047 maximum
================================================================================
```

This shows no DBTemp in the database configuration.

In $SCI_LOGS/online.log:

```
================================================================================
06:02:46  Informix Dynamic Server Initialized -- Shared Memory Initialized.
06:02:47  Warning: Invalid dbspace 'dbtemp' listed in DBSPACETEMP.
================================================================================
```

and in running

```
onstat -c | grep TEMP:
```

```
================================================================================
DBSPACETEMP     dbtemp,dbonls   # Default temp dbspaces
================================================================================
```

both of which show that DBTemp is in the runtime configuration, but cannot br accessed.

In /dev:

```
================================================================
==========
root@ripro02:/scitex/version/logs 36 % ls -l /dev/*DB*
crw-rw----   2 informix informix  51,  2 Jul 14 02:23 /dev/DBBlobs
crw-rw----   2 informix informix  51,  3 Mar 19 14:29 /dev/DBBlobs01
crw-rw----   2 informix informix  51,  4 Mar 19 14:29 /dev/DBBlobs02
crw-rw----   2 informix informix  51,  5 Mar 19 14:30 /dev/DBBlobs03
crw-rw----   2 informix informix  51,  6 Mar 19 14:30 /dev/DBBlobs04
crw-rw----   2 informix informix  52,  1 Mar 19 14:30 /dev/DBBlobs05
crw-rw----   2 informix informix  52,  2 Mar 19 14:30 /dev/DBBlobs06
crw-rw----   2 informix informix  10, 13 Jul 26 06:02 /dev/DBRoot
crw-rw----   2 informix informix  51,  1 Mar 19 14:58 /dev/DBRootM
crw-rw----   2 informix informix  52,  3 Mar 19 14:30 /dev/DBOnls
crw-rw----   2 informix informix  52,  4 Mar 19 14:30 /dev/DBOnls01
crw-rw----   2 informix informix  52,  5 Mar 19 14:30 /dev/DBOnls02
crw-rw----   2 informix informix  51,  7 Mar 19 14:32 /dev/DBTemp
brw-rw----   1 informix informix  51,  2 Mar 19 14:29 /dev/mngr_DBBlobs
brw-rw----   1 informix informix  51,  3 Mar 19 14:29 /dev/mngr_DBBlobs01
brw-rw----   1 informix informix  51,  4 Mar 19 14:29 /dev/mngr_DBBlobs02
brw-rw----   1 informix informix  51,  5 Mar 19 14:30 /dev/mngr_DBBlobs03
brw-rw----   1 informix informix  51,  6 Mar 19 14:30 /dev/mngr_DBBlobs04
brw-rw----   1 informix informix  52,  1 Mar 19 14:30 /dev/mngr_DBBlobs05
brw-rw----   1 informix informix  52,  2 Mar 19 14:30 /dev/mngr_DBBlobs06
brw-rw----   1 informix informix  10, 13 Mar 19 14:28 /dev/mngr_DBRoot
brw-rw----   1 informix informix  51,  1 Mar 19 14:28 /dev/mngr_DBRootM
brw-rw----   1 informix informix  52,  3 Mar 19 14:30 /dev/mngr_DBOnls
brw-rw----   1 informix informix  52,  4 Mar 19 14:30 /dev/mngr_DBOnls01
brw-rw----   1 informix informix  52,  5 Mar 19 14:31 /dev/mngr_DBOnls02
brw-rw----   1 informix informix  51,  7 Mar 19 14:31 /dev/mngr_DBTemp
crw-rw----   2 informix informix  51,  2 Jul 14 02:23 /dev/rmngr_DBBlobs
crw-rw----   2 informix informix  51,  3 Mar 19 14:29 /dev/rmngr_DBBlobs01
crw-rw----   2 informix informix  51,  4 Mar 19 14:29 /dev/rmngr_DBBlobs02
crw-rw----   2 informix informix  51,  5 Mar 19 14:30 /dev/rmngr_DBBlobs03
crw-rw----   2 informix informix  51,  6 Mar 19 14:30 /dev/rmngr_DBBlobs04
crw-rw----   2 informix informix  52,  1 Mar 19 14:30 /dev/rmngr_DBBlobs05
crw-rw----   2 informix informix  52,  2 Mar 19 14:30 /dev/rmngr_DBBlobs06
crw-rw----   2 informix informix  10, 13 Jul 26 06:02 /dev/rmngr_DBRoot
crw-rw----   2 informix informix  51,  1 Mar 19 14:58 /dev/rmngr_DBRootM
crw-rw----   2 informix informix  52,  3 Mar 19 14:30 /dev/rmngr_DBOnls
crw-rw----   2 informix informix  52,  4 Mar 19 14:30 /dev/rmngr_DBOnls01
crw-rw----   2 informix informix  52,  5 Mar 19 14:30 /dev/rmngr_DBOnls02
crw-rw----   2 informix informix  51,  7 Mar 19 14:32 /dev/rmngr_DBTemp
================================================================
==========
```

Here we see that the logical volume has been allocated, and all permissions are well defined on it.

Now at the Logical Volume Manager level (only the lines relevant to the database):

```
================================================================
==========
root@ripro02:/scitex/version/logs 40 % lsvg -o|lsvg -i -l

svg10:
LV NAME            TYPE      LPs   PPs   PVs  LV STATE      MOUNT POINT
mngr_DBBlobs05     jfs       125   125   1    open/syncd    N/A
mngr_DBBlobs06     jfs       94    94    1    open/syncd    N/A
mngr_DBOnls        jfs       125   125   1    open/syncd    N/A
mngr_DBOnls01      jfs       125   125   1    open/syncd    N/A
mngr_DBOnls02      jfs       63    63    1    open/syncd    N/A
svg9:
LV NAME            TYPE      LPs   PPs   PVs  LV STATE      MOUNT POINT
mngr_DBRootM       jfs       16    16    1    open/syncd    N/A
mngr_DBBlobs       jfs       125   125   1    open/syncd    N/A
mngr_DBBlobs01     jfs       125   125   1    open/syncd    N/A
mngr_DBBlobs02     jfs       125   125   1    open/syncd    N/A
mngr_DBBlobs03     jfs       125   125   1    open/syncd    N/A
mngr_DBBlobs04     jfs       13    13    1    open/syncd    N/A
mngr_DBTemp        jfs       4     4     1    closed/syncd  N/A
rootvg:
LV NAME            TYPE      LPs   PPs   PVs  LV STATE      MOUNT POINT
mngr_DBRoot        jfs       16    16    1    open/syncd    N/A
================================================================
==========
```

What we see here is that the mngr_DBTemp volume has LV STATE closed/syncd, which means that it exists, but has never been used.

Now we need to check it's size. We can see from the following:

```
================================================================
==========
root@ripro02:/scitex/version/logs 58 % lsvg svg9
VOLUME GROUP:   svg9          VG IDENTIFIER:  00422812a3f309c2
VG STATE:       active        PP SIZE:        16 megabyte(s)
VG PERMISSION:  read/write    TOTAL PPs:      542 (8672 megabytes)
MAX LVs:        256           FREE PPs:       9 (144 megabytes)
LVs:            7             USED PPs:       533 (8528 megabytes)
OPEN LVs:       6             QUORUM:         2
TOTAL PVs:      1             VG DESCRIPTORS: 2
STALE PVs:      0             STALE PPs       0
ACTIVE PVs:     1             AUTO ON:        yes
================================================================
==========
```

that the PP SIZE is 16MB. We saw earlier that mngr_DBTemp has 4 PPs. Therefore 16 * 4 = 64 MB.

Now we have to let Informix know about it, since we saw that the problem was not at the AIX level, but, rather, that DBTemp was not set-up at the database level:

```
================================================================
==========
 # onspaces -c -d dbtemp -t -p /dev/DBTemp -o 500 -s 63496

Verifying physical disk space, please wait ...
Space successfully added.
================================================================
```

Now we can check:

```
================================================================
root@ripro02:/scitex/version/logs 68 % onstat -d

Informix Dynamic Server Version 7.30.UC3   -- On-Line -- Up 5 days 21:16:00 -- 1
00560 Kbytes

Dbspaces
address  number   flags    fchunk   nchunks  flags    owner    name
4003e13c 1        2        1        1        M        informix dbroot
4003f188 2        11       2        7        N B      informix dbblobs
4003f244 3        1        9        3        N        informix dbonls
404ff19c 4        2001     12       1        N T      informix dbtemp
 4 active, 2047 maximum

Chunks
address  chk/dbs offset   size     free     bpages   flags pathname
4003e1f8 1   1   125      63875    12934              PO-   /dev/DBRoot
4003e2d4 1   1   125      63875    0                  MO-   /dev/DBRootM
4003e8f0 2   2   125      499874  ~27590    249937   POB   /dev/DBBlobs
4003e9cc 3   2   125      499874  ~249690   249937   POB   /dev/DBBlobs01
4003eaa8 4   2   125      499874  ~249690   249937   POB   /dev/DBBlobs02
4003eb84 5   2   125      499874  ~249690   249937   POB   /dev/DBBlobs03
4003ec60 6   2   125      51874   ~25910    25937    POB   /dev/DBBlobs04
4003ed3c 7   2   125      499874  ~249690   249937   POB   /dev/DBBlobs05
4003ee18 8   2   125      375874  ~187751   187937   POB   /dev/DBBlobs06
4003eef4 9   3   125      499875   401450            PO-   /dev/DBOnls
4003efd0 10  3   125      499875   499872            PO-   /dev/DBOnls01
4003f0ac 11  3   125      251875   251872            PO-   /dev/DBOnls02
404ff258 12  4   125      15874    15821             PO-   /dev/DBTemp
 12 active, 2047 maximum
================================================================
```

and at the AIX level:

```
================================================================
root@ripro02:/scitex/version/logs 73 % lsvg -o | lsvg -i -l |grep DBTemp
```

```
mngr_DBTemp       jfs      4    4    1    open/syncd    N/A
================================================================================
```

we can see that the volume has been opened.

Please note that this whole procedure is done while the application and Informix are online, and it does not disturb the users in any way.

12.3 Symptom selection – not DB oriented

Symptom	Message	Workaround / Information
FileTrak+ application Cannot connect to Timna database.	FileTrak+ configuration: "Archiver at <IP address> is currently disconnected".	Check if Timna system is down or through Archiver administration option check the database status. Must be on-line.
	FileTrak+ configuration: "Fail to interact with local server."	Close FileTrak+ configuration control panel. Delete "MacSDSM TCP Prefs" from the Macintosh preferences folder. Open FileTrak+ configuration control panel, type the Timna default IP address (SciNet subnet name is optional). If get the same message again, rerun the procedure.
FileTrak+ application Cannot connect to Timna database.	FileTrak+ configuration: "Station name is not configured properly."	Check "host" file in the Mac system folder.
FileTrak+ application Cannot archive files or folder to TAPE.	Message viewer: "none of the files can be archived"	Check if file or parent folder to be archived has either special characters in its name or blank at the end of the name.
FileTrak+ application Cannot retrieve files or folders from TAPE	No message in FileTrak+. Check nwadmin (see Scheduled Archiving FAQ #2)	Check if file or parent folder to be archived has either special characters in its name or blank at the end of the name. Check destination disk space.

		If retrieve can be done via nwrecover call scitex service.
FileTrak+ application Can not archive or retrieve files or folder to TAPE.	FileTrak+ messages: “Failed to allocate Device Handling Server 'server1' in zone '*'. Archive/Retrieve action cancelled.”	Check “scitexArchiverZone” file in the Mac system folder. (When Timna and Macintosh are located in different zones.)
FileTrak+ application Can not assign folder to a Master Job.	FileTrak+ messages: “Assign failed – the directory <folder name> is already assigned, unassign it first”	Unassign folder and assign it again.
FileTrak+ application Can not unassign folder to a Master Job.	FileTrak+ messages: “Unassign failed – unassign parent directory first.”	Look for the folder that has been assigned to the master job and unassign it.
FileTrak+ application Cannot archive files or folders to TAPE.	FileTrak+ messages: “The sum of path lengths in job <archive job name> is too big. You should divide your request to <#> parts and try again.”	Archive path length is limited to total of 1900 bytes (characters) per list of files, include the path of the file name. Split the Archive request.
FileTrak+ application Files are not showing up in the dataVolumes after a successful submission of retrieve request.	FileTrak+ messages: “Submitted successfully”,	Retrieve can be done only to a reporting volume. Check that the retrieve destination is in a reporting volume.
Legato NetWorker admin Archive was submitted successfully but NetWorker does not perform writing to tape.	Legato NetWorker admin: “Pending – media waiting : backup to pool ‘scitexArchive’ waiting for 1 writable backup tape(s)”	Make sure that there are “ScitexArchive” tapes with space on them available.
Legato	Legato NetWorker admin:	Make sure that there is enough

NetWorker admin Retrieve was submitted successfully but NetWorker does not retrieve.	"Root browsing Done root browsing"	space in destination directory.

13. Timna Maintenance

13.1 Daily maintenance

13.1.1 Backing up logical logs to DAT

- **Description:**

The logical log indicator on Archiver Admin on a Macintosh computer isn't changing, but many files are being written to the RAID. Archiver Admin shows the logical logs 16% full. onmonitor shows them to be 31% full. Trying to back up the logical logs fails. As before, everything is normal until after clicking "YES" in the pop up dialog box, to back up the logical logs. Again, nothing happens. The DAT doesn't move, and the logical log indicator doesn't move either.

- **Solution**

1. Check if there is anything unusual in onstat -l
2. Look at /u/d0/online.log for Informix error messages related to disk access or logical logs.
3. Enter the onmonitor. Try to backup logical logs directly from there, so that you may see the actual Informix-level error (or other) messages related to the problems in logical logs backup.

If all the above is normal, and you succeed in the backup, the problem is not at the Informix level, but in some other process, such as DBAdmin.

13.1.2 Archive database

Full backup every day (must)
Backup logical logs (optional)
by default backup logical log device is configured to /dev/null

13.1.3 Disk Info (server launch pad)

13.1.4 Check file systems (none should exceed 95%)

13.2 Weekly maintenance

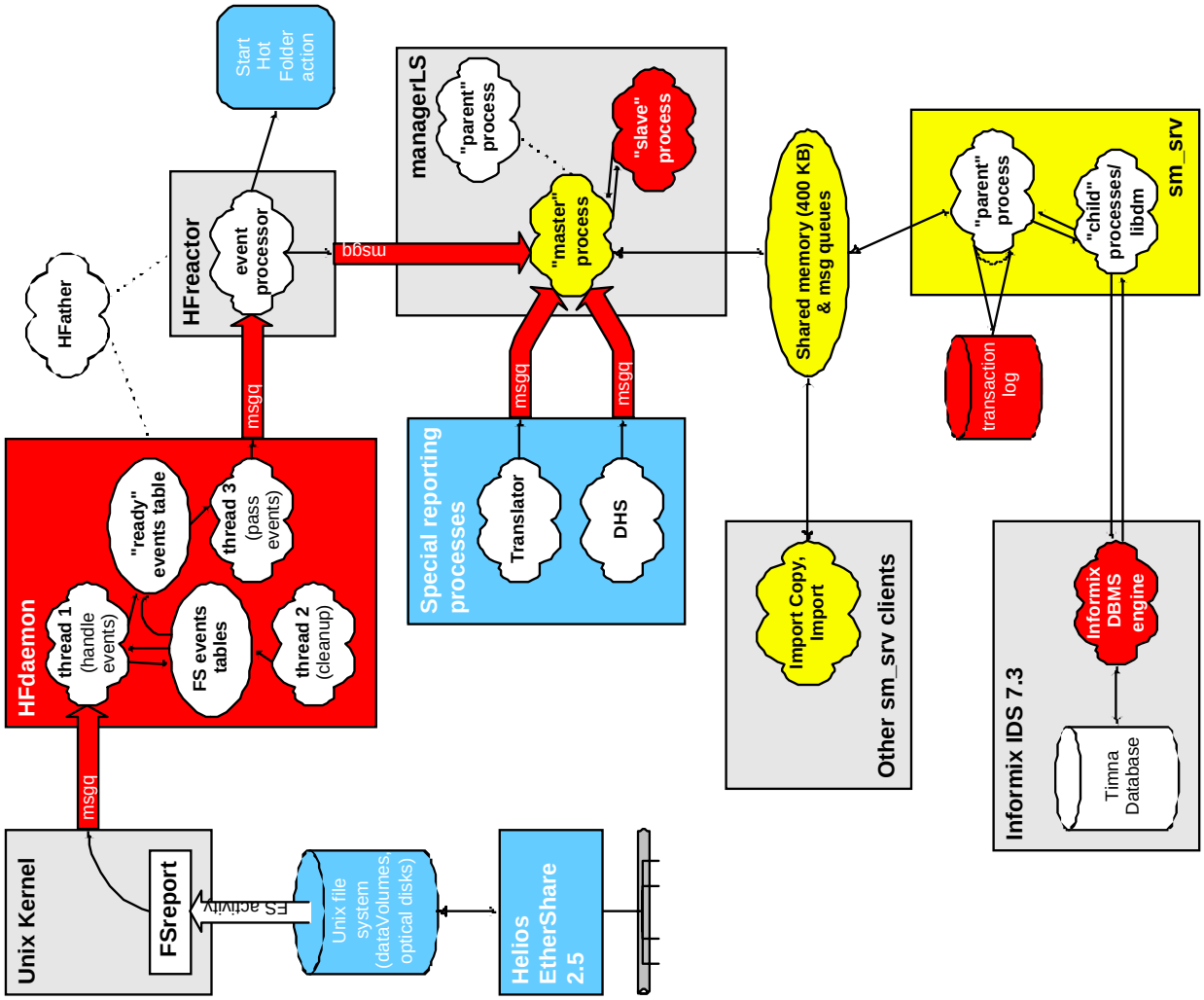
Database diagnostics and repair

- Indexes
- Data

If problems are found during the diagnostics, run the repair procedure.
Check dataVolumes (fsck)

Run Check dataVolume (fsck) from scismit on all volumes.
Shut down the system (use *"shutdown -r"* to reboot)
Verify, then Verify and Correct if needed
Report any unusual results to scitex Service

14. APPENDIX H- Timna dataflow



15. APPENDIX G - ON-Bar Return Codes

The table below shows the ON–Bar return codes for all Informix database servers. These return codes are accompanied by messages in the ON–Bar activity log. For details about an ON–Bar or storage-manager error, review the activity log before you call Technical Support.

Table 21. Common ON-Bar Return Codes

Decimal Value	ON-Bar Return Code Description
2 through 34	These return codes are produced by XBSA. For more information, consult your storage-manager documentation and log files.
100	ON–Bar cannot find something in **sysutils**, the emergency boot file, or storage-manager catalogs that it needs for processing. Check the ON–Bar activity log for messages that say what could not be found and try to resolve that problem. If the problem recurs, contact Technical Support.
104	Adstar Distributed Storage Manager (ADSM) is in generate-password mode. ON–Bar does not support ADSM running in generate-password mode. For information on changing the ADSM security configuration, refer to your ADSM manual.
115	A critical dbspace is not in the set of dbspaces being cold-restored.
116	The **onsmsync** utility is already running.
117	The information contained in the sysutils database and the Emergency Boot File are inconsistent.
118	An error trying to commit a backup object to the storage manager.
119	The logical log is full on one or more coservers. Perform a logical-log backup.
120	The transport buffer size has changed since this object was last backed up. This object cannot be restored. Set the transport-buffer size to its original value and retry the restore.
121	Error occurred on dbslice name expansion (XPS). ON–Bar was unable to determine the list of dbspaces in a dbslice.
122	Deadlock detected. The ON–Bar command is contending with another process. Retry the ON–Bar command.
123	The root dbspace was not in the cold restore. You cannot perform a cold restore without restoring the root dbspace. To resolve the problem, try one of the following procedures: • Bring the database server to quiescent or online mode and restore just the storage spaces that need to be restored. • If the database server is offline, issue the **onbar -r** command to restore all the storage spaces. • Make sure that the root dbspace and other critical dbspaces are listed on the command line or in the **-f** filename.
124	The buffer had an incomplete page during the backup. For assistance, contact Technical Support.
126	Error processing the emergency boot file. Check the ON–Bar activity log for descriptions of the problem and the emergency boot file for corruption such as non-ASCII characters or lines with varying numbers of columns. If the source of the problem is not obvious, contact Technical Support.
127	Could not write to the emergency boot file. Often, an operating-system error message accompanies this problem. Check the permissions on the following files and directories: • **$INFORMIXDIR/etc** on UNIX or **%INFORMIXDIR%\etc** on Windows

Table 21. Common ON-Bar Return Codes

Decimal Value	ON-Bar Return Code Description
	• The emergency boot file • The directory that BAR_BOOT_DIR points to (XPS only).
128	Data is missing in the object description. For assistance, contact Technical Support.
129	ON–Bar received a different object for restore than it had expected. (The backup object did not match.) The requested backup object might have been deleted or expired from the storage manager. Run **onsmsync** to synchronize the **sysutils** database, emergency boot file, and storage-manager catalogs. For assistance, contact Technical Support.
130	Database server is not responding. The database server probably failed during the backup or restore. Run the **onstat -** command to check the database server status and then: • If the operation was a cold restore, restart it. • If the operation was a backup or warm restore, restart the database server and retry the backup or warm restore.
131	A failure occurred in the interface between ON–Bar and the database server. For assistance, contact Technical Support.
132	Function is not in the XBSA shared library. Verify that you are using the correct XBSA for the storage manager. For information, consult your storage-manager manual.
133	Failed to load the XBSA library functions. Verify that you are using the correct XBSA for the storage manager. Ensure that the BAR_BSALIB_PATH value in the ONCONFIG file points to the correct location of the XBSA shared library. For information, consult your storage-manager manual.
134	User wants to restore a logical-log file that is too early. You probably tried a point-in-log restore (**onbar -r -l -n**) after performing a separate physical restore. The specified logical log is too old to match the backups used in the physical restore. Perform either of the following steps: • Rerun the physical restore from an older set of physical backups. • Specify a later logical log in the **-n** option when you rerun the point-in-log restore. To find the earliest logical log that you can use, look at the emergency boot file. For assistance, contact Technical Support.
136	ON–Bar cannot warm restore the critical dbspaces. Perform either of the following steps: • Reissue the warm-restore command without listing any critical dbspaces. • Shut down the database server and perform a cold restore.
137	The MAX_DBSPACE_COUNT was exceeded. For assistance, contact Technical Support.
138	An XBSA error occurred. Verify that you are using the correct XBSA for the storage manager. Also check the **bar_act.log** for XBSA error messages. For information, consult your storage-manager manual.
139	Either the XBSA version is missing from the **sm_versions** file or the incorrect XBSA version is in the **sm_versions** file. Insert the correct XBSA version into the **sm_versions** file. For more information, consult your storage-manager manual.
140	A fake backup failed. Retry the fake backup using the **onbar -b -F** command. Only IDS supports fake backups. If the fake backup fails again, contact Technical Support.
141	ON–Bar received an operating-system signal. Most likely, the user entered the Ctrl-C command to stop an ON–Bar process.

Table 21. Common ON-Bar Return Codes

Decimal Value	ON-Bar Return Code Description
	Fix the cause of the interruption and then retry the ON–Bar command.
142	ON–Bar was unable to open a file. Verify that the named file exists and that the permissions are correct. Check the ON–Bar activity log for an operating-system error message.
143	ON–Bar was unable to create a child process. If BAR_MAX_BACKUP is not 0, ON–Bar could not create child processes to perform the parallel backup or restore. The operating system probably ran out of resources. Either not enough memory is available to start a new process or no empty slot exists in the process table. Check the operating-system logs, the ON–Bar activity log, or the console.
144	The log backup was aborted because one or more blobspaces were down. Attempt to restore the blobspace. If the restore fails, retry the log backup using the **onbar -l -O** command. Executing this command might make the blobspace unrestorable.
145	ON–Bar was unable to acquire more memory space. Wait for system resources to free up and retry the ON–Bar command.
146	ON–Bar was unable to connect to the database server. The network or the database server might be down. For assistance, contact Technical Support.
147	ON–Bar was unable to discover any storage spaces or logical logs to back up or restore. For example, if you specify a point-in-time restore but use a *datetime* value from before the first standard backup, ON–Bar cannot build a list of storage spaces to restore. This return code also displays if you specify a whole-system restore without having performed a whole-system backup. Verify that the database server and the storage spaces are in the correct state for the backup or restore request. Contact Technical Support.
148	An internal SQL error occurred. Provide Technical Support with the information from the ON–Bar activity log.
149	Either you entered the wrong ON–Bar syntax on the command line or entered an invalid or incorrect *datetime* value for your GLS environment. Check the command that you tried against the usage message in the ON–Bar activity log. If that does not help, then retry the command with quotes around the *datetime* value. If your database locale is not English, use the **GL_DATE** or **GL_DATETIME** environment variables to set the date and time format.
150	Error collecting data from the ONCONFIG file. Check the permissions, format, and values in the ONCONFIG file. Check that the **ONCONFIG** environment variable is set correctly.
151	The database server is in an incorrect state for this backup or restore request, or an error occurred while determining the database server state. Either you attempted an operation that is not compatible with the database server mode or ON–Bar is unable to determine the database server state. For example, you cannot do a physical backup with the database server in recovery mode. Check the error message in the ON–Bar activity log. If an ASF error occurred, the following message displays in the ON–Bar activity log: `Fatal error initializing ASF; asfcode = code` To determine the cause of the ASF error, refer to the ASF error code in this message and repeat the backup or restore

Table 21. Common ON-Bar Return Codes

Decimal Value	ON-Bar Return Code Description
	command. If an ASF error did not occur, change the database server state and repeat the backup or restore command.
152	ON–Bar cannot back up the logical logs. The logical logs are not backed up for either of the following reasons: • If another log backup is currently running. • If you perform a logical-log backup with the LTAPEDEV parameter set to **/dev/null** (UNIX) or **nul** (Windows). You receive this return code when no log backups can be done. To enable log backups, change the LTAPEDEV parameter to a valid value.
153	ON–Bar cannot set the process group id. If BAR_MAX_BACKUP is set to any value other than 1 and ON–Bar encounte an error setting the process group id, this value is returned. This message is a warning of a possible operating-system problem.
154	The ON–Bar user does not have the correct permissions. You must be user **root** or **informix** or a member of the **bargroup** group on UNIX or a member of the **Informix-Admin** group on Windows to execute ON–Bar commands.
155	The **INFORMIXSERVER** environment variable is not set. Set the **INFORMIXSERVER** environment variable to the correct database server name.
157	Error attempting to set the **INFORMIXSHMBASE** environment variable to -1. ON–Bar could not set **INFORMIXSHMBASE** to -1. For assistance, contact either the system administrator or Technical Support.
158	An internal ON–Bar error occurred. Contact Technical Support.
159	An unexpected error occurred. Contact Technical Support.
160	External restore failed. To determine what went wrong with the external restore, look at the **bar_act.log** and the **online.log** files. Ensure that you already performed the manual part of the external restore before you retry the **onbar-r -e** command to complete the external restore. If that does not work, try the external restore from a different external backup.
161	Restarted restore failed. Verify that RESTARTABLE_RESTORE is set to ON and try the original restore again. For more information, check the ON–Bar activity log and database server message logs (IDS).
162	The ON-Bar log file cannot be a symbolic link. Remove the symbolic link or change the ONCONFIG file so that the ON-Bar parameters BAR_DEBUG_LOG or BAR_ACT_LOG point to non-symbolic linked files.
163	The ON-Bar log file must be owned by user **informix**. Change the ownership of the log file to be owned by user **informix** or change the BAR_ACT_LOG or BAR_DEBUG_LOG values in the ONCONFIG file to point to different log files.
164	Unable to open file. The file or its directory permissions prevent it from being created or opened. Verify the permissions on the file and its directory.
177	An online dbspace was restored. This return code notifies the user that the **-O** option overrode the internal checks in ON Bar. You do not need to take any action.

Table 21. Common ON-Bar Return Codes

Decimal Value	ON-Bar Return Code Description
178	The logical log was backed up while one or more blobspaces were down. This return code notifies the user that the **-O** option overrode the internal checks in ON–Bar. Examine the data in the blobspace to determine which simple large objects you need to re-create. These blobspaces might not be restorable. For assistance, contact Technical Support.
179	ON–Bar created the chunk needed to restore the dbspace. This return code notifies the user that the **-O** option overrode the internal checks in ON–Bar. You do not need to take any action.
180	ON–Bar could not create the chunk needed to restore the dbspace. Create the chunk file manually. Retry the restore without the **-O** option.
181	ON–Bar expired an object that was needed for a backup or restore. The **onsmsync** utility expired an object that might be needed for a restore. You probably specified **onsmsync** with the **-O** option. If you used the **-O** option by mistake, contact Technical Support to recover the object from the storage manager.
183	ON-Bar could not obtain the logical-log unique ID from the storage manager. The backup of the specified logical log is missing. Query your storage manager to determine if the backup of the specified logical-log file exists and if it is restorable.
247	Merging of emergency boot files timed out because it took too long. (XPS) On UNIX, look in **/tmp/bar_act.log** and the file that the BAR_ACT_LOG parameter points to for clues. (The **onbar-merger** writes to **/tmp/bar_act.log** until it has enough information to read the ONCONFIG file.) Resolve the problems that the **bar_act.log** describes and retry the cold restore. If the cold restore still fails, contact Technical Support.
252	Received the wrong message from **onbar_m** that merges the emergency boot files. (XPS) For assistance, contact Technical Support.