

AARC2 EISCAT_3D pilot

Authentication and Authorisation for Research and
Collaboration

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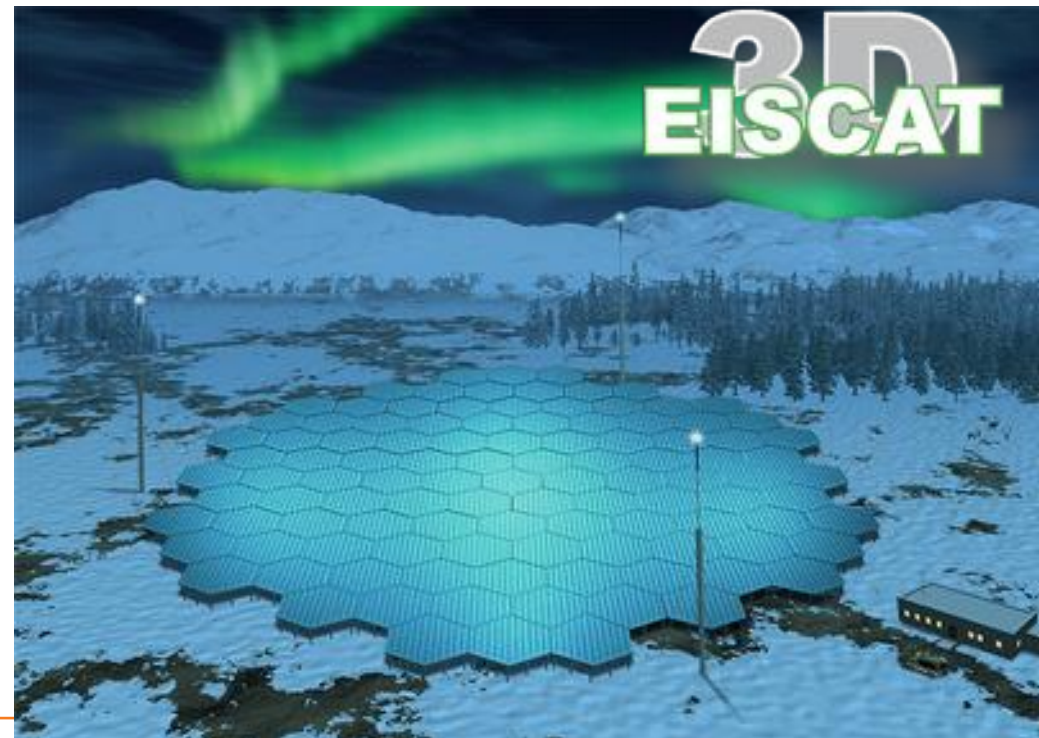
13th FIM4R Workshop

11 February 2019, Vienna

EISCAT/EISCAT_3D



- Large radar facilities in Tromsø (NO), Longyearbyen (SJ), Kiruna (SE), Sodankylä (FI)
 - 1981-
 - Space Physics
 - Plasma Physics (with HF heater)
 - Campaign/event based
- EISCAT_3D
 - 85% of Stage1 budget, 56M€
 - Implementation started 1 Sep 2017
 - ESFRI landmark 2018
 - Geospace Environment
 - Radar to run 24/7



User categories

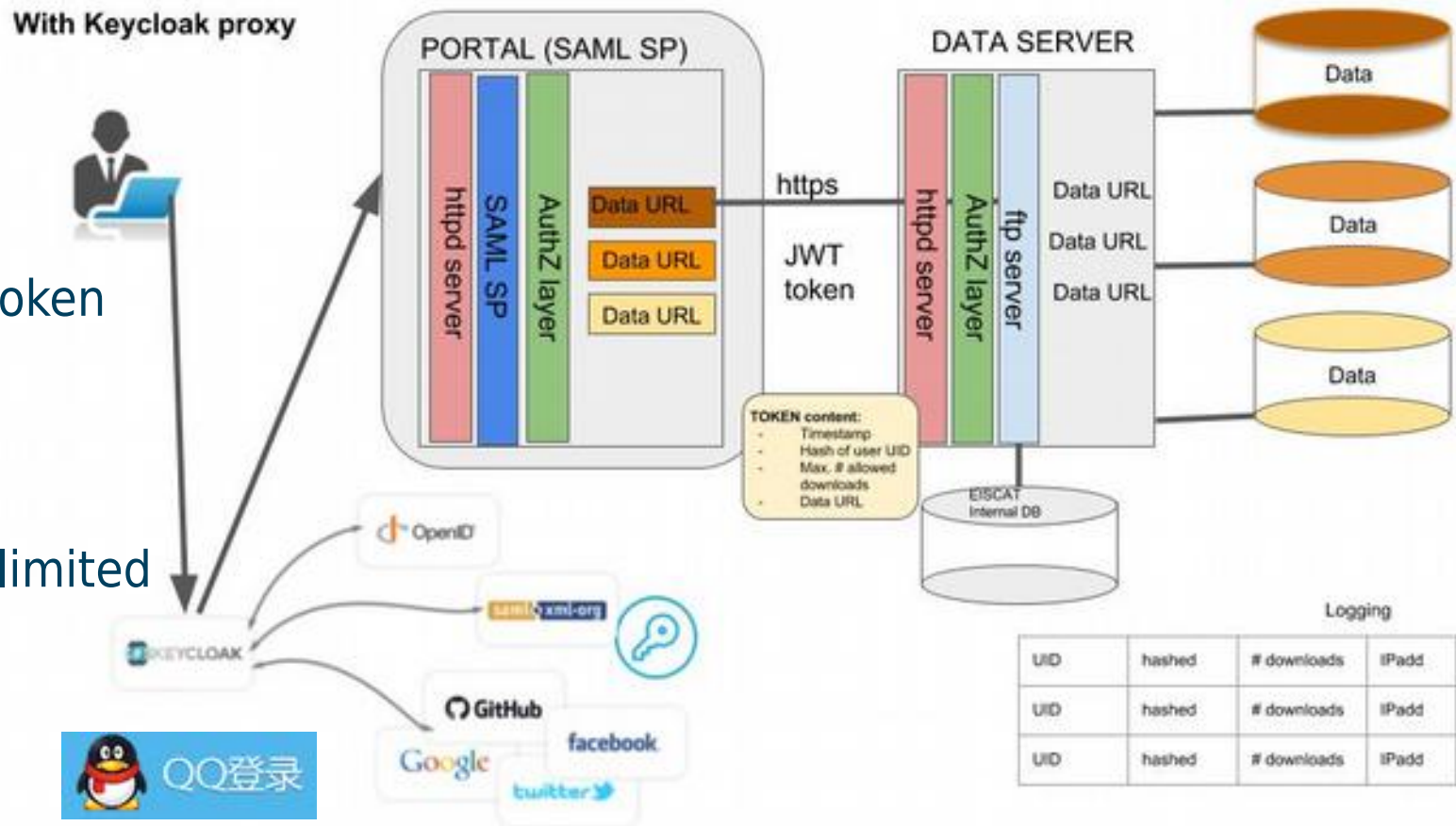
- Services for Users
 - Data + Processing
 - Users
 - Associate (RC, country), >1000
 - Affiliate (institute), >100
 - 3P (individual), >1
 - Staff, ~10
 - Other, >10000
 - Some data have embargo times
 - 1yr, 4yrs according to membership
 - (non military/commercial use)
 - Operation
 - Request (member..), ~100
 - Expert (selected users), ~10
 - Wizards, ~3
 - Machine (predefined APIs), ~10

Current EISCAT portal, python cgi

- Portal
 - Metadata, public
 - No login
- Schedule (Operation)
 - Request (cgi)
 - Manually scheduled
- Data selection
 - Check IP
 - Basically whois → country
 - Lists for affiliates, staff, individuals
 - Link to data (separate) server
 - Makes same IP check
 - Processing at EISCAT
 - cgi making task lists

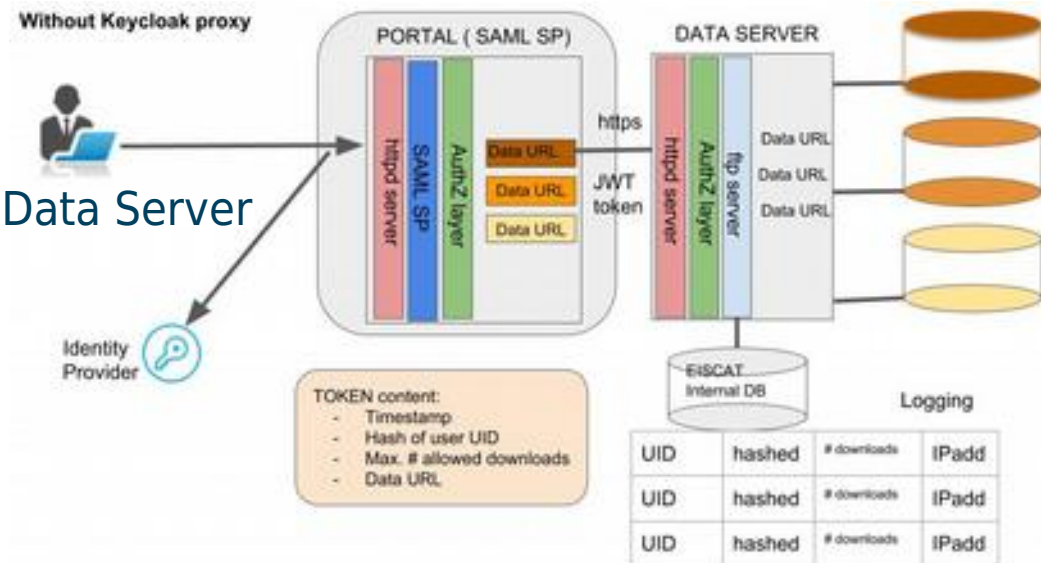
EISCAT_3D pilot data server

- Keycloak proxy
 - + qq idp
- Portal
 - SAML
 - AuthZ layer
 - Create JWT token
- Data server
 - Token in url
 - Time/Usage limited
- Logging



EISCAT_3D pilot data server

- Exchanged and Tracked information
 - The system will track relevant information to uniquely identify a user and a transaction, together with providing hooks for logging / accounting/
- Tracked (logged) on the Master Portal
 - Consumed Data by the Master Portal
 - Produced Data on the Master Portal
 - Received Data by the Master Portal
 - Sent Data from the Master Portal to the Data Server
 - TransactionID
 - Hashed (userID+timestamp)
 - Download URL
- Received by the Data Server
 - Token including the transactionID
- Tracked on the Data Server



Implementations

- Describe agreed architecture
- Set up common GIT repo
- Reproduce current EISCAT environment in Docker
- Identify relevant code bits to be modified on the Master Portal
- Set up SP to protect Master Portal and allow for SAML based AuthN/Z
- Set up the IDP in the test env
- Implement script from the Data Server side to handle tokens generated on the portal
- Implement token generation based on user idp-released attributes
- Keycloak setup and config
- Test of consistency and basic testing between the token server-client sides (Portal to Data Server)
- Final test of pilot set up
- Report on testing

Sustainability

- EISCAT_3D to run for >30 years
 - EISCAT staff to maintain services
 - Associates to continue DataBase
- EISCAT_3D
 - First 5 years
 - EOSC portal
 - EISCAT services
 - (eInfra data/processing services)
 - Cost issue
 - With extra funding (updates)
 - Much more data
 - May move services to eInfras

Thank you Any Questions?

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<https://aarc-project.eu>



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The work leading to these results has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 730941 (AARC2).