Informix Re-Org Activity

Notes :
=====
dbexport location : /tmp/informix/REORG
Use ss to check what instance is currently set .

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Available space for reorg saftey backup on adevas3s and adeoas01s
==========

adevas6s
======
$ hostname
adevas6s
$ pwd
/user
adbm@adevas6s:/user> df -kh .
Filesystem   size   used avail capacity Mounted on
rpool/users   33G   20G   13G   62%   /user

$

Keep the backup at this location

$ pwd
/user/informix/REORG_BACKUP_14072019
$

adeoas01s
========
adbm@adeoas01s:/home/adbm> hostname
adeoas01s
adbm@adeoas01s:/home/adbm> pwd
/home/adbm
adbm@adeoas01s:/home/adbm> df -kh .
Filesystem   Size Used Avail Use% Mounted on
/dev/md/dsk/d107   20G 8.9G   11G 46% /export/home/adbm
adbm@adeoas01s:/home/adbm>

dakota3
======
adbm@dakota3:/adbm/dumps/INFORMIX> df -kh .
Filesystem   Size Used Avail Use% Mounted on
10.132.37.16:/vfde/tq4/db_dumps
                       1.8T 1.5T 351G 81% /adbm/dumps

adbm@dakota3:/adbm/dumps/INFORMIX> ls -ltr
total 20
-rw-r--r-- 1 adbm adbm   0 Jul 12 2019 abc.t
drwxrwxr-x 9 adbm adbm 4096 Jul 19 2020 rataktp1_vm
drwxrwxr-x 4 adbm adbm 4096 Jul 19 2020 rataktp4_vm
drwxrwxr-x 6 adbm adbm 4096 Jul 19 2020 rataktp2_vm
drwxrwxr-x 6 adbm adbm 4096 Jul 19 2020 ratcalp2_vm_old
drwxrwxr-x 6 adbm adbm 4096 Jul 19 2020 ratcalp2_vm

adbm@dakota3:/adbm/dumps/INFORMIX>

==========

Prepair for Reorg
==========

Timings allowed for Reorg :
---
for weekdays
=========
08:30 PM CET buisness ends ========> Start activity.
next day 08:00 AM CET buisness start =====> End activity.

for Weekends
==========
On Sunday : 05:00 AM CET Start => 08:30 IST
On Sunday : 01:00 PM CET End => 16:30 IST

##
Timings :

Date of Reorg : 27th June,2021
Timing : 03:00 AM CEST to 12:00 PM CEST
RFC : RFC-0638845
##

Few days before reorg activity
==========
3 weeks before activity Create an RFC ======> RFC-0638845

Application Team will do below things.
==========
- Write one mail to announce the outage .
Prepare steps that should be done earlier before the reorg day.
- Create job request for stopping the CSM 60 daemons (Example: Z_JRT00049945A)
- Create job request for starting the CSM 60 daemons (Example: Z_JRT00049946A)

Gathering Data
==========
informix@adetrmas:/opt/informix/reorg/scripts/scripts> ./generate_schema_files.sh

After this execute below script to Get Initial extent Next extent.
==========

Follow these setps to generate the data
---
informix@adetrmas:/opt/informix/reorg/scripts/scripts> ./get_sizes_for_Tables_main.sh
WORKDIR=/opt/informix/reorg/scripts
cat $WORKDIR/files/get_sizes_for_Tables.txt
Do text to column in seperate sheet and
Copy paste the data to this excel before the reorg.

Steps for Informix Reorg

==========

1) Ask the application team to stop all the applications and monitoring from application side .
==========
Someone from Application team should be available.

Drop mail to : DL-DE TISF_ePos_Support [ZV] - MXL TISF-ePos-Support-ZV.de@vodafone.com

- Forward service request for stopping the daemons to PMC/SMC and call the colleagues
- As user epos: Disable epos monitoring on all depop[x]ls to prevent hundreds of error messages and incident generation (touch /tmp /procmon2_epos_off)
- As user tramo: Disable VAS on all Tramo application servers (in directory /opt/tramo/d2as/bin: rm d2as_prod.exe)
- As user tramo: stop tramo monitor, otherwise it would lead to prio1 or prio 2 incident (pid=`ps –ef| grep lomonit| nawk '{ print $1 }'; kill $pid)
- As user tramo: stop statusmonitor (pid=`ps –ef| grep statusmonit| nawk '{ print $1 }'; kill $pid)
- As user tramo: Stop erni on adevas3s (in directory /opt/tramo/ernid/bin: ./ernid-rataktp1_vm.sh stop; ./ernid-rataktp2_vm.sh stop; ./ ernid-ratcalp2_vm.sh stop; ./ernid-ratcalp2_vm_import.sh stop)
- As user tramo: stop bert on adevas3s (in directory /opt/tramo/bertd/bin: ./ bert-rataktp1_vm.sh stop; ./ bert-rataktp2_vm.sh stop; ./ bert-ratcalp2_vm.sh stop)
- Check if all activate daemons are down

Deactivate all crontab jobs for user tramo on adetrmas

2) Put all four Informix Instances in Administrative mode .
==========

Switch to each instance .
---

onstat -u - also Verify the connections to the database , there should not be any connections to Informix instances .
If in above command if we find any user connection get the session id and kill the session using below command.

onstat -g ses sessionID
onmode -z session ID to kill the session in case required .
onmode -j - Only infomrmix user will be able to connect the database .

If any remaining sessions then take snaps and data .

3) DBA team to stop monitoring from Database side .
==========

cd /opt/informix/ifxmonitor/scripts
informix@adetrmas:/opt/informix/ifxmonitor/scripts> vi config_ifxmonitor.sh

#SET this VALUE is Y, to exit at anytime
DO_YOU_WANT_TO_EXIT=N

Value after change

#SET this VALUE is Y, to exit at anytime
DO_YOU_WANT_TO_EXIT=Y

Record the logging mode for the database
---
informix@adetrmas:/opt/informix/reorg/scripts/scripts> ./check_logging_mode.sh > logging_before.txt

4) Take full backup of all the 4 Informix instances.
==========

Switch to each instance before taking backup (do it one by one)
---

onbar -b -L 0 ==========> do this rataktp1_vm_vm
onbar -b -L 0 ==========> do this rataktp2_vm_vm
onbar -b -L 0 ==========> do this rataktp4_vm_vm
onbar -b -L 0 ==========> do this ratcalp2_vm_vm

5) Get the Count of records in each database for each table.
==========

informix@adetrmas:/opt/informix/reorg/scripts/scripts> ./verify_table_record.sh

Rename the file to table_record_count_before_reorg.txt
---
mv table_record_count.txt table_record_count_before_reorg.txt

8) Take an export of the data for reorg .
==========
All dbexport : dbexport -d <database_name> -ss

dbexport -d active_imp -ss

Do all the export one by one . Verify the end of dbexport.out . == > "dbexport completed"

rataktp1_vm - arsoc , erwerb , misc , subvent , subventmulti , tochgreq , tochgval
rataktp2_vm - aktiv , aktiv_imp , port_aktiv , tausch , wechsel
rataktp4_vm - benutzer , rueckmeldung
ratcalp2_vm - debitchg , port_reg , reg , reg_imp

========== rataktp1_vm ========== rataktp1_vm - arsoc , erwerb , misc , subvent , subventmulti , tochgreq , tochgval

Switch to rataktp1_vm
==========

cd /tmp/informix/REORG/rataktp1_vm/arsoc
dbexport -d arsoc -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp1_vm/erwerb
dbexport -d erwerb -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp1_vm/misc
dbexport -d misc -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp1_vm/subvent
dbexport -d subvent -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp1_vm/subventmulti
dbexport -d subventmulti -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp1_vm/tochgreq
dbexport -d tochgreq -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp1_vm/tochgval
dbexport -d tochgval -ss
Verify dbexport.out file for "dbexport completed"

Note ** Scp all the dumps to dakota3
informix@adetrmas:/tmp/informix/REORG> scp -r rataktp1_vm/* adbm@dakota3:/adbm/dumps/INFORMIX/rataktp1_vm

========== rataktp2_vm ========== rataktp2_vm - aktiv , aktiv_imp , port_aktiv , tausch , wechsel

switch to rataktp2_vm
==========

cd /tmp/informix/REORG/rataktp2_vm/aktiv
dbexport -d aktiv -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp2_vm/port_aktiv
dbexport -d port_aktiv -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp2_vm/tausch
dbexport -d tausch -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp2_vm/wechsel
dbexport -d wechsel -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp2_vm/aktiv_imp
dbexport -d aktiv_imp -ss
Verify dbexport.out file for "dbexport completed"

Note ** Scp all the dumps to dakota
informix@adetrmas:/tmp/informix/REORG> scp -r rataktp2_vm/* adbm@dakota1:/adbm/dumps/INFORMIX/rataktp2_vm

========== rataktp4_vm ========== rataktp4_vm : benutzer , rueckmeldung

cd /tmp/informix/REORG/rataktp4_vm/benutzer
dbexport -d benutzer -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/rataktp4_vm/rueckmeldung
dbexport -d rueckmeldung -ss
Verify dbexport.out file for "dbexport completed"

Note ** Scp all the dumps to dakota
informix@adetrmas:/tmp/informix/REORG> scp -r rataktp4_vm/* adbm@dakota1:/adbm/dumps/INFORMIX/rataktp4_vm

========== ratcalp2_vm ========== ratcalp2_vm : debitchg , port_reg , reg , reg_imp

cd /tmp/informix/REORG/ratcalp2_vm/debitchg
dbexport -d debitchg -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/ratcalp2_vm/port_reg
dbexport -d port_reg -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/ratcalp2_vm/reg
dbexport -d reg -ss
Verify dbexport.out file for "dbexport completed"

cd /tmp/informix/REORG/ratcalp2_vm/reg_imp
dbexport -d reg_imp -ss
Verify dbexport.out file for "dbexport completed"

Note ** Scp all the dumps to dakota
informix@adetrmas:/tmp/informix/REORG> scp -r ratcalp2_vm/* adbm@dakota1:/adbm/dumps/INFORMIX/ratcalp2_vm

9) Drop complete database.

========== rataktp1_vm ==========

login to rataktp1_vm dbaccess and switch to sysmaster database .

drop database arsoc
drop database erwerb
drop database misc
drop database subvent
drop database subventmulti
drop database tochgreq
drop database tochgval

This should be done during the reorg activity after the export is taken .

========== rataktp2_vm ==========

login to rataktp2_vm dbaccess and switch to sysmaster database .

drop database aktiv
drop database port_aktiv
drop database tausch
drop database wechsel
drop database aktiv_imp

This should be done during the reorg activity after the export is taken .

========== rataktp4_vm ==========

login to rataktp4_vm dbaccess and switch to sysmaster database .

drop database benutzer
drop database rueckmeldung

This should be done during the reorg activity after the export is taken .

========== ratcalp2_vm ==========

login to ratcalp2_vm dbaccess and switch to sysmaster database .

drop database debitchg
drop database port_reg
drop database reg
drop database reg_imp

This should be done during the reorg activity after the export is taken .

12) Import the data .
==========
This option created the database as well .

dbimport database -d dbspace ==========> You will have to specify the dbspace here .
you have to run this command from the same location where the dbexport was done

========== rataktp1_vm ==========

cd /tmp/informix/REORG/rataktp1_vm/erwerb
dbimport erwerb -d datadbs1

cd /tmp/informix/REORG/rataktp1_vm/subvent
dbimport subvent -d datadbs1

cd /tmp/informix/REORG/rataktp1_vm/subventmulti
dbimport subventmulti -d datadbs1

cd /tmp/informix/REORG/rataktp1_vm/tochgreq
dbimport tochgreq -d datadbs2

cd /tmp/informix/REORG/rataktp1_vm/arsoc
dbimport arsoc -d datadbs2

cd /tmp/informix/REORG/rataktp1_vm/misc
dbimport misc -d datadbs2

cd /tmp/informix/REORG/rataktp1_vm/tochgval
dbimport tochgval -d datadbs2

Verify the end of dbimport.out . == > "dbimport completed"

========== rataktp2_vm ==========

cd /tmp/informix/REORG/rataktp2_vm/aktiv
dbimport aktiv -d datadbs1

cd /tmp/informix/REORG/rataktp2_vm/wechsel
dbimport wechsel -d datadbs2

cd /tmp/informix/REORG/rataktp2_vm/tausc
dbimport tausch -d datadbs2

cd /tmp/informix/REORG/rataktp2_vm/port_aktiv
dbimport port_aktiv -d datadbs2

cd /tmp/informix/REORG/rataktp2_vm/aktiv_imp
dbimport aktiv_imp -d datadbs2

Verify the end of dbimport.out . == > "dbimport completed"

========== rataktp4_vm ==========

cd /tmp/informix/REORG/rataktp4_vm/benutzer
dbimport benutzer -d datadbs1

cd /tmp/informix/REORG/rataktp4_vm/rueckmeldung
dbimport rueckmeldung -d datadbs1

Verify the end of dbimport.out . == > "dbimport completed"

========== ratcalp2_vm ==========

cd /tmp/informix/REORG/ratcalp2_vm/reg
dbimport reg -d datadbs1

cd /tmp/informix/REORG/ratcalp2_vm/port_reg
dbimport port_reg -d datadbs1

cd /tmp/informix/REORG/ratcalp2_vm/debitchg
dbimport debitchg -d datadbs1

cd /tmp/informix/REORG/ratcalp2_vm/reg_imp
dbimport reg_imp -d datadbs1

Verify the end of dbimport.out . == > "dbimport completed"

13) Verify the Import .
==========

informix@adetrmas:/opt/informix/reorg/scripts/scripts> ./verify_table_record.sh

Rename the file to table_record_count_after_reorg.txt
---
mv table_record_count.txt table_record_count_after_reorg.txt

Calculate the difference in the before and after file there should be no difference.
---
diff table_record_count_before_reorg.txt table_record_count_after_reorg.txt ====== There should be no difference

15) Enable the logging mode of the database . This step is required anyways .
==========

Switch to each instance before taking backup
---

ontape -s -U <databaselist> #ontape -s -U kalu locktest stores_demo

rataktp1_vm
==========
ontape -s -U arsoc erwerb misc subvent subventmulti tochgreq tochgval

rataktp2_vm
==========
ontape -s -U aktiv aktiv_imp port_aktiv tausch wechsel

rataktp4_vm
==========
ontape -s -U benutzer rueckmeldung

ratcalp2_vm
==========
ontape -s -U debitchg port_reg reg reg_imp

16) Take full backup
==========

Switch to each instance before taking backup
---

onbar -b -L 0 ==========> do this rataktp1_vm.
onbar -b -L 0 ==========> do this rataktp2_vm.
onbar -b -L 0 ==========> do this rataktp4_vm.
onbar -b -L 0 ==========> do this ratcalp2_vm.

17) Record the logging mode for the database
---
informix@adetrmas:/opt/informix/reorg/scripts/scripts> ./check_logging_mode.sh > logging_after.txt

check the logging mode before and after the activity

informix@adetrmas:/opt/informix/reorg/scripts/scripts> diff logging_before.txt logging_after.txt

18) Follow these setps to generate the data

==========
informix@adetrmas:/opt/informix/reorg/scripts/scripts> ./get_sizes_for_Tables_main.sh
WORKDIR=/opt/informix/reorg/scripts
cat $WORKDIR/files/get_sizes_for_Tables.txt
Copy paste the data to this excel before the reorg.

19) Bring the database in online mode.
==========

Switch to each instance before executing command
---

onmode -m ==========> do this rataktp1_vm.
onmode -m ==========> do this rataktp2_vm.
onmode -m ==========> do this rataktp4_vm.
onmode -m ==========> do this ratcalp2_vm.

20) Start monitoring from and applications from Informix side .
==========

Drop an email to Application team to start applications and monitoring from their side (the order of the steps should be correct .)

21) Start the Monitoring from databse side.
==========

cd /opt/informix/ifxmonitor/scripts
informix@adetrmas:/opt/informix/ifxmonitor/scripts> vi config_ifxmonitor.sh

#SET this VALUE is Y, to exit at anytime
DO_YOU_WANT_TO_EXIT=Y

Value after change

#SET this VALUE is Y, to exit at anytime
DO_YOU_WANT_TO_EXIT=N

2**2) Sanity checks if any from application side .**
==========

Customer data query .

23) Check if functional users are connecting to the Database .

onstat -u

24) Rollback plan is to restore the database one by one .
https://www.ibm.com/support/knowledgecenter/SSGU8G_14.1.0/com.ibm.bar.doc/ids_bar_235.htm