24-01-2021: Finish ACS/NT/ZeroMQ presentation.

- Translate presentation to english.
- ZeroMQ brief description.
- Prepare new version of initial presentation, read about ZeroMQ sockets and patterns.

25-01-2021:

- Testing, read code, comment features of functions and MACROs.
- Read about TAO and ACE framework.
- VM issues, tests failed. (Some ACS directories deleted)

[26-01-2021 ; 27-01-2021]:

- None already-made test of ACS/BulkDataNT repository works.
- Read API documentation(API Docs).
- Comment code and learn about functions and Classes used in Test N°1 "SenderReceiverTest". Done!
- If arguments of test executable are changed, process throw ERROR.
- If ACS process is stoped(Ctrl + C), may generate ERROR with ACS instances. "acsdataClean -all" and "killACS" commands work only sometimes.
- JorgeSep gives me TAT documentation. (IntGuidelines.pdf)

[28-01-2021 ; 29-01-2021]:

- Change simple Receive and Sender Test(bdNTReceiverTest - bdNTSenderTest) for add more flows.
- Compile without errors and warnings.
- Test just works with one flow like original test.
- Problemas with CBD and others files in new test execution.

31-01-2021:

- Test code with six flows edited and it works!
- Prepare advances presentation of week two.

01-02-2021:

- Read and understand others Test of ACS/BulkDataRepository
- Read TAT documentation.

02-02-2021:

- Summary updated (ACS/BulkDataNT Summary (TAT summary added))
- Hardcoding erased and test code its now general.
- Create repository with BDNT tester (BulkDataNT_Tester)

03-02-2021:

- Install dependencies for ZMQ in RHEL7 machine(Founded in opensuses.org repositories, link in references):

1. libzmq (Dependencies) libbsd - libpgm - libsodium.
2. zmq-devel (Dependencies) gnutls-devel(yum) - nss-devel(yum) - libbsd-devel - libpgm-devel - libsodium-devel.
3. protobuf-compiler and protobuf-devel (yum).

- ACSflix compiled and ready for testing.

[04-02-2021 - 05-02-2021]:

- Study ACSflix code.
- Make ACSflix summary.

07-02-2021:

- Prepare Monday presentation.

[08-02-2021 ; 09-02-2021]:

- Read ZMQ docs and source code.
- Read ACSflix source code.
- Work with worker testing.
- Worker test code finished(for now).

10-02-2021:

- Work in Sender test.
- Understand ZMQ sender paradigm.

11-02-2021:

- Multiple flows send and receive data. Test works!

12-02-2021:

- Read others test and try to implement multiple Streams.
- Working in new BulkDataZMQ implementation.

14-02-2021:

- Prepare Last week advances presentation.
- Prepare ALMA summer job workers presentation.

15-02-2021:

- Compare performance between ZMQ and NT with multiple flows and data size Test.

16-02-2021:

- Implement ZMQ comunication using PGM protocol. (Testing not working in same machine. I need to try with 2 different machines.)

[17-02-2021 ; 18-02-2021]:

- Return to read ACS BulkDataTranfer documentation.
- Understand Makefile and IDL files.
- Try to implement BulkDataZMQ.

18-02-2021:

- Makefile now is working.
- Change names of classes and everything that not have sense in ACS/BulkData context. (Not finished, still get "Undefined references" but not of ZMQ).
- Working on BDZMQ and his structure.

19-02-2021:

- Files modified and Study BDNT with its ACS inheritance.
- Where can i include headers files?, Makefile throw "Undefined reference" with BulkDataZMQ headers files.
- Monday presentation with PGM summary.

[20-02-2021 ; 21-02-2021]:

- Makefile linking issues solved.
- Implement BulkDataZMQ Class.
- Implement startSend, stopSend, sendData metods.
- BDZMQ Sender test modified and compiled.

22-02-2021:

- Working in implementation of BDZMQ.
- Class diagram of actual BDZMQ implementation(BDZMQ_Class_Diagram, just structure and entities names).

[23-02-2021 ; 24-02-2021]:

- I decided keep BDZMQSenderImpl class because inherit of POA::BDSender and baci::CharComp, but for now BDZMQSender not inherit of that because baci::CharComp need inicializated static atributtes and demands me to use some constructors that must carry for all code, not a problem but does not look tidy. In other way, NTSender does not inherit from NTSenderImpl, in fact never is used. I think that NT needs ACS for working because they implemented many functions in theirs code, like ACS_LOGS() and others that not have essential use, also NT use baci and maci clients that needs ACS.
- BDZMQSender classes and test finished.

[25-02-2021 ; 26-02-2021]:

- BDZMQSenderImpl needs ACS linker libraries that i do not know. I comment the code that implement this class as inherit class of BDZMQSender.
- Class diagram updated.
- BDZMQReceiver classes and test implemented and working.

[01-03-2021 - 05-03-2021]:

- Debugging of Receiver test. Errors and incongruences fixed.
- Return to PGM and its implementation.
- Modify some fuctions(different classes) and make it more generic.
- Modify a little bit the test files for PGM implementation.
- PGM does not work(Sender was sended data but receiver does not received).
- Return to TCP implementation.
- Found new Errors and incongruences, never seen before. Fixed.
- Modify test file for TCP implementation. Test works perfectly, all data it is received and saved in txt file.
- Return to PGM with new fixed code.
- PGM implementation still does not work.
- Return to TCP and performace test with NT concluded.

[06-03-2021 ; 07-03-2021]:

- Prepare presentation.

[08-03-2021 ; 11-03-2021]:

- All code was documented.

[12-03-2021]:

- README.md with indications of dependencies and how run tests.

[15-03-2021]:

- BulkDataNT test README.md is done.
- Prepare final presentation.
- Class diagram updated.

[16-03-2021]:

- Final presentation.