RELEASE NOTES FOR MIGRATION DATA of TIMNA to BRISQUE SERVE

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1. External migration 2
1.1 OVERVIEW 2
1.2 MIGRATION TESTING 2
1.3 PRE RUN REQUIREMENTS 2
1.4 Running the script 2
1.5 Script Actions 2
1.6 Monitoring the process 3
1.7 ATP 3
1.8 Post migration steps 3
1.9 APPENDIX 4
1.9.1 Known problems 4
1.9.2 How the script uses the onpload 4
1.9.3 Troubleshooting guide 4
2. Internal migration 5
2.1 OVERVIEW 5
2.2 MIGRATION TESTING 5
2.3 PRE RUN REQUIREMENTS 5
2.4 Running the scripts 5
2.5 Scripts Actions 5
2.5.1 ti_2_bs_pre.sh 5
2.5.2 ti_2_bs_post.sh 6
2.6 Monitoring the process 6
2.6.1 ti_2_bs_pre.sh 6
2.6.2 ti_2_bs_post.sh 6
2.7 ATP 7
2.7.1 ti_2_bs_post.sh 7
2.8 APPENDIX 7
2.8.1 Known problems 7
2.8.2 II. Limitations 7

1. External migration

1.1 OVERVIEW

The purpose of these release notes is to make you aware of any special
actions required to configure and use the migration script on your
computer. This file also describes the technique features.
The scripts can be copied and run from ANY location.

1.2 MIGRATION TESTING

The migration script have been tested with the following :

Module	Property	Database	OS
Timna	Source	Informix IDS 7.30.UC3	AIX 4.2.1
Brisque serve	Destination	Informix IDS 9.21.UC2	AIX 4.3.3

1.3 PRE RUN REQUIREMENTS

1. Logout the application in Timna and Brisque Serve computers.
2. Move on both computers the '/etc/resolv.conf' file to '/etc/resolv.conf.org'.
3. Add on both computers the remote computer IP and name to the '/etc/hosts' local file.
4. Make a Point to Point connection with a network cross cable.

5. Use 'smitty devices' to change the Timna computer hostname to be different From the Brisque Serve computer

```
-smitty tcpip
--Further configuration
---Hostname
----set the host name
```

6. Use 'smitty devices' to change the Ethernet Adapter Media Speed to 10 MB/s

```
-smitty devices
--communication
---Ethernet Adapter-Adapter-Change
       / Show Characteristics of an Ethernet Adapter
----Media Speed- choose from list(F4) 10_HALF_DUPLEX
----Apply change to DATABASE only- (Tab) yes
----press enter and verify success, exit smitty and reboot (shutdown -Fr)
```

7. Make sure you have 'ping' between the two computers.

1.4 Running the script

1. Make sure your local machine is the 'Brisque Serve' machine and that the Application is Down.

2. Run from command line : 'ti_2_bs_ext.sh <hostname>' where hostname is the remote machine hostname - The Timna machine hostname.

1.5 Script Actions

The script use HPL (Infromix High Performance Loader) product
for high speed data migration of Timna Database to Brisque Serve Database
over the network.
The HPL product uses 'onpload' Database for predefined Jobs to Load/Unload
of tables and uses parallel 'onpload' process to do the job.
More information can be found in www-3.ibm.com/software/data/informix.

The script does the following things:

**prepares Timna environment for migration

**Finds out the dataVolumes with largest free space and use it for the data unload
**Makes sure DBAmin is in 'OFF' in Brisque Serve machine

**Recreates Brisque Serve Database without Table dependencies and Triggers

**Creates 'onpload' Database on Timna machine and loads it with All the Unload Jobs Information

**Creates 'onpload' Database on Brisque Serve machine and loads it with All the load Jobs Information

**Handles file names in Timna DB that ends with backslash (\) character by replacing them to an ampersand character (&) - see Reference in 'APPENDIX - Known Problems'

**Changes Timna and Brisque Serve Database server resources to be adequate for

Unload/Load process

**Uses parallel several 'onpload' processes to migrate Timna Database to Brisque Serve Database

**Returns Timna Database server resources

**Changes Brisque Serve Database server resources to be adequate for update DB structure

**Creates in Brisque Serve Database the table dependencies and Triggers

**updates station name

**Upgrades DB structure

**Drops 'onpload' Database on Timna and Brisque Serve machines

**Returns Brisque Serve Database server resources

1.6 Monitoring the process

Once the script is running it is possible to monitor the script progress in '/scitex/version/logs/ti_2_bs_ext.log' log file using 'tail -f /scitex/version/logs/ti_2_bs_ext.log'.

The data transfer rate through the network can be monitor by using 'topas'.
The tables load progress can be watched by '/tmp/**_TABLE_NAME.log' file, for example 'tail -f /tmp/DE_location.log'.

1.7 ATP

Make the following checks in Timna and Brisque Serve machine, the output result should be the same:

```
oncheck -pt directmgr:files |grep rows
oncheck -pt directmgr:media |grep rows
```

1.8 Post migration steps

Move on both computers "/etc/resolv.conf.org" file to "/etc/resolv.conf".

Change back the Ethernet Adapter Media Speed to value prior to migration.
Reboot the system (shutdown -Fr).
Start the Brisque Serve application.

1.9 APPENDIX

1.9.1 Known problems

** Floating point differences.

** When migrating files with file_name that ends with '\' the migration fails -
  The work around is to change their name by replacing the '\' character with '&'
character.

1.9.2 How the script uses the onpload

The script uses HPL (Infromix High Performance Loader) product
for high speed data migration of Timna Database to Brisque Serve Database
by the network.
The HPL product use 'onpload' Database for predefined Jobs for Load/Unload
of tables and use a parallel 'onpload' process to do the job.
More information on this product can be found in www-3.ibm.com/software/data/informix
The script does the following things:
The script runs from Brisque Serve machine and uses remote shell command
to invoke Unload process in Timna machine and at the same time invoke
Load process in The Brisque Serve machine. data is transferred via the Network.
The average transfer rate speed is 1 Mega/byte per second.
The script also determines the number of parallel process and buffers size to be
used on each side.

1.9.3 Troubleshooting

1. Problem - Unexpected error - you need to rerun the migration process again
   Remedy - (a) Reboot the Timna and Brisque Serve computers
            (b) Use scismit database Initial configuration in Brisque Serve
                        computer to recreate the database
            (c) run the migration script again

2. **Return the Timna DB config if the pre step fails**

The "ti_2_bs_pre.sh" changes the DB config condition for migration pre step best use.
If the script fails then this will return DB config to initial condition:

```
#make sure informix DB is down
onmode -kuy


#return original DB config
cp $INFORMIXDIR/etc/onconfig.mig  $INFORMIXDIR/etc/onconfig
cp $INFORMIXDIR/etc/sqlhosts.mig  $INFORMIXDIR/etc/sqlhosts
```

2. Internal migration

2.1 OVERVIEW

The purpose of these release notes is to ease your way and clarify things
when you use the ti_2_bs_pre.sh and ti_2_post.sh scripts for Informix database
migration on Local computer.
This file also describes the techniques features.

2.2 MIGRATION TESTING

The migration script have been tested with the following :

Module	Script	Database	OS
Timna	ti_2_bs_pre.sh	Informix IDS 7.30.UC3	AIX 4.2.1
Brisque serve	ti_2_bs_post.sh	Informix IDS 9.21.UC2	AIX 4.3.3

2.3 PRE RUN REQUIREMENTS

Logout Timna application.

The ulimit file size is set to unlimited:
chuser fsize=-1 root
shutdown -Fr

Run the scripts as 'root'

2.4 Running the scripts

The local migration is based on two serial steps
1. Run from command line (Timna): 'ti_2_bs_pre.sh'
2. Run from command line (Brisque Serve) : 'ti_2_bs_post.sh'

2.5 Scripts Actions

2.5.1 ti_2_bs_pre.sh

The script checks for existing enough disk free space on file systems for
database download and finds out the dataVolumes with largest free space and use it
for the data unload.
The script than creates special directory in this file
system called "ti_2_bs_save_place_for_db" and use HPL (Infromix High Performance
Loader) product for high speed data migration of Timna Database to files in
this location.
The HPL product uses 'onpload' Database for predefined Jobs to Unload
of tables and uses parallel 'onpload' process to do the job.
The predefined jobs download files location is /tmp, and the script in charge of
creating symbolic link to the dynamic download location save place.
More information on HPL product can be found in www-3.ibm.com/software/data/informix.
The script does the following things

**Makes sure Application is in down

** Start Informix server

** Check for enough disk free space on specific file system

** Change Informix server resources for Unload process

** Creates 'onpload' Database on Timna machine and loads it with All the Unload

Jobs Information

** Handles file names in Timna DB that ends with backslash (\) character by replacing them to an ampersand character (&) - see Reference in 'APPENDIX - Known Problems'

** Uses parallel several 'onpload' processes to migrate Timna Database to file system

** Returns Database server resources
Our estimation is that it takes ~5 hours for 1 million files Db

2.5.2 ti_2_bs_post.sh

NOTE: The empty DB must be initialized on the dedicated DB disk PRIOR to running this script !!
The script load the files that were downloaded by the ti_2_bs_pre.sh into "ti_2_bs_save_place_for_db" directory into the Database and complete the local migration process.
The load is done using the Informix HPL, The HPL product uses 'onpload' Database for predefined Jobs to load of tables and uses parallel 'onpload' process to do the job.

The script does the following things

**Makes sure DBAdmin is in down
**Identifies the dataVolumes with the unload data on it.

**Starts Informix server

**Creates destination directmgr DB with no table dependencies and triggers

**creates onpload DB - for Informix HPL

**Creates onpload data

**Loads data to onpload DB

**Changes Informix server resources for HPL

**Migrates tables from file system using delimited HPL jobs

**Migrates tables from file system using no conversion HPL jobs

**Changes Informix server resources for update DB structure

**Builds directmgr DB tables dependencies and triggers

**Upgrades destination DB structure

**Returns destination Informix server resources

2.6 Monitoring the process

2.6.1 ti_2_bs_pre.sh

Once the script is running it is possible to monitor the script progress in '/scitex/version/logs/ti_2_bs_pre.log' log file using 'tail -f /scitex/version/logs/ti_2_bs_pre.log'.
The tables load progress can be watched by '/tmp/**_TABLE_NAME.log' file

2.6.2 ti_2_bs_post.sh

Once the script is running it is possible to monitor the script progress in '/scitex/version/logs/ti_2_bs_post.log' log file using

'tail -f /scitex/version/logs/ti_2_bs_post.log'.
The tables load progress can be watched by '/tmp/**_TABLE_NAME.log' file

2.7 ATP

========

2.7.1 ti_2_bs_post.sh

Make the following checks keep the result for end of post stage, the output result should be the same:

```
oncheck -pt directmgr:files |grep rows
oncheck -pt directmgr:media |grep rows
```

2.8 APPENDIX

2.8.1 Known problems

**Floating point differences.

**When migrating files with file_name that ends with '\' the migration fails - The work around is to change their name by replacing the '\' character with '&' character.

2.8.2 II. Limitations

The scripts will fail to migrate if "files" table size is more than 30GB