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Scientific Computing

Proposal for IRIS Access to SCARF

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IRIS-TWG 21st June 2022

Introduction

- Brief Introduction to SCARF
- Proposal to enable IRIS Access
- Live Demo
- Discussion

Brief Intro to SCARF

- SCARF (Scientific Computing Applications Resource for Facilities) is a ~20k core HPC compute cluster based at STFC RAL
- Supports STFC/Diamond/RFI staff and collaborators and users of STFC Facilities (ISIS, CLF)
- Primarily used for modelling and simulation
- Range of provided compilers and codes
- Heterogenous cluster – has a small number of GPU nodes, but also a range of CPUs, both Intel and AMD.

<https://www.scarf.rl.ac.uk>

Proposed Solution

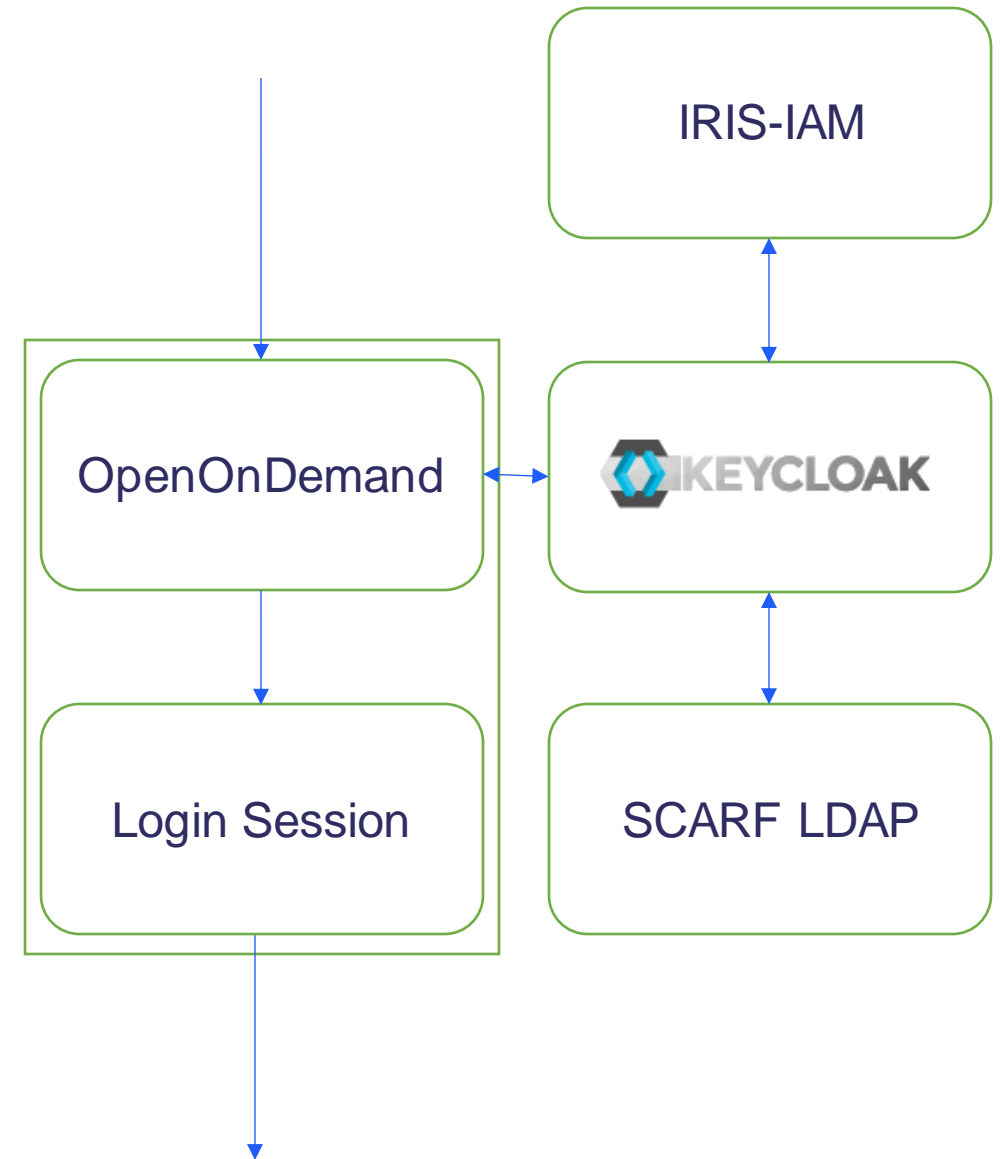
Access to SCARF will be contingent on 2 things:

1. Having an IRIS-IAM account
 2. Being a member of the SCARF group in IRIS-IAM
- Andrew Sansum and myself will approve membership of the group

Users will log in to the OpenOnDemand portal and be redirected (via Keycloak) to IRIS-IAM to authenticate

Looked up by e-mail address returned from IRIS-IAM, SCARF account details are extracted from SCARF's LDAP.

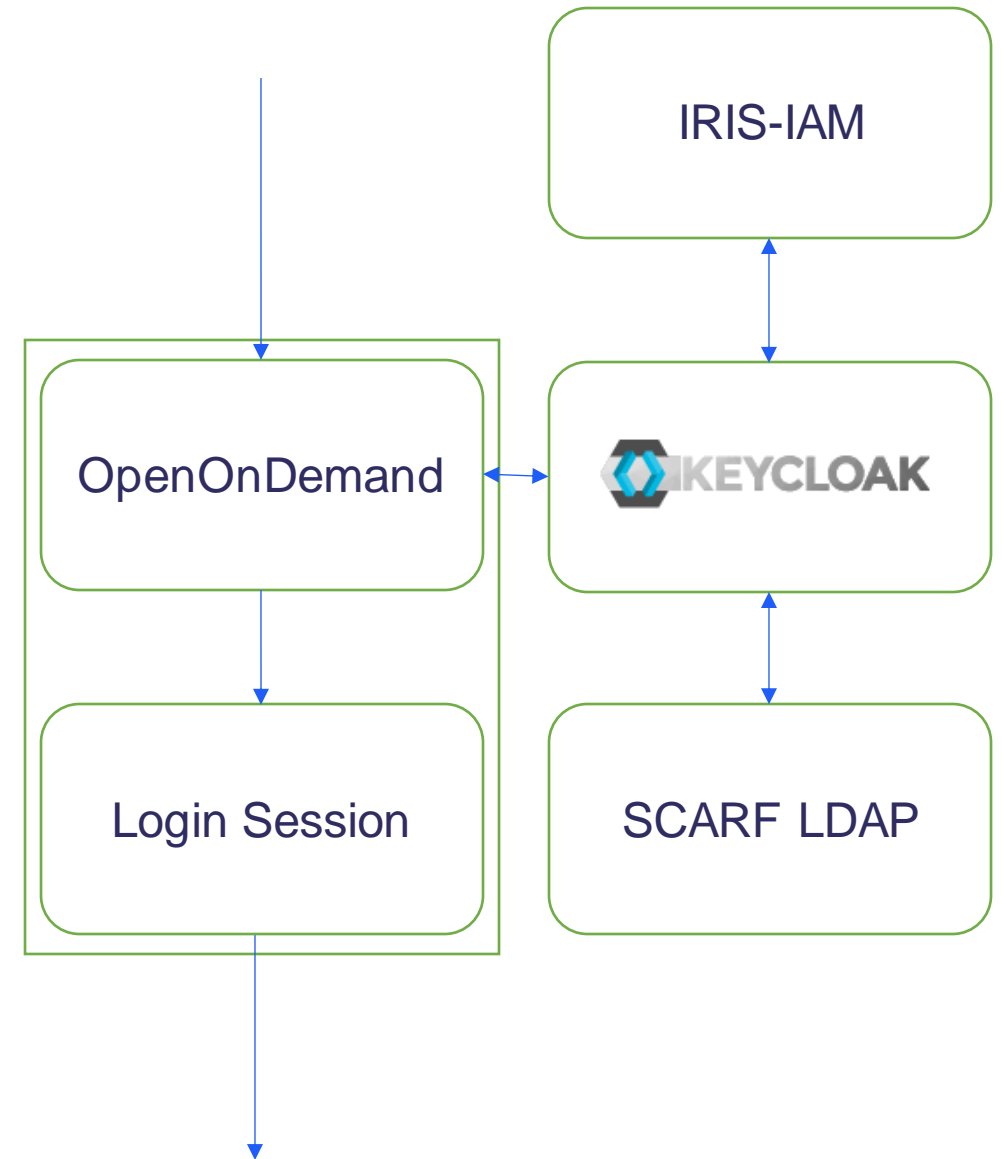
If there is no corresponding LDAP account information, then one will be created – this is still under development.



Proposed Solution cont.

Once logged into OpenOnDemand, users can either start a terminal session from inside the browser or use OpenOnDemand templates to submit jobs

User can also browse their home directory and upload and download files



Considerations

- We hope to provide this solution to the existing SCARF user base as well
 - Informed choice of Keycloak as it can integrate with Active Directory and potentially other future Oauth providers
- Aware of OpenOnDemand as an open-source HPC portal and that it integrated with Keycloak
 - Had previously used IBM Platform portal but no longer use LSF batch system



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Live Demo...

scd.stfc.ac.uk

 [@SciComp_STFC](https://twitter.com/SciComp_STFC)

Discussion

- Is the mechanism sufficient/acceptable on the IRIS-IAM side
- Is a web-based terminal sufficient? Or will full ssh access be required?
- Other concerns or issues?



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Thanks

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