



NOTIFICATION CHANNEL REPLACEMENT

INITIAL PRESENTATION



Catalina Pezo Vergara
Supervisor Jorge Avarias
Summer Students Program 2021
January 26th, 2021



OVERVIEW

1. Problem
2. Background: Previous work with DDS implementation
3. Possible options for replacement
4. Chosen solution and approach
 - a. Activities chronogram
5. Expectations and final thoughts



PROBLEM

- ★ Obsolescence of current technology CORBA, used in ACS.
 - ★ Notification Channel.



PROBLEM

Objective: Find a replacement for the notification channel. Move away from CORBA while keeping in place the current API provided by Common Software.

BACKGROUND

- ★ Data Distribution Service (DDS) as an alternative to CORBA Notify Service.
- ★ Problems:
 - ★ Handling of event objects.
 - ★ Python not supported.

SUITABLE OPTIONS FOR REPLACEMENT

- ★ ActiveMQ
- ★ RabbitMQ
- ★ Kafka
- ★ Pulsar
- ★ ZeroMQ

The ZeroMQ logo consists of the text "ØMQ" in a bold, red, sans-serif font. The "Ø" is a red circle with a diagonal slash through it. The logo is centered within a white rounded rectangle with a red border.

ØMQ

The Pulsar logo features a blue stylized wave icon to the left of the word "PULSAR" in a grey, sans-serif font. The logo is centered within a white rounded rectangle.

PULSAR



CHOSEN SOLUTION



ABOUT ACTIVEMQ

- ★ Open source, multi-protocol, Java-based messaging server.
- ★ Connectivity from C, C++, Python.
- ★ Supports different protocols.
- ★ Two versions: ActiveMQ Classic and Artemis.

ΔΡΡΡΟΔΗ

- ★ Initial study of current software and technology.
- ★ Design.
- ★ Implementation:
 - ★ Language: C++.
 - ★ Maintain current API.
- ★ Testing.
- ★ Results and documentation.



CHRONOGRAM

	Week 1 Jan 18-22	Week 2 Jan 25-29	Week 3 Feb 1-5	Week 4 Feb 8-12	Week 5 Feb 15-19	Week 6 Feb 22-26	Week 7 Mar 1-5	Week 8 Mar 8-12
<i>Formulate Plan of Action</i>	Active							
<i>Get to know ACS and Notification Channel</i>	Active	Active						
<i>Learn about ActiveMQ</i>	Active	Active						
<i>Design and planification of implementation</i>	Active	Active						
<i>Implement Replacement</i>			Active	Active	Active	Active		
<i>Testing</i>						Active		
<i>Results and Corrections</i>						Active	Active	
<i>Documentation and Report</i>							Active	Active

The background is a dark blue and purple space-themed illustration. It features several celestial bodies: a ringed planet (like Saturn) in the upper left, a cratered moon-like sphere in the middle left, and a striped planet (like Jupiter) in the lower right. The space is filled with numerous small white stars and larger, four-pointed starburst shapes. There are also soft, wavy nebula-like shapes in shades of blue and purple.

THOUGHTS AND EXPECTATIONS

- ★ Hard work and a lot of learning
- ★ Gain experience
- ★ Make a contribution to the scientific community

A vibrant space-themed background with a dark blue and purple gradient. It features several celestial bodies: a large planet with horizontal stripes in the top left, a smaller planet with a ring in the top center, and a cratered moon in the bottom right. An astronaut in a white suit is floating in the lower left, holding a tether. The background is filled with numerous white stars of varying sizes and soft, glowing nebulae in shades of purple and teal.

QUESTIONS, IDEAS OR
SUGGESTIONS