Towards a Shared European Logistics Intelligent Information Space

National Technical University of Athens
CSLab

Authentication and Authorization towards Federated Logistics Communities

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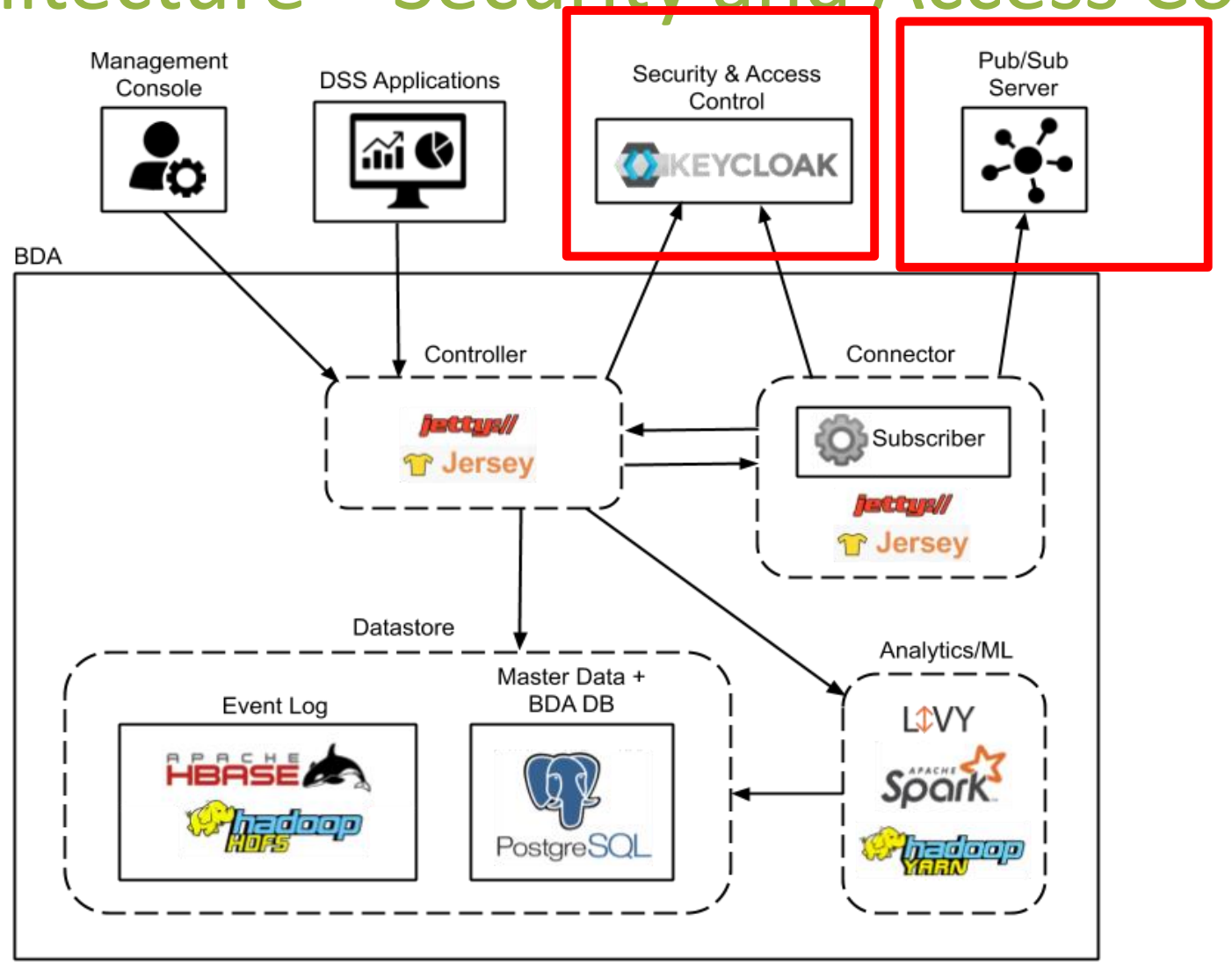
IPIC 2019

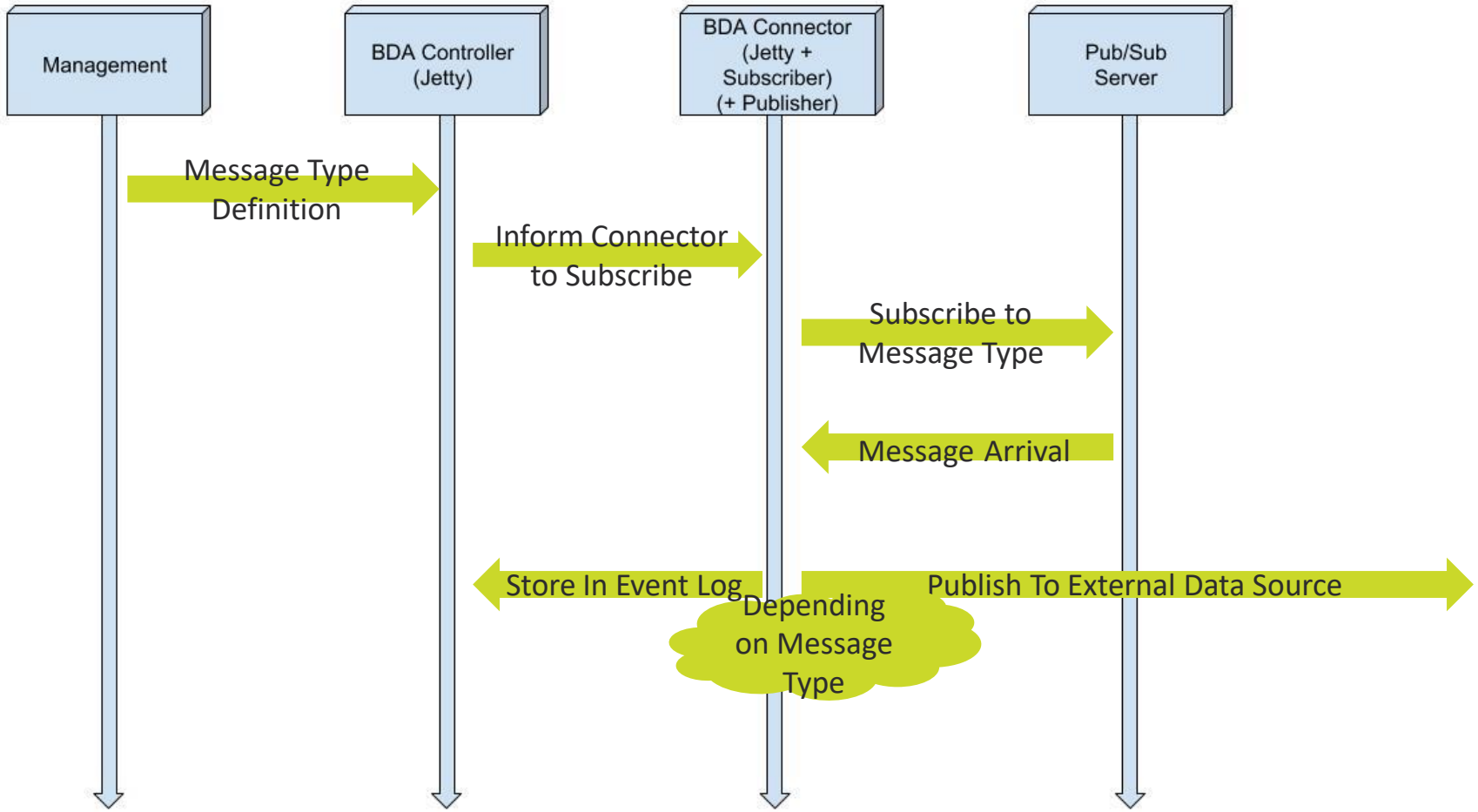
10th July 2019, London, UK

SCN Architecture – Security and Access Control



Data Exchange

- Subscribing/Publishing to Data Source (e.g. Pub/Sub)

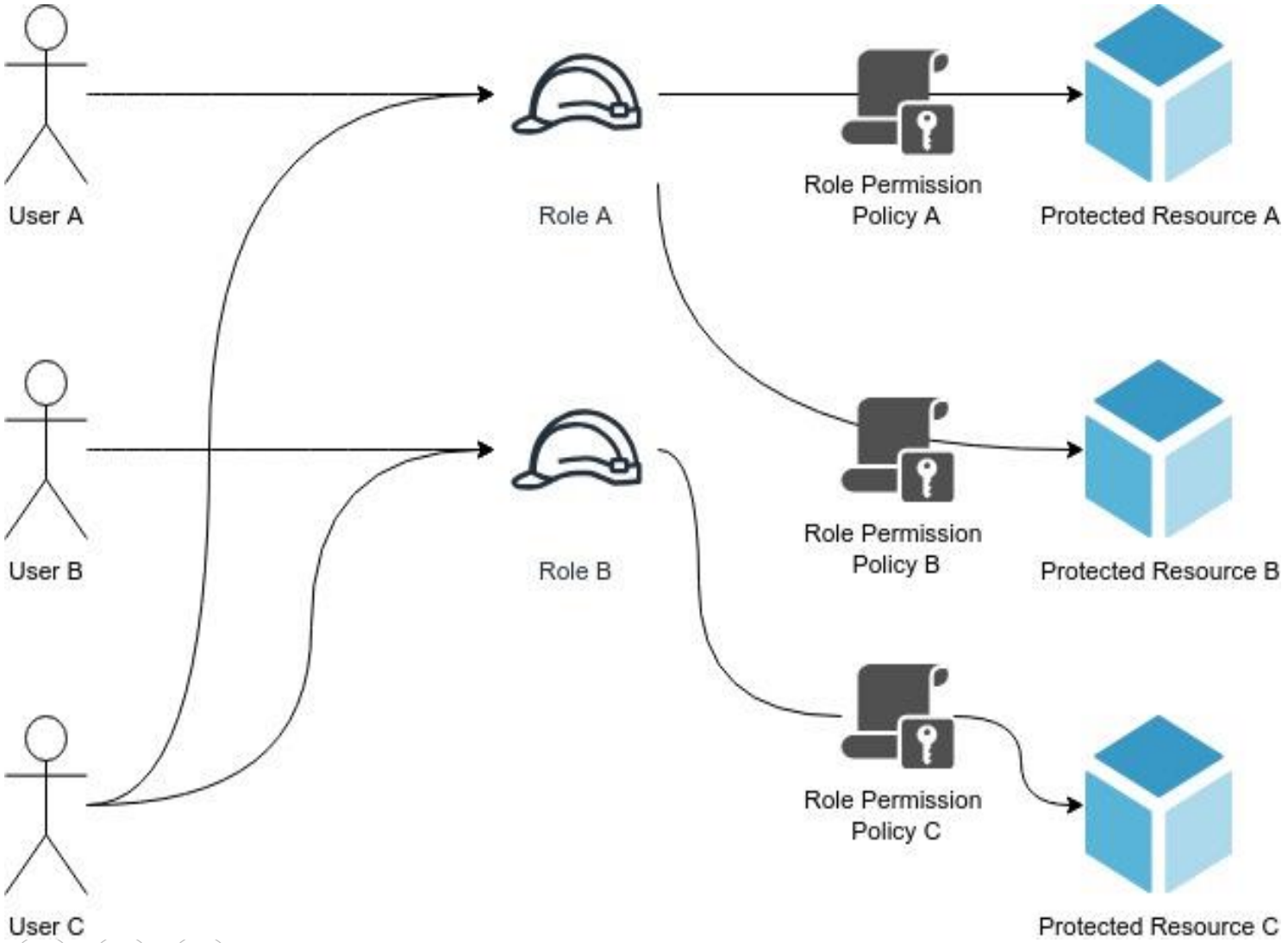


Security Aspects - Semantics (I)

- Authorization / Authentication Performed by 

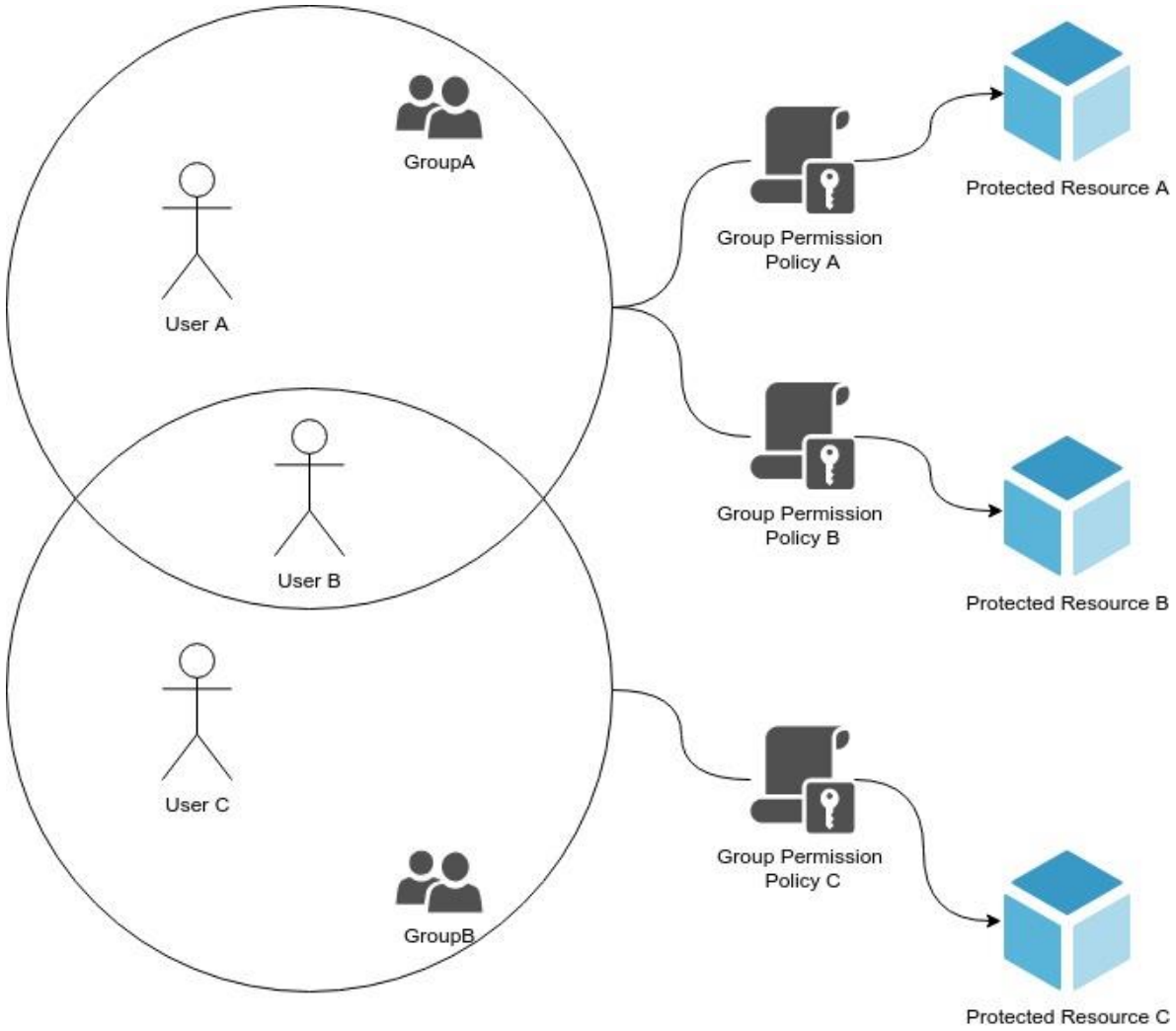
- Semantics:
  - Resources : Anything that needs protection (REST API, PostgreSql Tables, HBase Namespaces, etc.)
  - Resource Scopes : Different aspects of resource protection – e.g. C(reate)R(ead)U(pdate)D(elete)
  - Clients / Resource Servers : Entities that protect some resources and authenticate users to access them
  - Users: Entities that demand access on a protect resource.
  - Permission: A user having a permission can access the corresponding scope / resource
  - Group : Define a group of users that have some permissions

Permissions/Policies Example using **Roles**



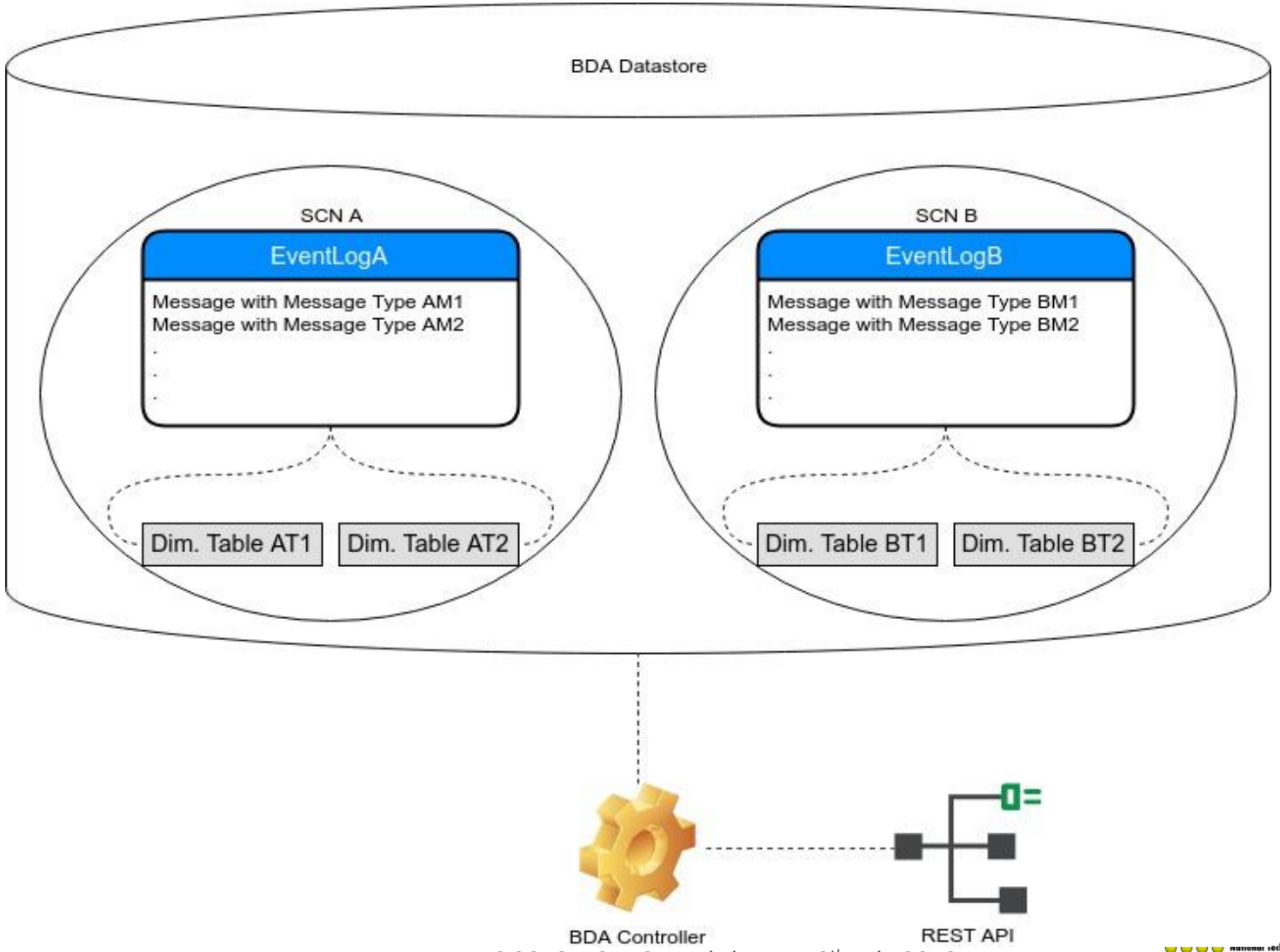
- User A: can access Resource A, B through Role A
- User B: Can access Resource B through Role B
- User C can access Resources A, B, C through Roles A, B

Permissions/Policies Example using **Groups**

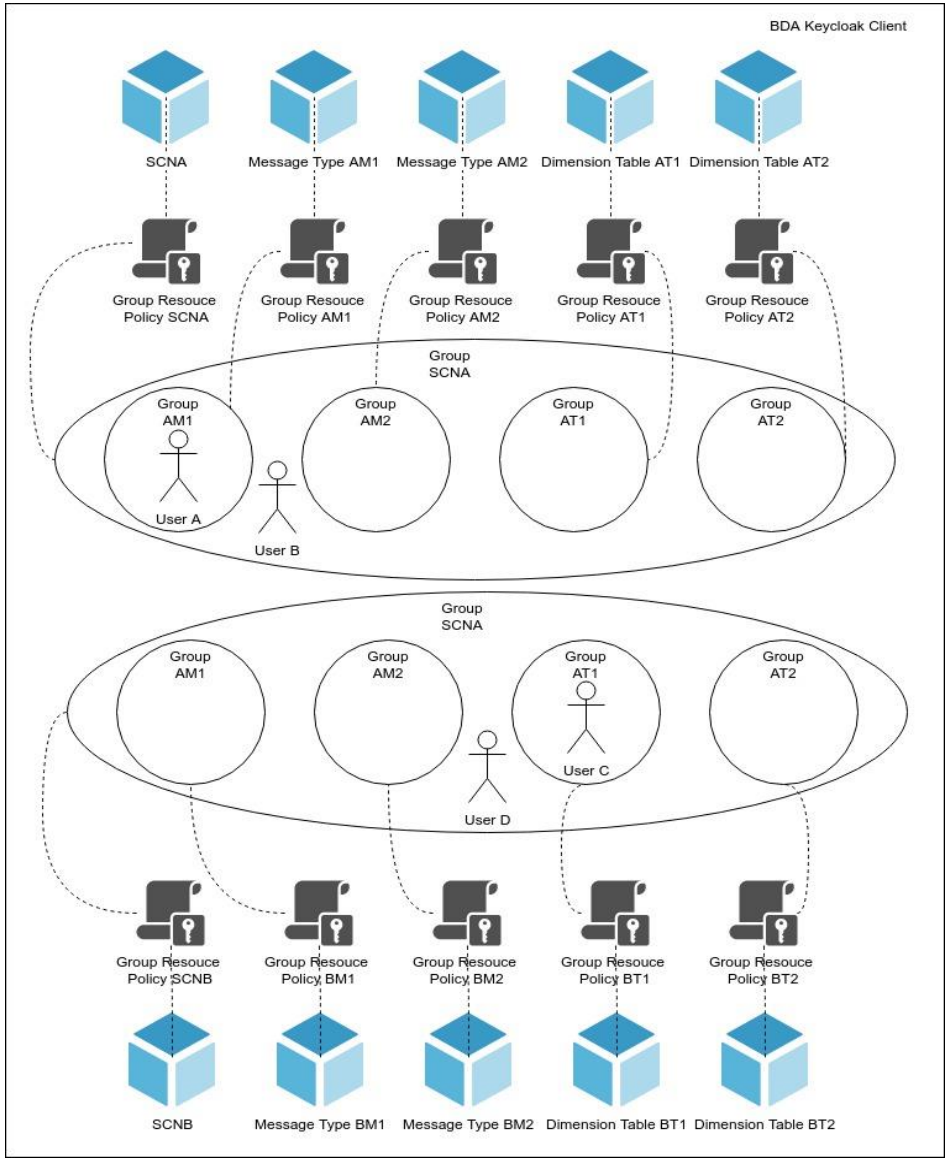


- Group A has two Group Permission Policies A and B that provide access to the Protected Resources A and B respectively.
- Group B can interact with Protected Resource C as it is defined by the Group Permission Policy C.
- User A can interact with Resources A and B since it belongs to Group A,
- User C has only access to the Protected Resource C through Group B.
- User B can interact with all the three stated resources, since she belong to both groups

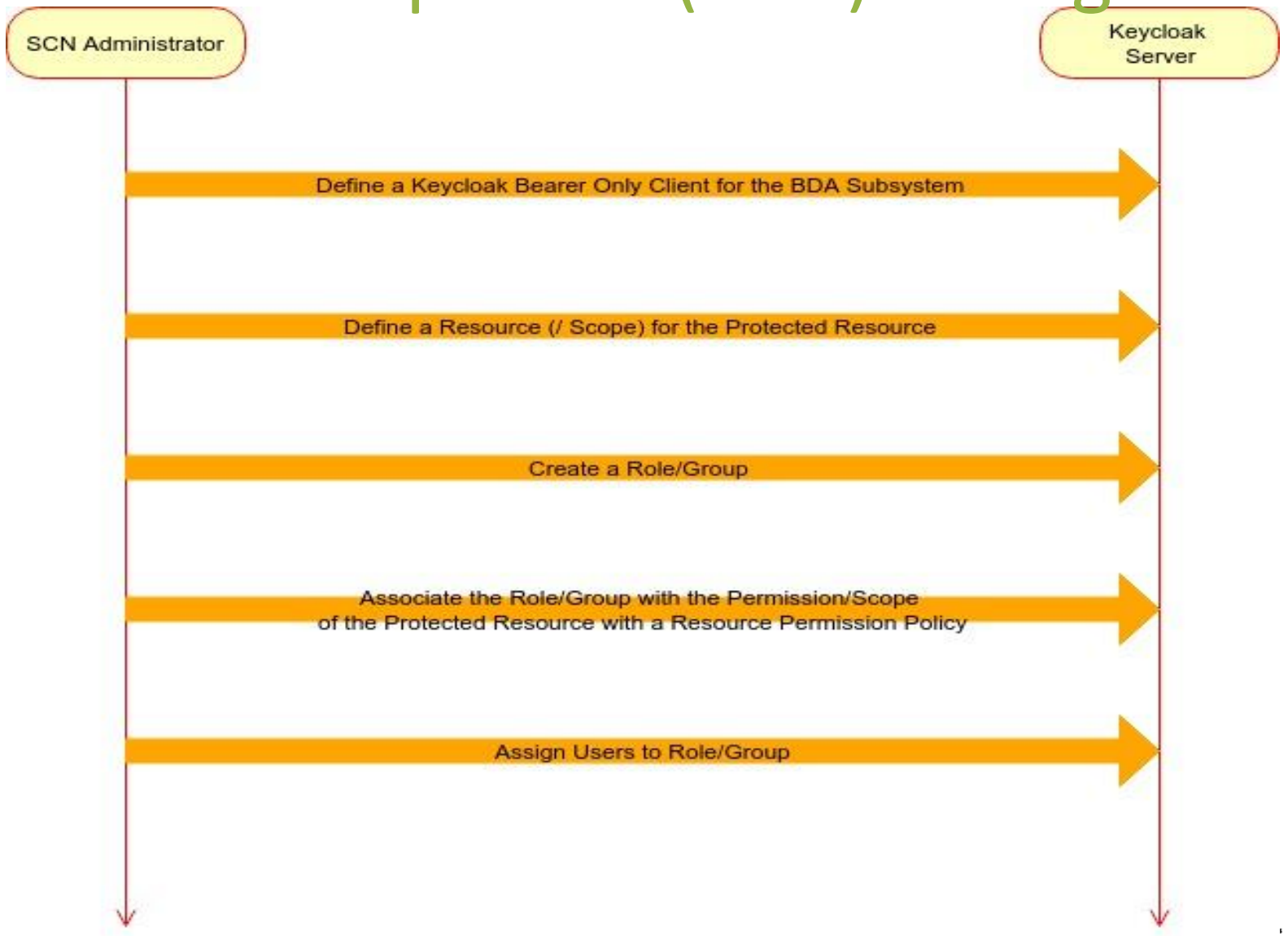
Putting it all together: Securing SELIS data communications



Putting it all together: Securing SELIS data communications

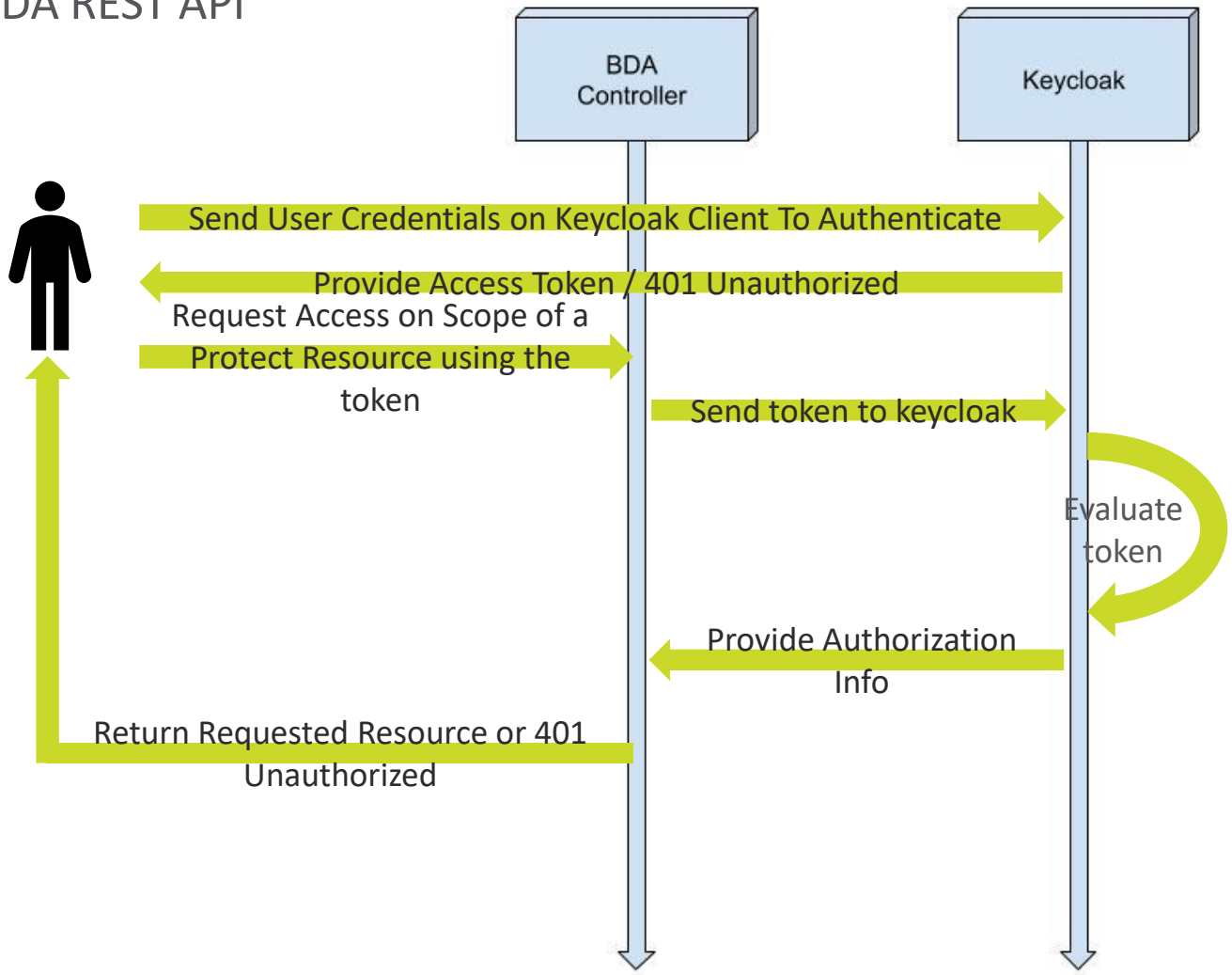


Securing an SCN component (BDA) during bootstrapping



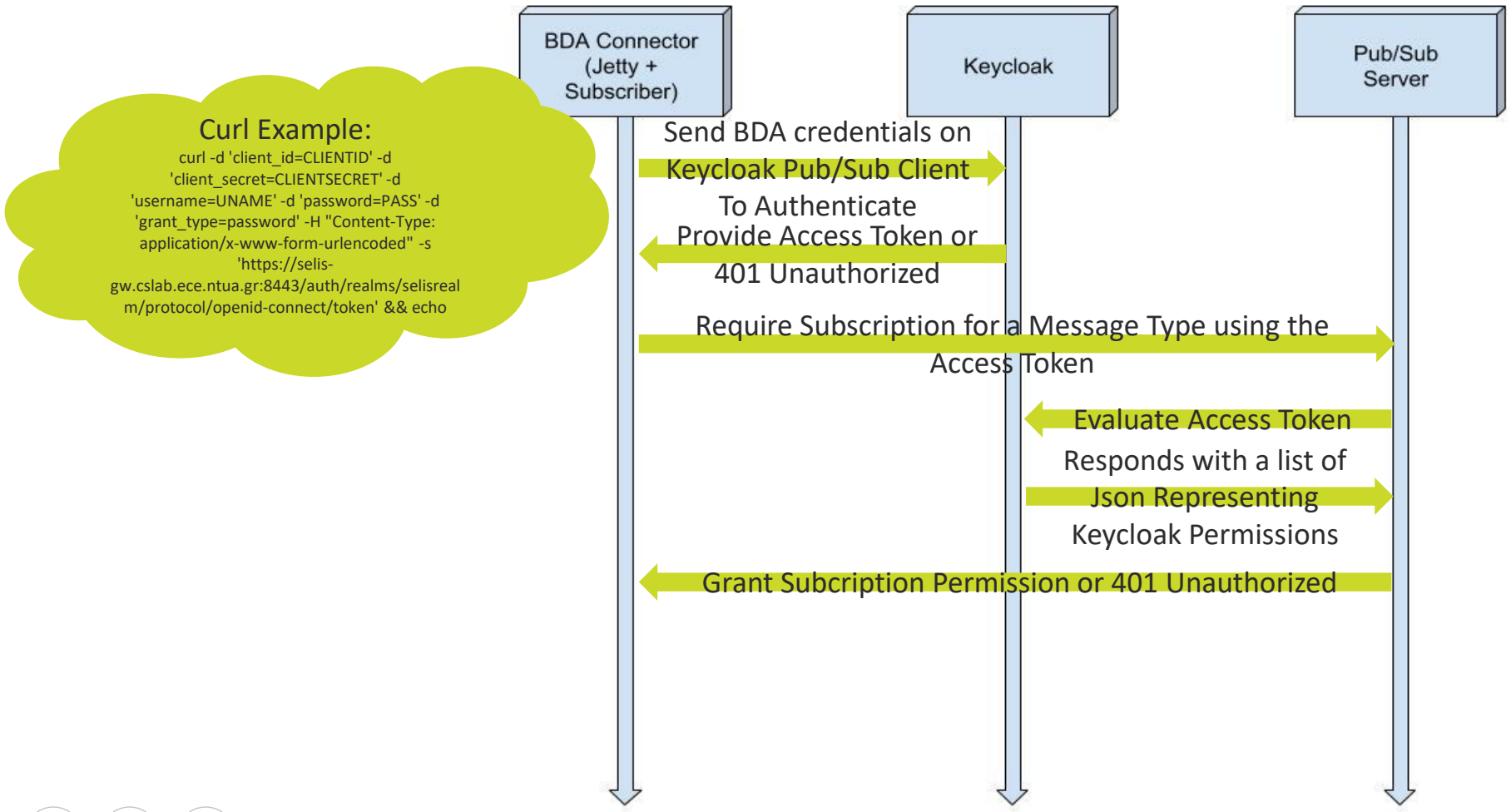
Security Aspects – Data at Rest (III)

- Secured BDA REST API



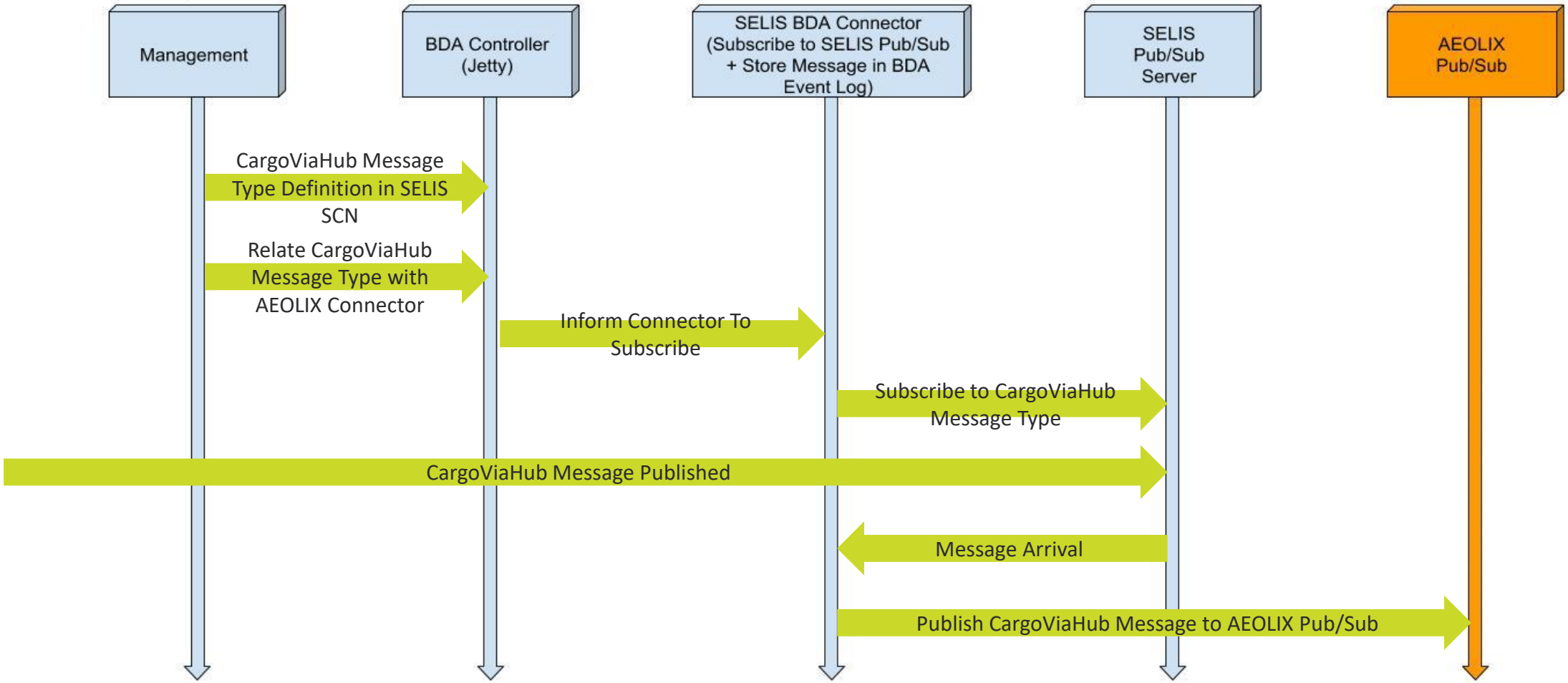
Security Aspects - Data at Motion (II)

- Secured BDA subscription on Pub/Sub



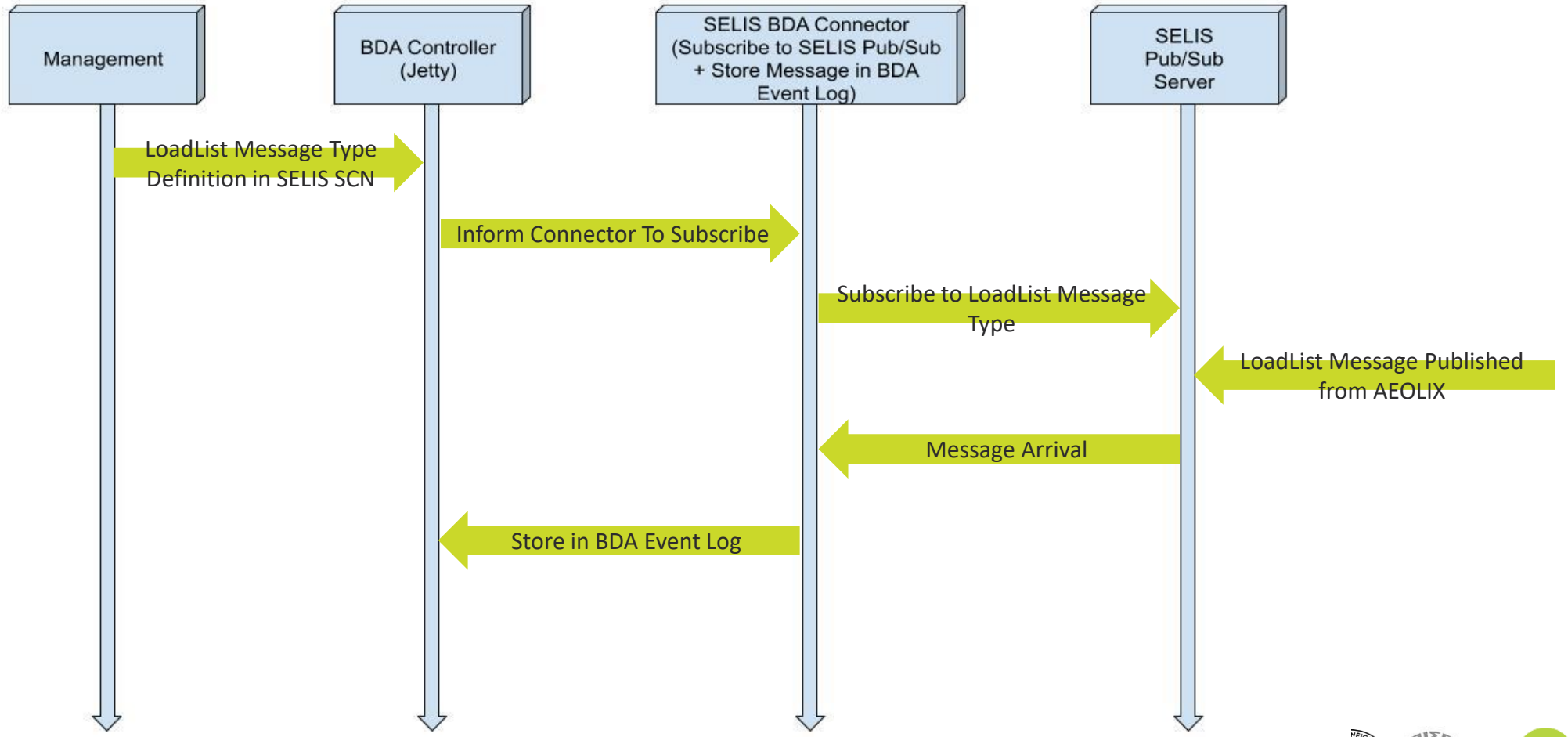
Data Exchange (AEOLIX Case) (I)

- Sending Data to AEOLIX



Data Exchange (AEOLIX Case) (II)

- Getting Data from AEOLIX




Q&A

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