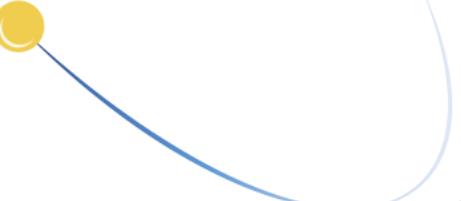




ESCAPE

European Science Cluster of Astronomy &
Particle physics ESFRI research Infrastructures



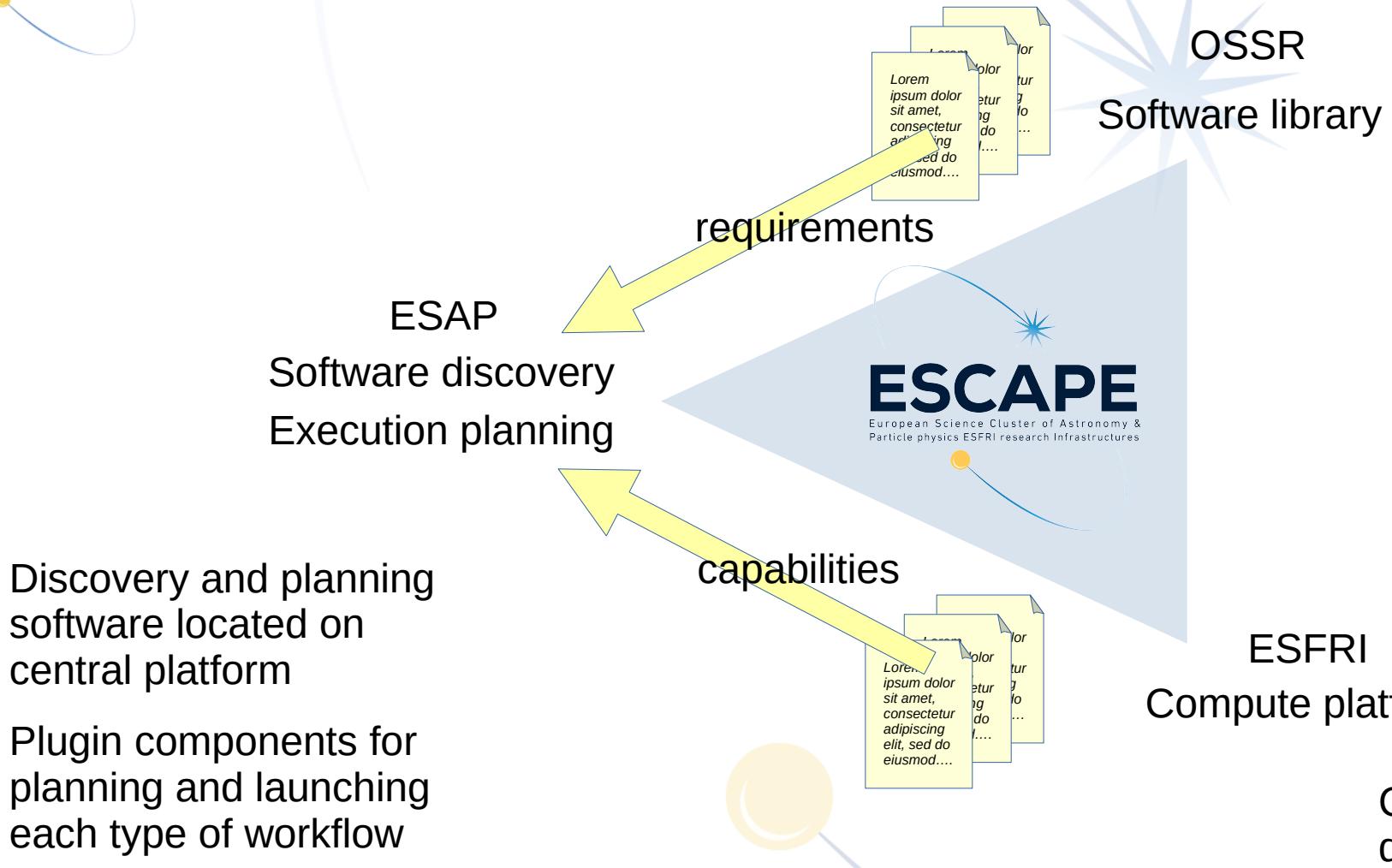
IVOA execution planner API

April 2021

D.Morris University of Edinburgh



Execution planning - ESCAPE



ESCAPE has a controlled set of contributed compute platforms

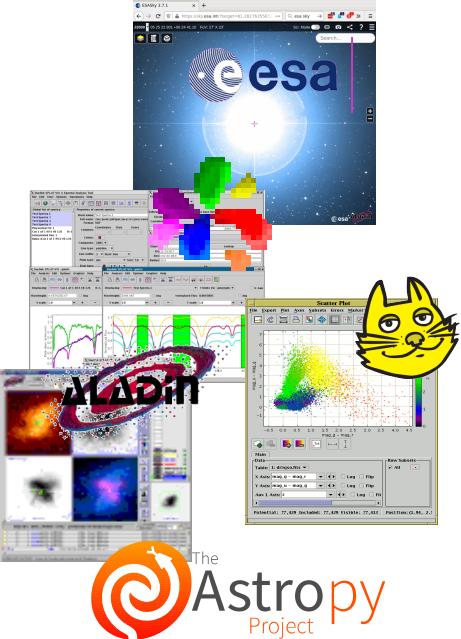
ESFRI
Compute platforms



Common set of components deployed on all platforms

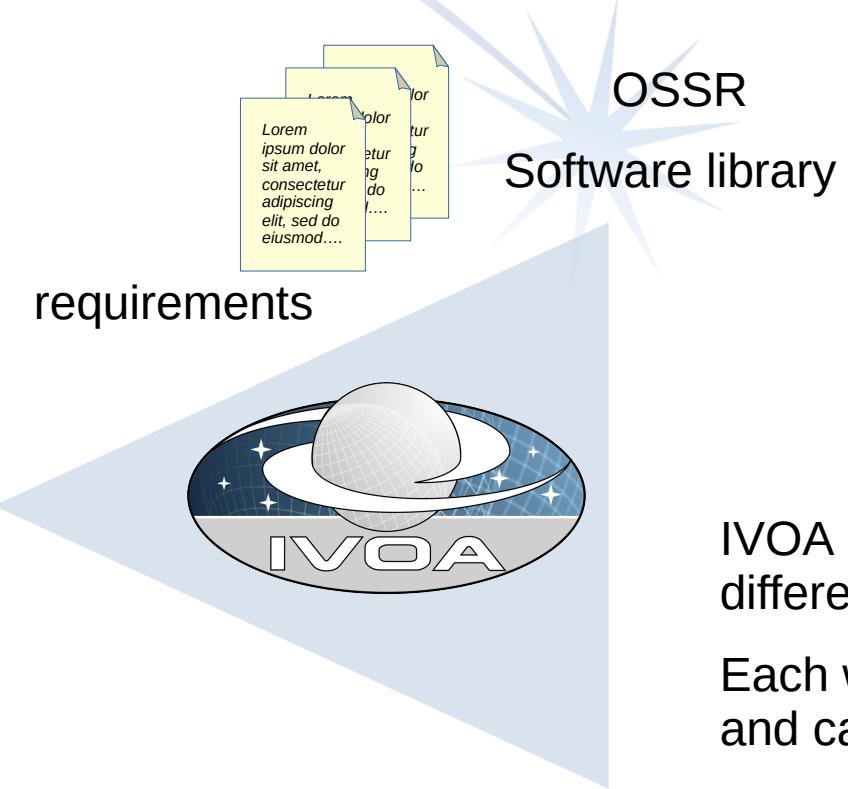


Execution planning - IVOA



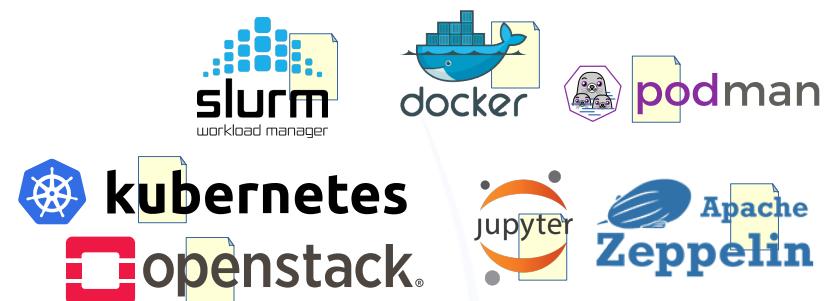
IVOA has a diverse set of different client applications

IVOA does not have a central service capable of execution planning

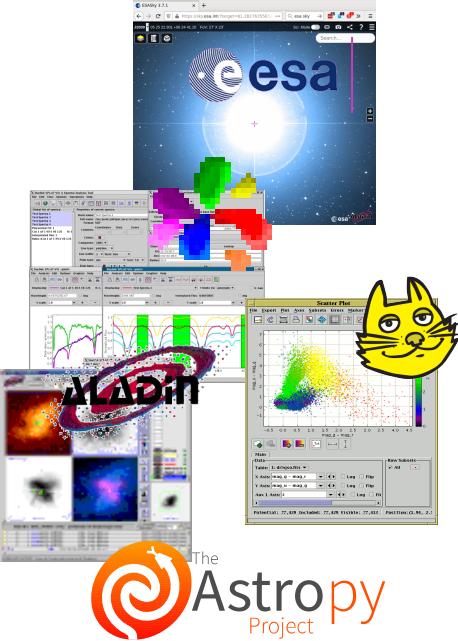


IVOA has a diverse set of different compute platforms

Each with different interfaces and capabilities

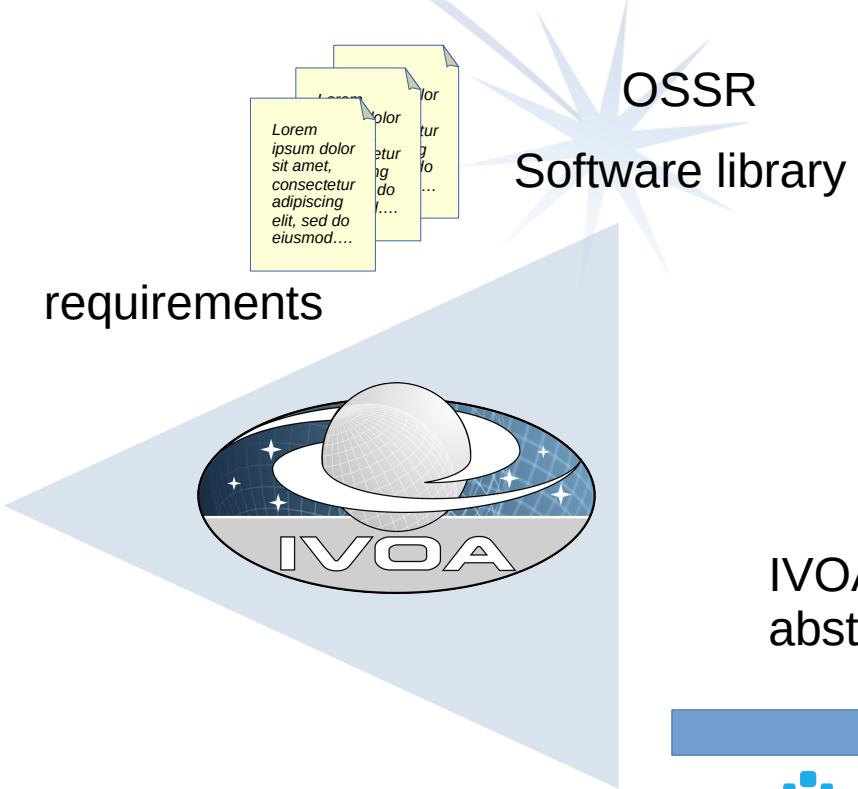


Execution planning - IVOA

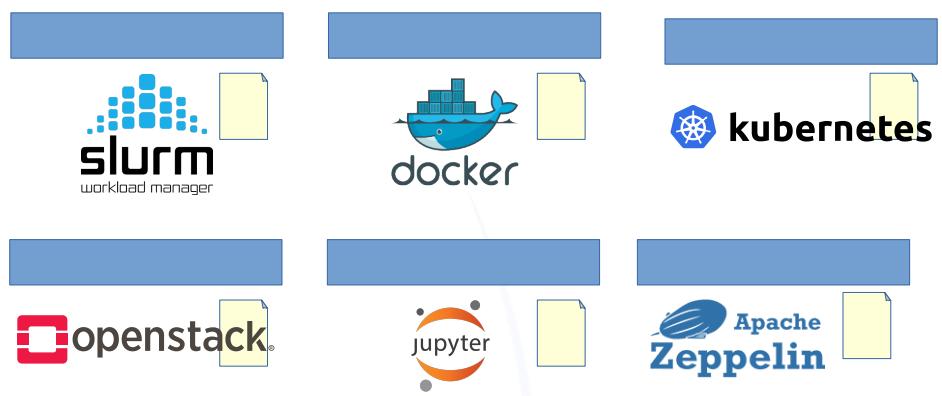


IVOA has a wide range of different client applications

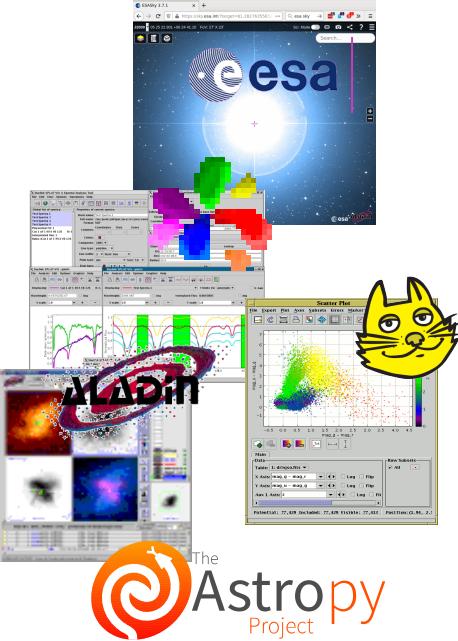
IVOA does not have a central service capable of execution planning



IVOA hides service details behind abstract interfaces

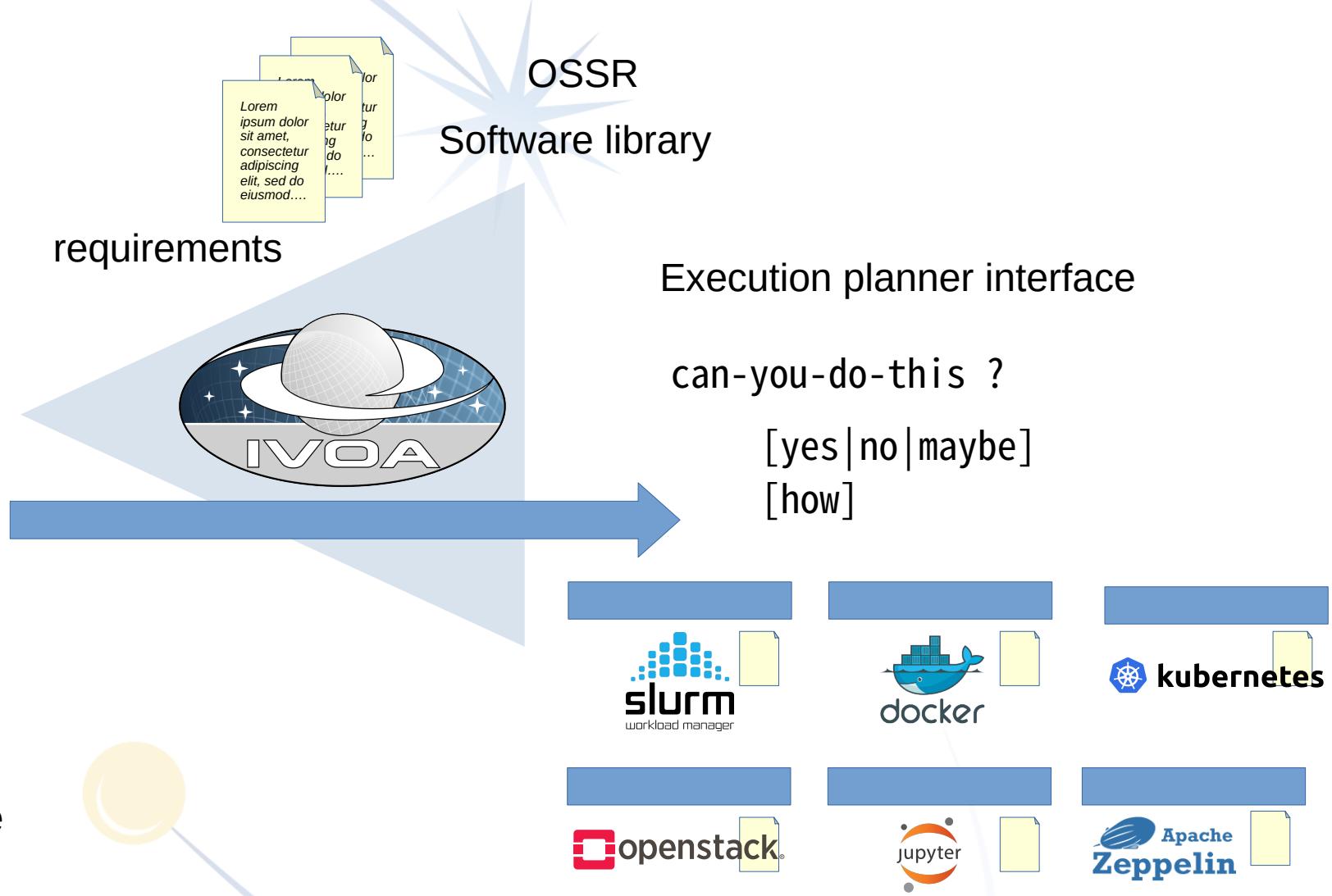


Execution planning - IVOA

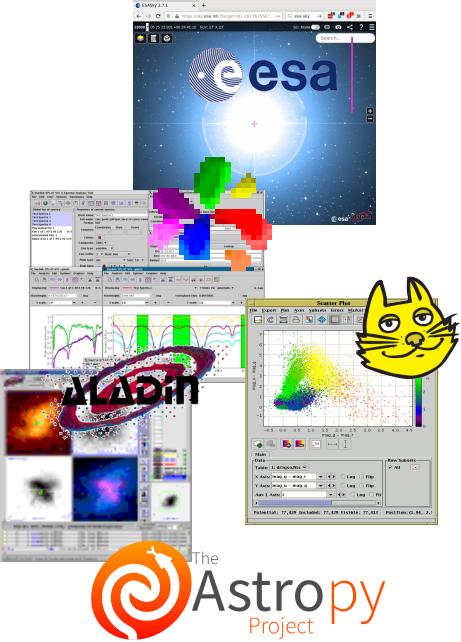


IVOA has a wide range of different client applications

IVOA does not have a central service capable of execution planning

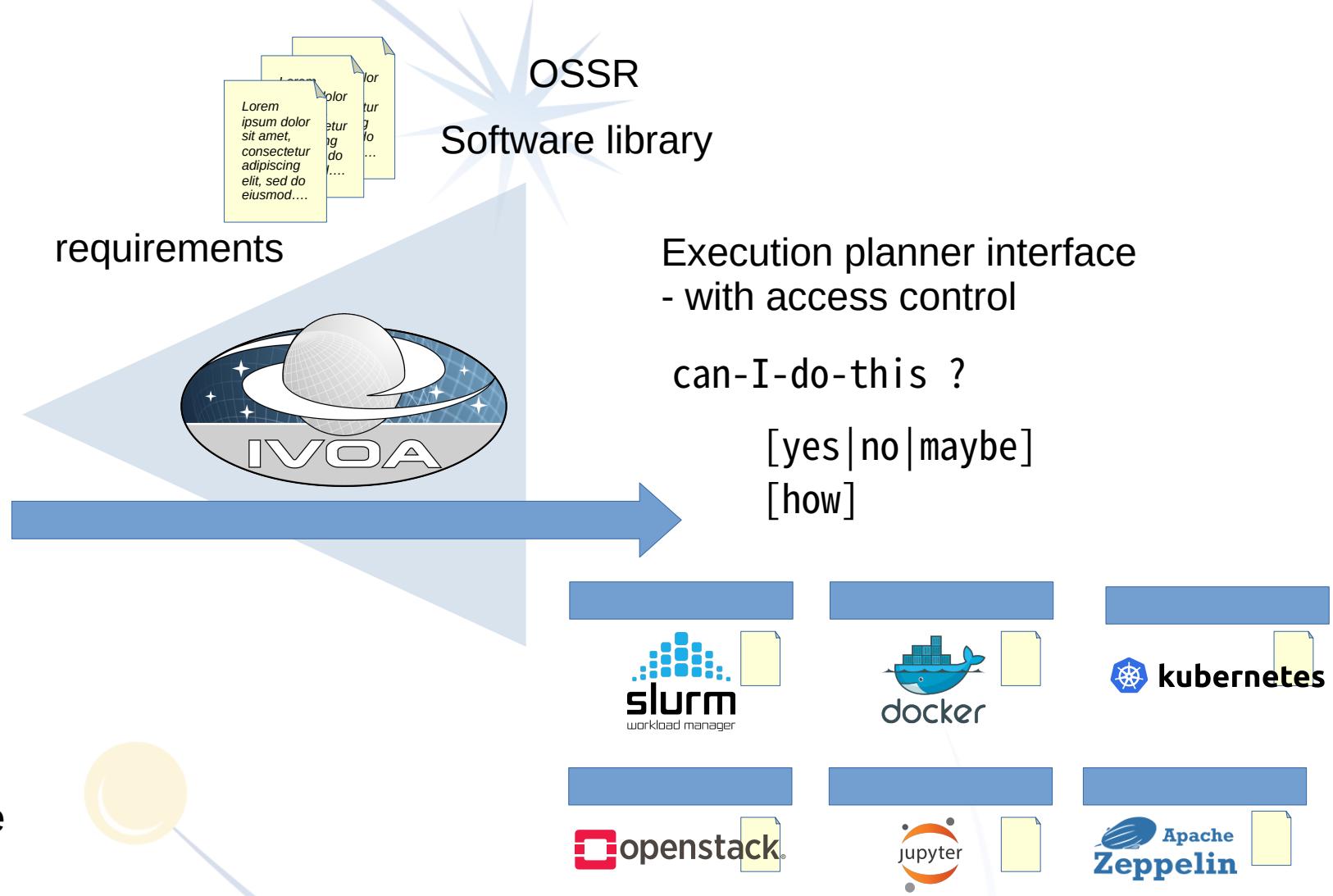


Execution planning - IVOA



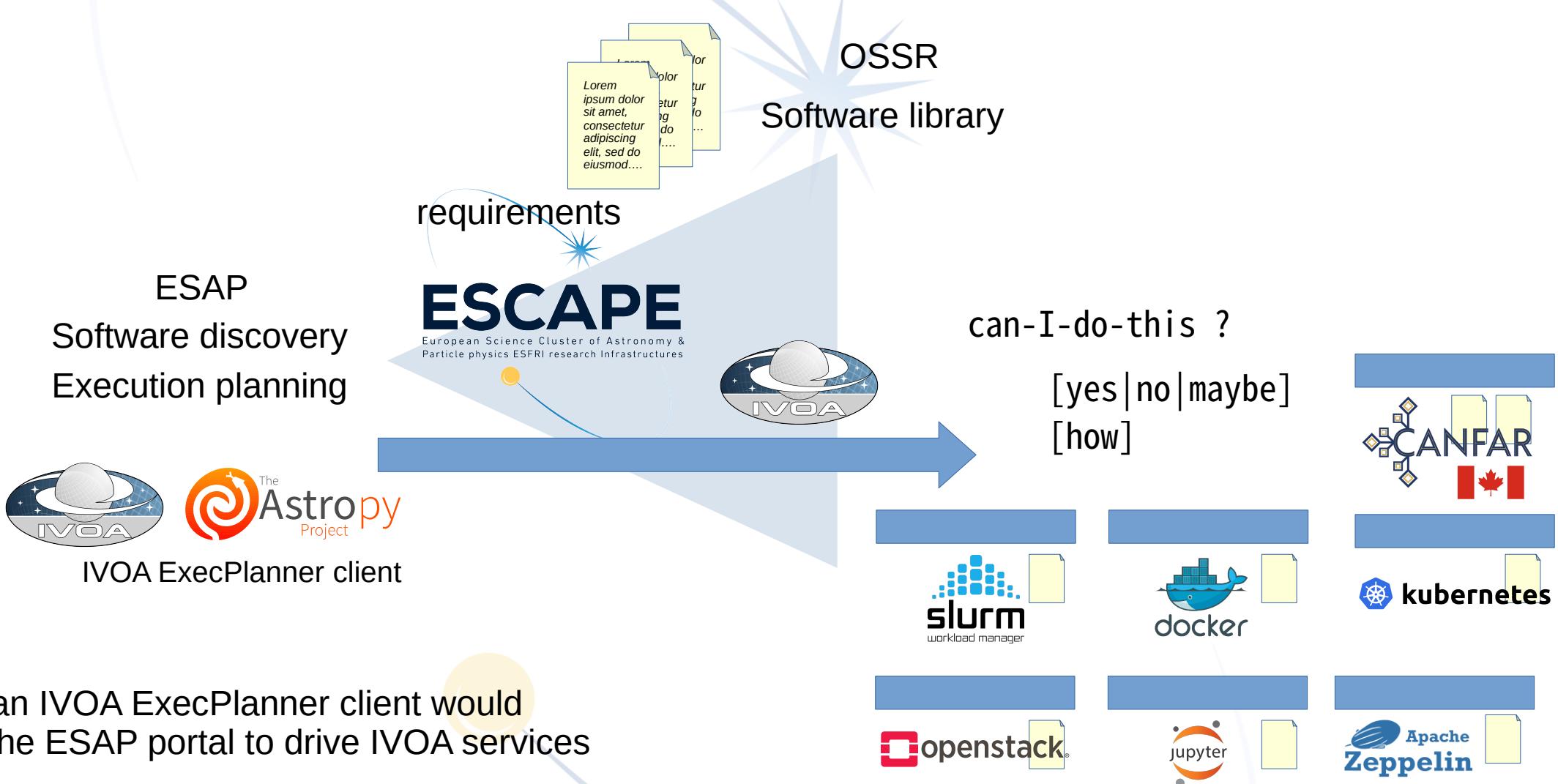
IVOA has a wide range of different client applications

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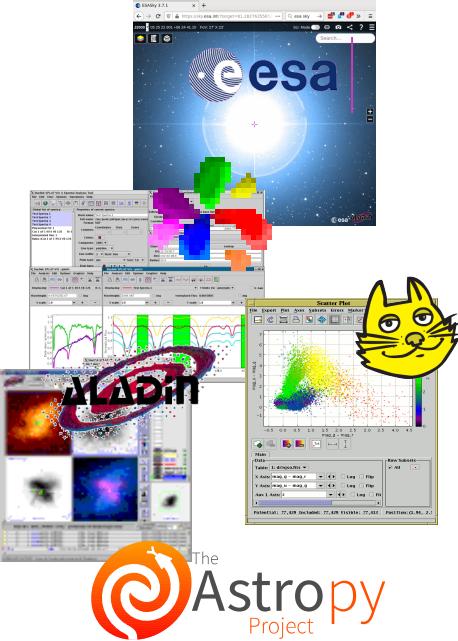


Execution planning – ESCAPE using IVOA

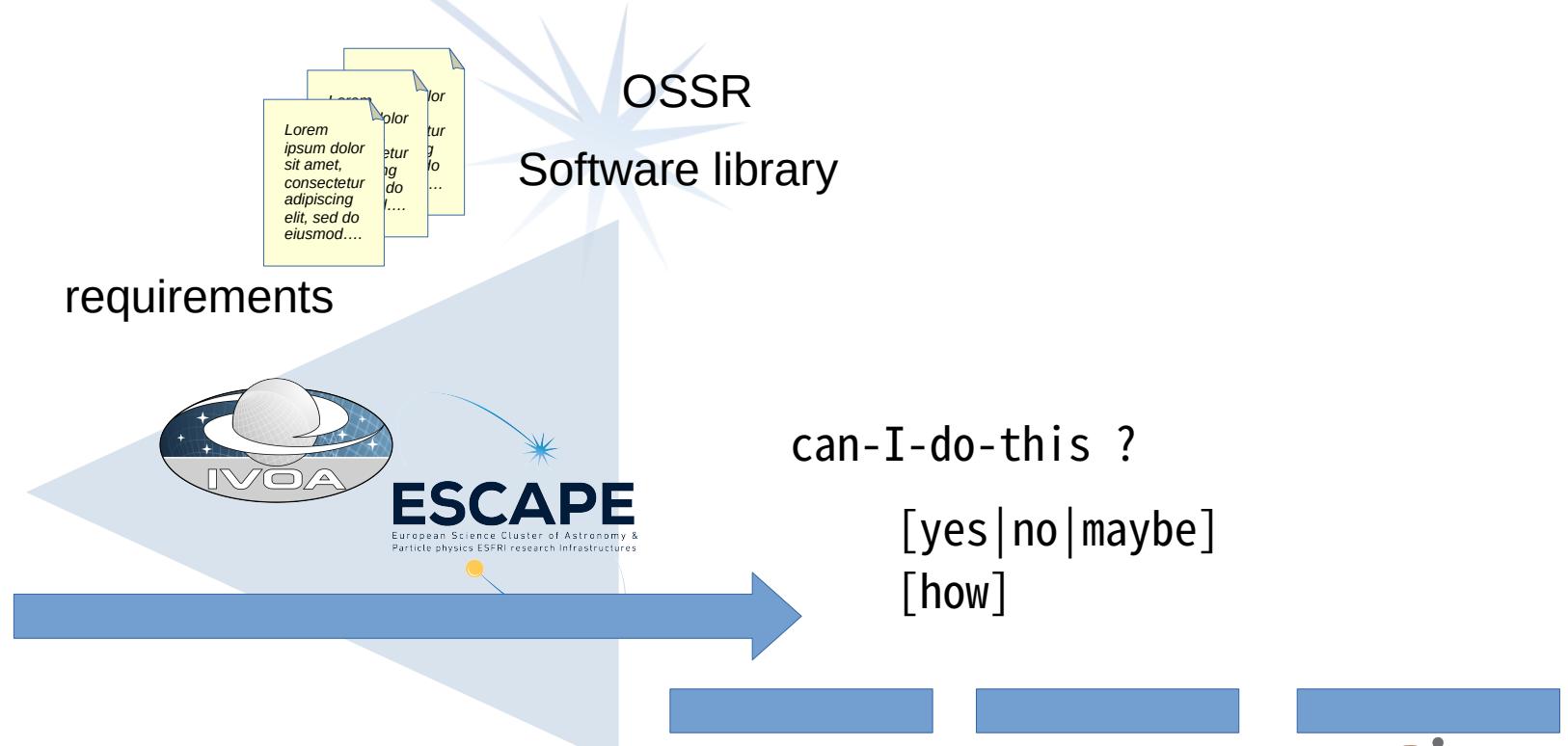


Adding an IVOA ExecPlanner client would enable the ESAP portal to drive IVOA services





IVOA clients would be able to use
ESCAPE services directly



Adding an IVOA ExecPlan interface to
the ESCAPE services enables IVOA
clients to access them directly

Execution planning – ESCAPE + IVOA

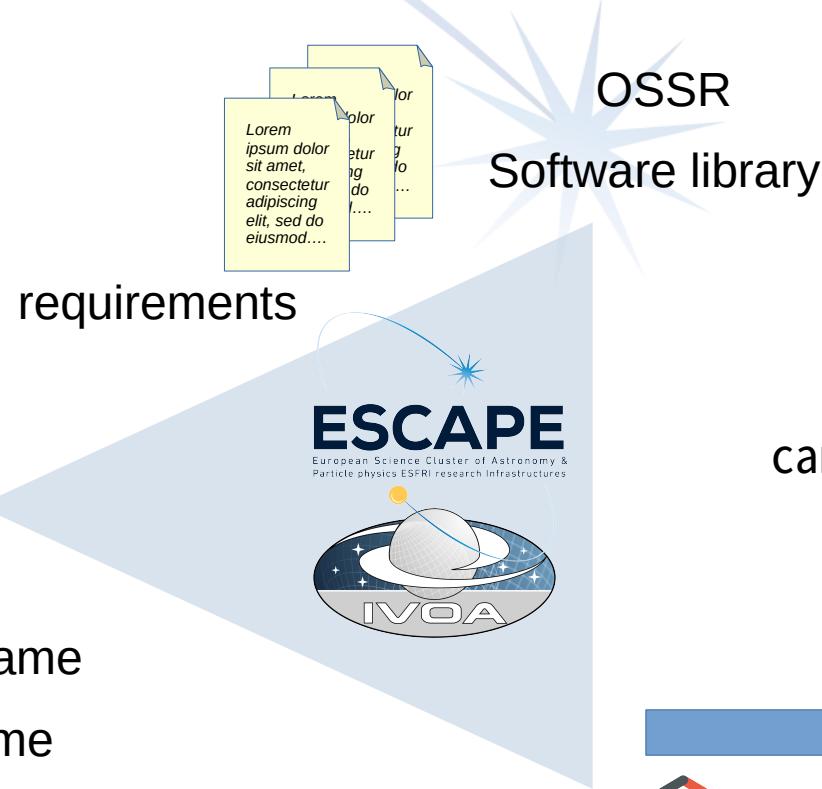
The cost :

Adding an IVOA ExecPlan interface to each of the the ESCAPE services

ESCAPE software metadata stays the same

ESCAPE service metadata stays the same

Services assess the software requirements and respond with how-to instructions



can-I-do-this ?

[yes | no | maybe]
[how]



Execution planning – ESCAPE + IVOA

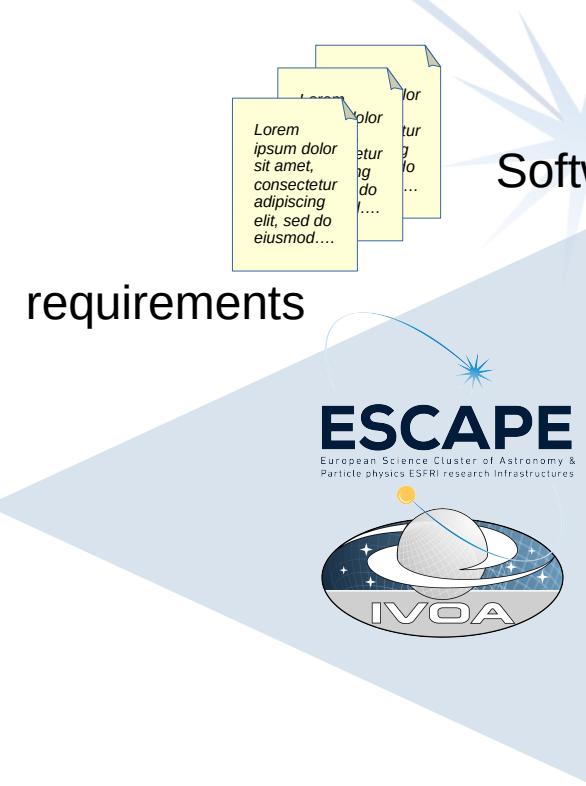
The benefit :

ESCAPE gets access to services
from the IVOA

IVOA gets access to services
inside ESCAPE

Abstract interface :

- Helps to make services interoperable
- Insulates from side effects of version changes
- Facilitates adoption of new technologies



can-I-do-this ?

[yes | no | maybe]
[how]



Execution planning – ESCAPE + IVOA

can-I-do-this ?

Propose a new IVOA standard

Based on ESCAPE use cases
and requirements

Contact me if you are interested :

- Dave Morris <dmr@roe.ac.uk>

Request :

identity : [OIDC token]

request type : [anyURI]

params :

- [name] : [value]

- [name] : [value]

Response :

[yes|no|maybe]

service type : [anyURI]

params :

- [name] : [value]

- [name] : [value]

