#innovacion #ayudascdti #asesoramiento #internacionalizacion





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# Agenda



- Introduction
- Objectives
- Functionalities
- Design
- Algorithms







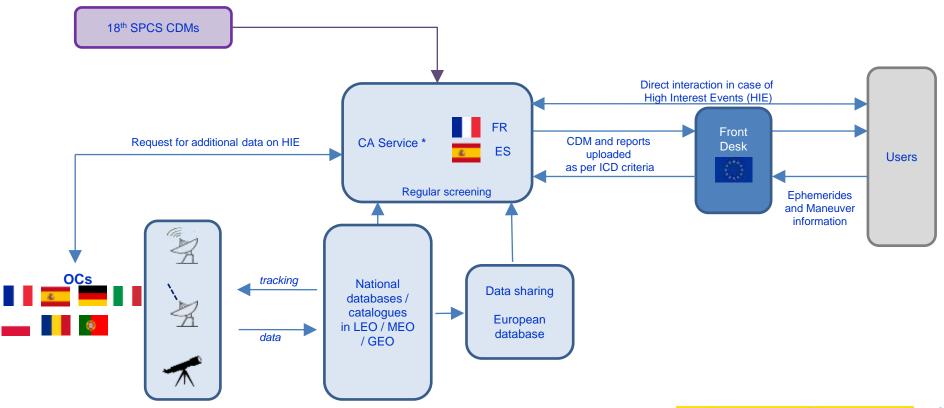




## Introduction



EU SST CA Service Data Flow













## Introduction











S3TOC operations



- S3TOC evolution
  - CONAN
  - Other projects...



Spanish companies consortium











## Objectives



- -> Improve S3TOC capabilities and response times
  - -> Provide **O/Os accessibility** for risk **auto evaluation** 
    - -> Increase communication efficiency between S3TOC and O/Os
      - -> Harmonize the CA Service S3TOC / CNES















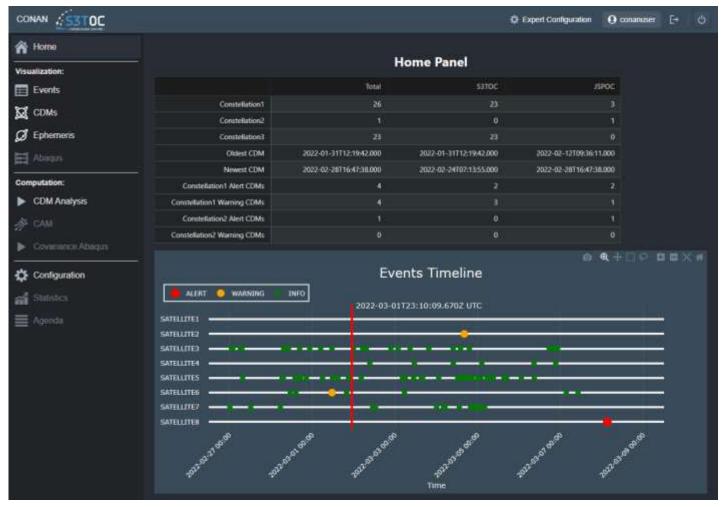




#### **Functionalities**

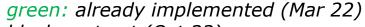


- CA Service Summary
- Visualization:
  - Conjunction Events
  - CDMs
  - Ephemeris
  - Covariance Abaqus
- Computation
  - CDM Analysis
  - CAM
  - Covariance Abaqus
- CA Service Statistics
- Agenda





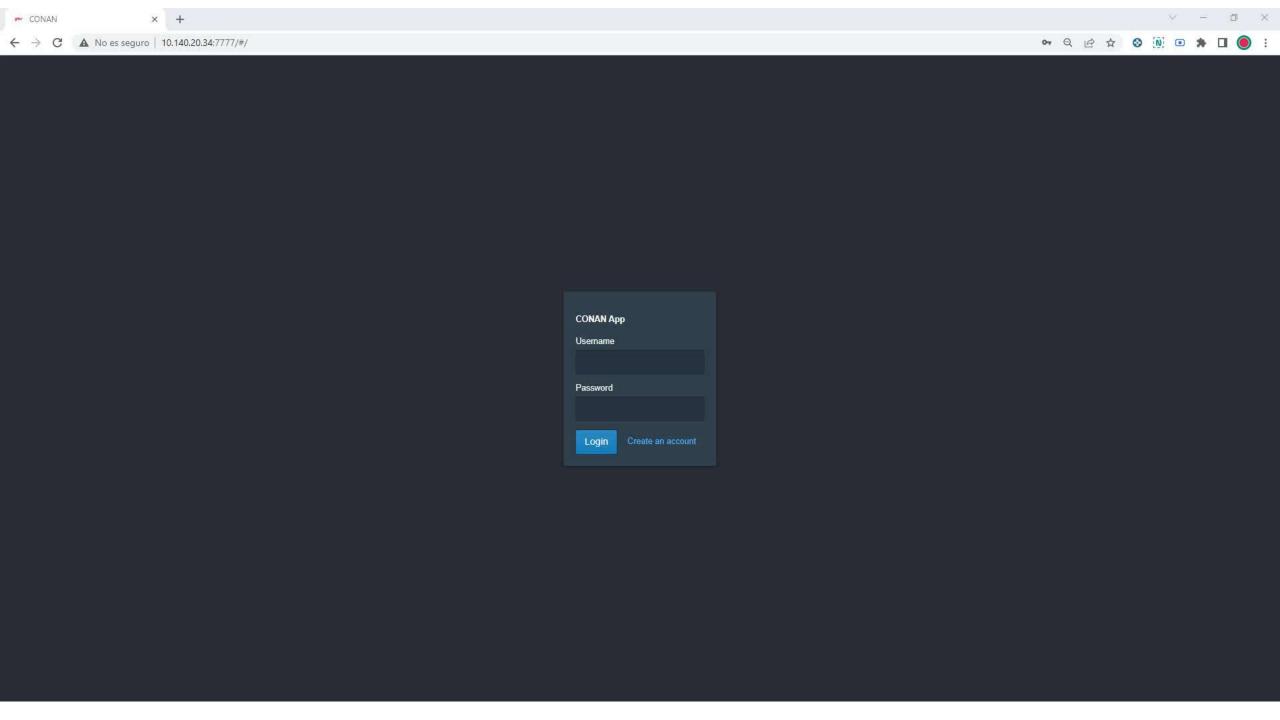




black: not yet (Oct 22)







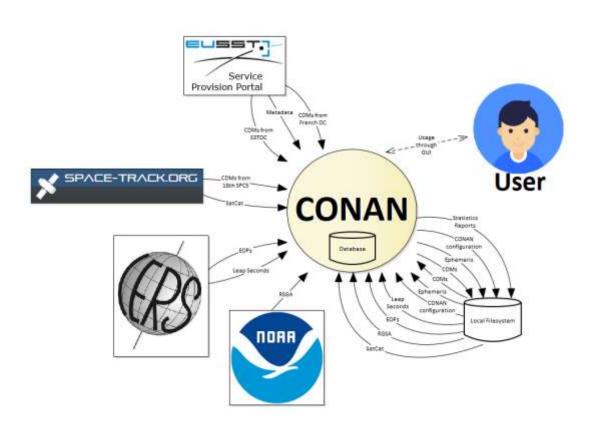


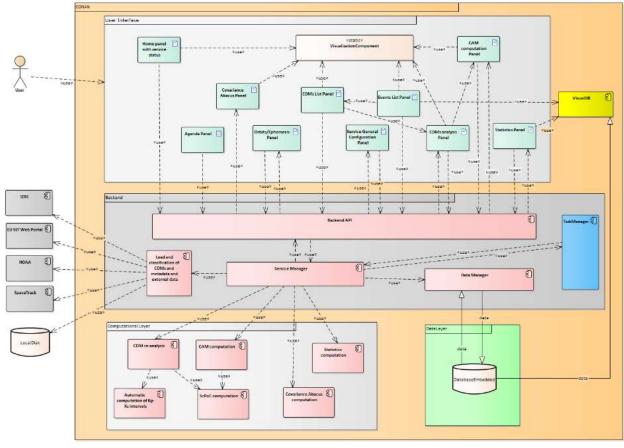
## Design



Interfaces

• Architecture: Frontend / Backend / Computational libraries











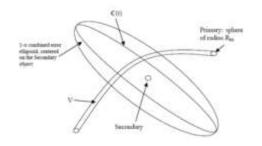


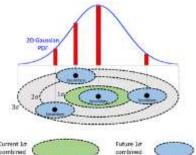


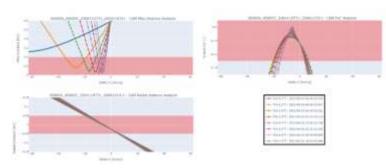
## Algorithms

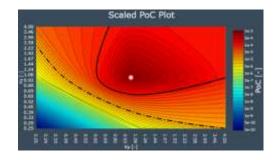


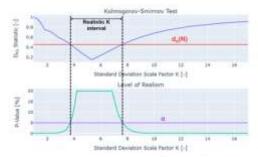
- Risk Level classification
  ALERT / WARNING / INFO
- Probability of collision
  - Akella-Alfriend / Hall / Automatic
  - Global probability of collision
- Scaled Probability of Collision
  - Kp-Ks intervals: Fixed / Automatic
- Next-Day-Analysis
- CAM
  - CAM solutions for 1 CDM
  - Global risk reduction for multiple conjunctions
- Covariance abacus

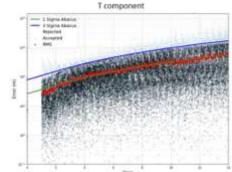
























### **THANK YOU VERY MUCH!**

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