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List of Revisions

The following table shows the list of revisions made to the Clear Data Guide document:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Revision | Release Date | Changes to Document | Author | Approved By |
| 0.2 | 8 November 2017 | First draft | Tamar Borek |  |
| 0.3 | 16 November 2017 |  | Tamar Borek |  |
| 0.4 | 19 November 2017 |  | Baruch Ostrovsky |  |
| 0.5 | 20 November 2017 |  | Baruch Ostrovsky |  |
| 1.0 | 21 November 2017 | Cassandra procedure | Baruch Ostrovsky |  |
| 1.1 | 22 November 2017 | Cassandra, Kafka, ZooKeeper procedures updated | Baruch Ostrovsky |  |

List of Revisions

# Introduction

## Purpose

This document describes how to clear all trading data from the DB to prepare the machines for migration.

## Conventions

The Conventions section describes conventions that are used in this manual.

* Bold font indicates GUI items, including things that you select or key names.

For example:

Press Enter.

* Bold italic font indicates user-defined input, such as user names and passwords.

For example:

Type <username**>** and press**Enter**.

* An arrow () outside the left margin with Bold italic Courier New fontindicates user input.

For example:

staff@HOST[N]>Input

* Bold left-indented font indicates a line that appears before a procedure.

For example:

 To edit a document:

1. Central Post Trade (CPT)

## Build Version

CPT\_2.3.0.0.1079 and up

## Stopping the CPT Application Server

The procedure phases are as follows:

1. Login to the CPT core and Tidy Servers as a **ptrade** user.
2. Execute the following stop command:

PTS/bin/service.sh stop

## Cleaning Up the Databases

The procedure phases are as follows:

1. Connect to the ptrade schema on PTDB via SQL client
2. Execute the following commands to clean up the data in the ptrade schema:

truncate table audit\_in;

truncate table fx\_ticket\_leg;

truncate table fx\_deal;

truncate table fx\_deal\_leg;

truncate table fX\_fixing\_event;

truncate table client\_ticket;

update SD\_TARGET set LAST\_Id = NULL, LAST\_SESSION = NULL, LAST\_SRC\_SESSION =

NULL, LAST\_SRC\_ID = NULL, last\_sent\_time = NULL;

commit;

## Validation steps

1. To validate the successful removal, execute the following commands in the ptrade schema:

with data\_count as (

(select 'audit\_in' as table\_name, count(\*) as records from

audit\_in ) union

(select 'fx\_ticket\_leg'as table\_name, count(\*) as records from fx\_ticket\_leg) union

(select 'fx\_deal' as table\_name, count(\*) as records from fx\_deal) union

(select 'fx\_deal\_leg' as table\_name, count(\*) as records from

fx\_deal\_leg) union

(select 'fX\_fixing\_event'as table\_name, count(\*) as records from fX\_fixing\_event ) union

(select 'client\_ticket' as table\_name, count(\*) as records from client\_ticket) )

select table\_name, decode(records,0,'OK','Failed, '||records||' records found')

is\_clean

from data\_count ;

1. If the result for each table is “OK” then the removal went successfully.
   1. Starting the CPT Application Server

The procedure phases are as follows:

1. Login to the CPT core and Tidy Servers as a **ptrade** user.
2. Execute the following stop command:

PTS/bin/service.sh start

1. MARKET DATA SERVICE
   1. Build Version

MDS\_MAIN\_1.0.377.0 and up

* 1. Stopping MDS

The procedure phases are as follows:

1. Remotely login (via ssh) to the MDS machine as **mds** user with password “mds1”.
2. Execute the following command to stop the MDS service:

sudo service MDS stop

1. Execute the following command to stop the MDS application:

/export/home/mds/MDS/bin/service.sh stop

* 1. Removing Previous States

The procedure phases are as follows:

1. Execute the following commands to delete the previous states:

rm –f /export/home/mds/MDS/states/\*

1. To validate the successful removal execute the following command:

ls -lA /export/home/mds/MDS/states/\*.state | wc -l

1. If the result of this command is “0” then the removal went successfully
   1. Post Cleanup

The procedure phases are as follows:

1. Upgrade the MDS if necessary.
2. Execute the following command to start the MDS service:

sudo service MDS start

1. CrEdiT MAnAgER
   1. Build Version

CM creditapp 3.1.12

* 1. Stopping CRM

The procedure phases are as follows:

1. Remotely login (ssh) to all CRM machines (also on DR sites) as a **crm** user.

cd to ~/crm\_install

1. stop crm process from crmmenu - stopcrm
   1. Clearing Script

The procedure phases are as follows:

1. The purge scripts are available under **crm\_install/tools** directory.

🡆 To clear the script:

The procedure phases are as follows:

1. cd to **~/crm\_install/tools**
2. Execute the script: CleanupForDay1.bash
3. Should be run on all CM instances on all DR sites
4. Output of the script is logged in:

~crm/crm\_install/logs/CleanupForDay1.log

* 1. Post Cleanup

The procedure phases are as follows:

* 1. validations:

To validate the successful removal execute the following command:

1.

select count(\*) from TRADE;

select count(\*) from TRADE\_VIEW;

select count(\*) from UTILIZATION\_REQUEST;

select count(\*) from UTILIZATION\_LEG;

select count(\*) from NAME\_VALUE\_TRANSINFO;

select count(\*) from REJECTED\_UTILIZATION\_REQUEST;

select count(\*) from FIXING\_TRADE\_MEMENTO;

select count(\*) from TMP\_UTIL\_REQUEST\_PURGE;

**results should be 0**

2. verify all POSITION tables:

run the attached script in sqlplus:



the result of this sql should be:" all tables are empty!"

1. Start CRM on all machines:
2. Remotely login (ssh) to the CRM machine as an **crm** user.
3. cd to ~/crm\_install.
4. Start crm process from crmmen- startcrm
5. Broker
   1. Build Version

10-1-2 and up

* 1. Stopping Broker

The procedure phases are as follows:

Remotely login (ssh) to the Brokernet machine as **brokernet** user.

#!/bin/sh

service tomcat-brokernet stop

* 1. Clearing Script

The procedure phases are as follows:

1. Truncate table **StpTickets**
2. Truncate table **PrimeBrokerDealsMapping**
3. Truncate table **Deals**
4. The script is available under:

"~/ebs/broker/tools/" directory.

1. Execute the script:

~/ebs/broker/tools/bn-master-exec.pl exeDbClearDeals

* 1. validations

To validate the successful removal execute the following command:

select count (\*) from StpTickets;

select count (\*) from PrimeBrokerDealsMapping;

select count (\*) from Deals;

all results should be 0

* 1. Post Cleanup

The procedure phases are as follows:

1. Restart Broker
2. Start Brokernet process - Remotely login (ssh) to the Brokernet machine as an **brokernet** user:

#!/bin/sh

service tomcat-brokernet start

1. XBS & SOLACE
   1. Build version

xbs\_2.0.33.0

* 1. Stopping XBS

The procedure phases are as follows:

1. Remotely login (ssh) to the XBS machine on all sites, including DR, as **root** user:
2. Execute the following command to stop the XBS:

sudo service xbsService stop

* 1. Clearing Solace Trades Durable Queue

The procedure phases are as follows:

1. The script will delete all messages that still spooled on DurableQueues (E1 prefixed – managed by solvpenv).
2. The script is located on "SolVPenv" machine.
3. Note: VPN\_name can be taken from CC
4. Script and its input:

/export/home/solmon/app\_solvpenv/bin/sv\_clean\_trading\_data.sh <VPN name>

*Example: to clean trading data on VPN\_SHA run the following:*

/export/home/solmon/app\_solvpenv/bin/sv\_clean\_trading\_data.sh VPN\_SHA

1. Verify that Solace queue were cleared:

Connect to the Solace machine with CLI user (can be different between environments):

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solace>

* Run "no paging"
* Run " show queue \* message-vpn <VPN> "

e.g.:

solace> no paging

solace> show queue \* message-vpn VPN\_SHA

* Look at "Messages Spooled" column – should be equal to 0
  1. Clearing XBS DB

The procedure phases are as follows:

1. Connect to XBS scheme

Login to RDB machine

Connect to the XBS scheme - Run: "sqlplus <user>/<password>@<SID>"

1. Run a procedure named "XBS\_CLEANUP" to truncate all relevant tables.

A manual execution is needed - "exec XBS\_CLEANUP" from SQL client or JDBC.

1. Run on all sites, including DR
   1. Post Cleanup

The procedure phases are as follows:

1. In the XBS scheme, verify that the relevant tables were truncated successfully (count should be 0):

select count(\*) from DEALS;

select count(\*) from INCOMING\_SOLACE\_MESSAGES;

select count(\*) from ORDERS;

select count(\*) from OUTGOING\_SOLACE\_MESSAGES;

1. Verify that the Solace queues were cleared successfully:

Login to SolAdmin  EndPoints tab  "Durable Queues" view.

Filter by Message VPN.

Verify that "Messages Spooled" is equal to 0 for all topics.

1. Remotely login (ssh) to the XBS machine on all sites, including DR, sites as an "root" user.
2. Execute the following command to launch XBS:

sudo service xbsService start

1. KAFKA & CS TOOLS
   1. build version

kafka:

0-90-20-0, spec 1.0.0.34 and up

zookeeper:

3.48.31, spec 1.0.0.33 and up

For earlier versions, please find instructions in section 7.2

* 1. PRe clean-up steps

1. If the versions are correct (section 7.1), please proceed to the next section. In case of earlier versions run the following steps:

* Copy "kafka\_zookeeper.tar.gz" to any Kafka machine (Unlike in Cassandra, all Kafka servers will be accessed via single script) under: /export/home/kafka/app\_kafka09/bin/
* Extract the archive: run "tar –zxvf kafka\_zookeeper.tar.gz"
* After the archive is extracted, make sure this script is executable:

Run "chmod +x /export/home/kafka/app\_kafka09/bin/cluster.sh"

* Modify cluster.env and enter all relevant IPs and passwords (Kafka & Zookeeper):

set ::kafkaHosts [list "kafka@172.19.192.231" "kafka@172.19.192.232"]

set ::kafkaPwd kafka1\r

set ::zookeeperHosts [list "zookeeper@172.19.192.231" "zookeeper@172.19.192.232"]

set ::zookeeperPwd "zookeeper1\r"

* 1. Stopping Kafka and Zookeeper and clearing the data

The procedure phases are as follows:

1. Login to Kafka machine with user **kafka**
2. Execute the following command to stop all Kafka and Zookeeper services and clear the data:

in the kafka machine run the following script:

/export/home/kafka/app\_kafka09/bin/cluster.sh cleanData

after clean the data run:

/export/home/kafka/app\_kafka09/bin/cluster.sh start

* 1. validations

to verify the data cleaning:

kafka:

go to /export/home/kafka/data\_kafka09

the directory should be empty

zookeeper:

/export/home/zookeeper/zkdata\_3\_4/version-2

/export/home/zookeeper/zklogdata\_3\_4/version-2

the 2 directories should be empty

* 1. Clearing DB Schemas

Before starting with clear data scripts, stop all DB producers (Iris and RDS):

Iris:

sudo service iris stop

RDS:

sudo service rds stop

* 1. Clearing NLNK

The procedure phases are as follows:

1. Connect to RDB machine with **oracle**user
2. Go to the following path: cd /export/home/oracle/nlnk\_db/sql/5.0/various
3. Run the following command: sqlplus

'NLNK/NLNK@(DESCRIPTION=(ADDRESS\_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=<HOST>)(PORT=1521)))(CONNECT\_DATA=(SERVER=DEDICATED)(SID=NLNK)))'

1. At SQL plus run: @./purge\_trading\_data.sql;
2. Wait until script will finish its run; make sure that no errors are printed. The following message should appear at the end of the script:

\* Purging Trading info on schema NLNK - End \*

1. Go to the schema using SQL developer and make sure that the following tables were cleared:

## select count (\*) from ARB\_QTE\_MESSAGES ;

## select count (\*) from BRK\_QTE\_MESSAGES ;

## select count (\*) from CHECKPOINT ;

## select count (\*) from DEAL\_MESSAGES ;

## select count (\*) from FIX\_LIST ;

## select count (\*) from FIX\_RATE ;

## select count (\*) from FLOOR\_ACTIVITY ;

## select count (\*) from MIFID\_EBSM\_ORDER\_ENTRY\_FIELDS ;

## select count (\*) from NRM\_RATE\_MESSAGES ;

## select count (\*) from OB\_SNAPSHOT\_DETAIL ;

## select count (\*) from OB\_SNAPSHOT\_MAIN ;

## select count (\*) from SI\_DETAIL ;

## select count (\*) from SI\_MAIN ;

## select count (\*) from TDL\_UPDATE\_MESSAGES ;

## select count (\*) from TICKS ;

## select count (\*) from MISSING\_TICKETS ;

## select count (\*) from RECOVERY\_LOG ;

## select count (\*) from RECOVERY\_TIME ;

all the results should be 0

## Clearing EBSD4CS

The procedure phases are as follows:

1. Connect to RDB machine with **root** user
2. Go to the following path: cd /export/home/oracle/ebsd4cs\_db/sql/2.0/var
3. Run the following command: sqlplus

'EBSD4CS/EBSD4CS@(DESCRIPTION=(ADDRESS\_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=172

.19.192.55)(PORT=1521)))(CONNECT\_DATA=(SERVER=DEDICATED)(SID=NLNK)))'

1. At SQL plus run: @./purge\_trading\_tables.sql;
2. Wait until script will finish its run, make sure that no errors are printed. The following message should appear at the end of the script:

\* Purging Trading info on schema EBSD4CS - End \*

1. Go to the schema using SQL developer and make sure that the following tables were cleared:

* select count(\*) from HIT\_MESSAGES\_LP\_D;
* select count(\*) from HIT\_MESSAGES ;
* select count(\*) from INTERACTIONS ;
* select count(\*) from INTERACTIONS\_SNAPSHOT\_CREDIT\_D ;
* select count(\*) from INTERACTIONS\_SNAPSHOT\_CREDIT\_O ;
* select count(\*) from INTERACTIONS\_SNAPSHOT\_CREDIT\_U ;
* select count(\*) from INTERACTIONS\_SNAPSHOT\_ENT\_D ;
* select count(\*) from INTERACTIONS\_SNAPSHOT\_ENT\_O ;
* select count(\*) from INTERACTIONS\_SNAPSHOT\_ENT\_U ;
* select count(\*) from INTERACTIONS\_SNAPSHOT\_MAIN ;
* select count(\*) from LC\_ENTITLEMENTS\_DETAIL ;
* select count(\*) from LC\_ENTITLEMENTS\_MAIN ;
* select count(\*) from LC\_PREFERENCES\_DETAIL ;
* select count(\*) from LC\_PREFERENCES\_MAIN ;
* select count(\*) from LP\_CREDIT\_DETAIL ;
* select count(\*) from LP\_CREDIT\_MAIN ;
* select count(\*) from LP\_ENTITLEMENTS\_DETAIL ;
* select count(\*) from LP\_ENTITLEMENTS\_MAIN ;
* select count(\*) from LP2LPA\_EXECUTION\_REPORT ;
* select count(\*) from LPA2LP\_NEW\_ORDER\_SINGLE ;
* select count(\*) from LPM\_ENTITLEMENTS\_DETAIL ;
* select count(\*) from LPM\_ENTITLEMENTS\_MAIN ;
* select count(\*) from MATCH\_OB\_SNAPSHOT\_DETAIL ;
* select count(\*) from MATCH\_SOR\_SMALL\_NOS\_DETAIL ;
* select count(\*) from MATCH\_SOR\_MAIN ;
* select count(\*) from NOS\_DATA ;
* select count(\*) from NOS2LP\_DETAILS ;
* select count(\*) from NOS\_SOR2LPA ;
* select count(\*) from ORD\_MASS\_CNCL\_REQ\_MRKT\_SGMNT\_D ;
* select count(\*) from ORD\_MASS\_CNCL\_REQ\_ORD\_ID\_D ;
* select count(\*) from ORD\_MASS\_CNCL\_REQ\_SCRTY\_D ;
* select count(\*) from ORD\_MASS\_CNCL\_REQ\_SCRTY\_TYPE\_D ;
* select count(\*) from ORDER\_CANCEL\_REJECT ;
* select count(\*) from ORDER\_CANCEL\_REQUEST ;
* select count(\*) from ORDER\_MASS\_CANCEL\_REPORT ;
* select count(\*) from ORDER\_MASS\_CANCEL\_REQUEST ;
* select count(\*) from RECORDED\_EXEC\_ACK ;
* select count(\*) from RECORDED\_EXECUTION\_REPORT ;
* select count(\*) from RECORDED\_NEW\_ORDER\_SINGLE\_LP\_D ;
* select count(\*) from RECORDED\_NEW\_ORDER\_SINGLE ;
* select count(\*) from RFQ\_MATCH\_ATTEMPT\_SNAP\_DETAIL ;
* select count(\*) from RFQ\_MATCH\_ATTEMPT\_MAIN ;
* select count(\*) from RFQ\_MD\_STARTED ;
* select count(\*) from RFQ\_QUOTE\_CANCEL ;
* select count(\*) from RFQ\_QUOTE\_REQUEST\_LP\_D ;
* select count(\*) from RFQ\_QUOTE\_REQUEST ;
* select count(\*) from RFQ\_QUOTE\_REQUEST\_REJECT ;
* select count(\*) from RFQ\_TRADABLE\_PARTIES ;
* select count(\*) from TRADE\_CAPTURE\_REPORT\_RECORDS ;
* select count(\*) from ACTIVE\_ORDERS ;
* select count(\*) from ORDER\_STATUS\_EXT\_SMALL ;
* select count(\*) from ORDER\_STATUS\_EXT;

all the results should be 0

* 1. Post Cleanup

The procedure phases are as follows:

1. Login to Kafka machine with user **kafka**
2. Verify that the data files were removed:

Zookeeper:

/export/home/zookeeper/zkdata\*/version\*/\*

(e.g. /export/home/zookeeper/zkdata\_3\_4/version-2/)

/export/home/zookeeper/zklogdata\*/version\*/\*

(e.g. /export/home/zookeeper/zklogdata\_3\_4/version-2/)

KAFKA:

/export/home/kafka/data\_kafka09/\*

1. Execute the following command to start all Kafka and Zookeeper services:

cd /export/home/kafka/app\_kafka09/bin

./cluster.sh start

1. Start DB producers (Iris and RDS):

Iris:

sudo service iris start

RDS:

sudo service rds start

1. Cassandra
   1. build version

1.0.12.0 and up

For earlier versions, please find instructions in section 7.2

* 1. Pre Clean-up steps

1. If the version is 1.0.12.0 and up, start the procedure from step 2. In case of earlier versions run the following steps:

* cluster.sh – script to be installed on every Cassandra machine. copy "cassandra.tar.gz" to: /export/home/cassandra/cluster/Cassandra/
* Extract the archive: run "tar –zxvf cassandra.tar.gz"
* After cluster.sh is extracted, change it to executable: run "chmod +x cluster.sh"
* cluster.sh is using cqlsh (Cassandra command line tool) located here:

/export/home/cassandra/cluster/1/bin/cqlsh

Before running cluster.sh make sure /export/home/cassandra/cluster/1/bin/cqlsh is executable. Change it to executable, if needed:

run "chmod +x export/home/cassandra/cluster/1/bin/cqlsh"

2. Verify that Cassandra is running on both cluster machines:

* Run on both machines: "/export/home/cassandra/cluster/cassandra/cluster.sh status"
* Verify that the cluster is up:

We are \*\*\*DONE\*\*\*

Note, you have a full log of this process in

/home/cassandra/cluster/start-util/logs

Utility wiki published here, use it to understand the process

https://icapebs.atlassian.net/wiki/pages/viewpage.action?pageId=148537372

Troubleshooting information collected here

https://icapebs.atlassian.net/wiki/display/CSTG/Cassandra+troubleshooting+and+maintenance

**Cluster is UP.**

* In case there are nodes which are not running, run: "/export/home/cassandra/cluster/Cassandra/cluster.sh start"
* Note that the cluster must be up in order to run the clean up

2. Verify that the rest of the system is stopped (to prevent new entries during the clean-up)

* 1. Clearing data

1. Run: "/export/home/cassandra/cluster/cassandra/cluster.sh cleanData"

the script will clean all data in the following Cassandra tables: **ems\_md\_esp\_var01, mbr\_main\_messages, rfq\_raw\_messages\_var01**

Note - you will get the following error: "InvalidRequest: code=2200 [Invalid query] message="unconfigured table user" – it's OK, this table should no exist

2. In case one of the machines is down when running the script, you will get an error:

"Error during truncate"

3. Verify that the tables were cleared:

* cd /export/home/cassandra/cluster/cassandra/arc/bin
* Run "cqlsh <Cassandra\_IP\_Address>" to connect to the DB:

Connected to EBS at <Cassandra\_IP\_Address>.

[cqlsh 5.0.1 | Cassandra 3.7 | CQL spec 3.4.2 | Native protocol v4]

Use HELP for help.

cqlsh>

* Run "select count(\*) from keyspace1\_sh.[table\_name]" and verify that the count is equal to '0' in each table:
* select count(\*) from keyspace1\_sh.ems\_md\_esp\_var01;
* select count(\*) from keyspace1\_sh.mbr\_main\_messages;
* select count(\*) from keyspace1\_sh.rfq\_raw\_messages\_var01;
* ems\_md\_esp\_var01 & mbr\_main\_messages are Market Data tables, so they will fill up quickly in case Market Data is streamed in the system.

Contact

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