

CESAR OSLC Interoperability Specification

Presentation of the OSLC based IOS implementation
approach to the OSLC Community

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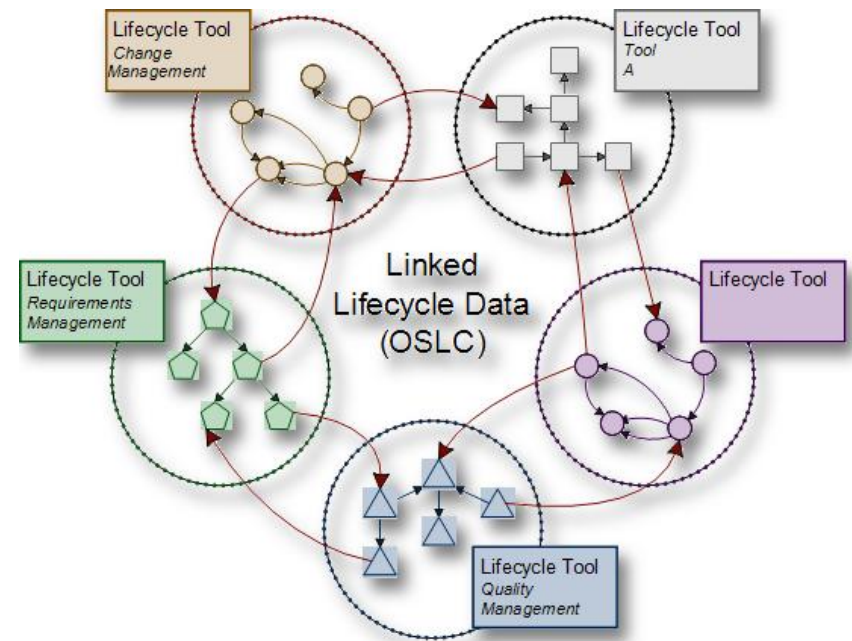
The OSLC IOS as part of the CESAR RTP

RTP: Reference Technology Platform

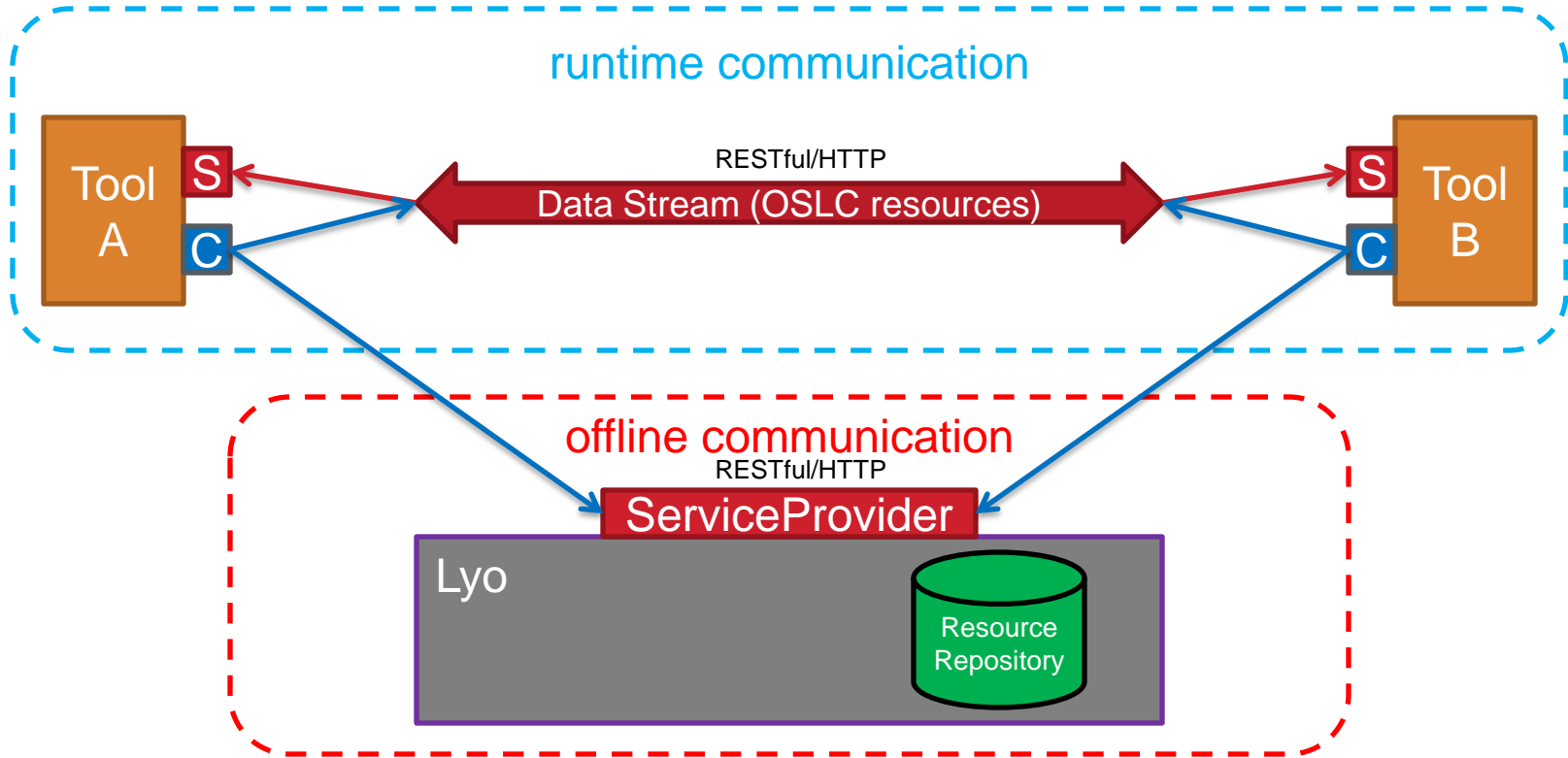
IoS: Interoperability Specification

CMM: CESAR Meta-Model

For IOS aspects, which cannot be covered by OSLC, additional standards or CESAR specific solutions will be considered



CESAR OSLC IoS Implementation Scenarios



runtime communication: One CESAR tool collaboration use case is based on a runtime communication scenario. Tools may communicate at runtime over the ModelBus to exchange data. In addition The runtime communication may be done over the OSLC based IoS.

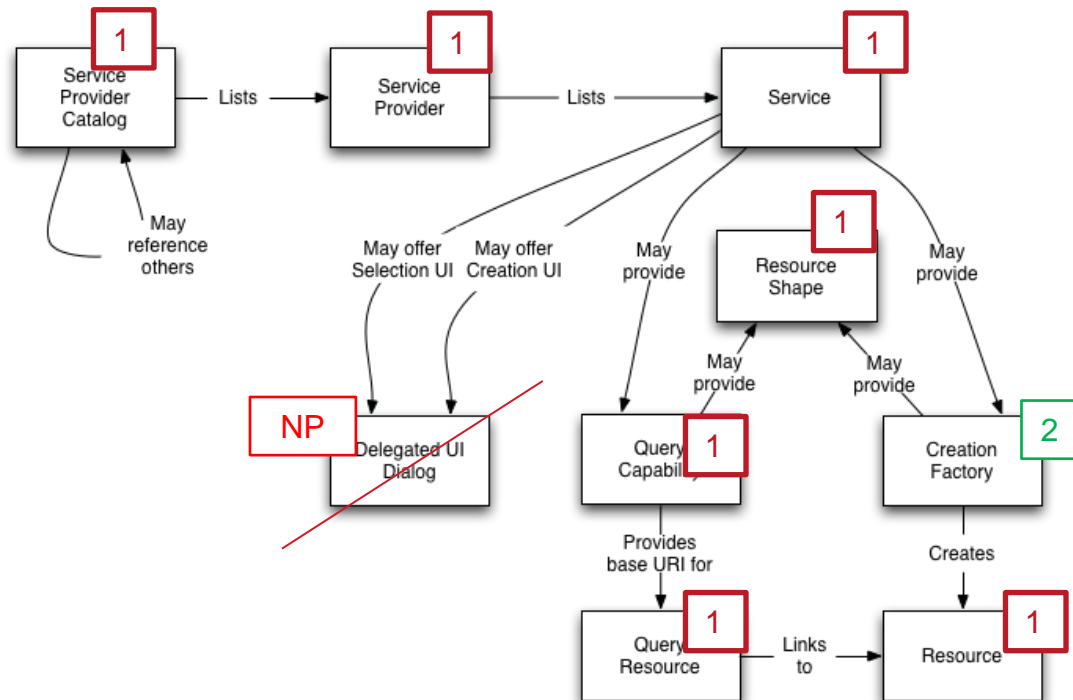
offline communication: The OSLC offline communication capability allows the storage of data as RDF into a repository. This feature is optional. The implementation is already available based on the OSLC Reference Implementation RIO.

C Client: A Tool may request data from other tools or a repository

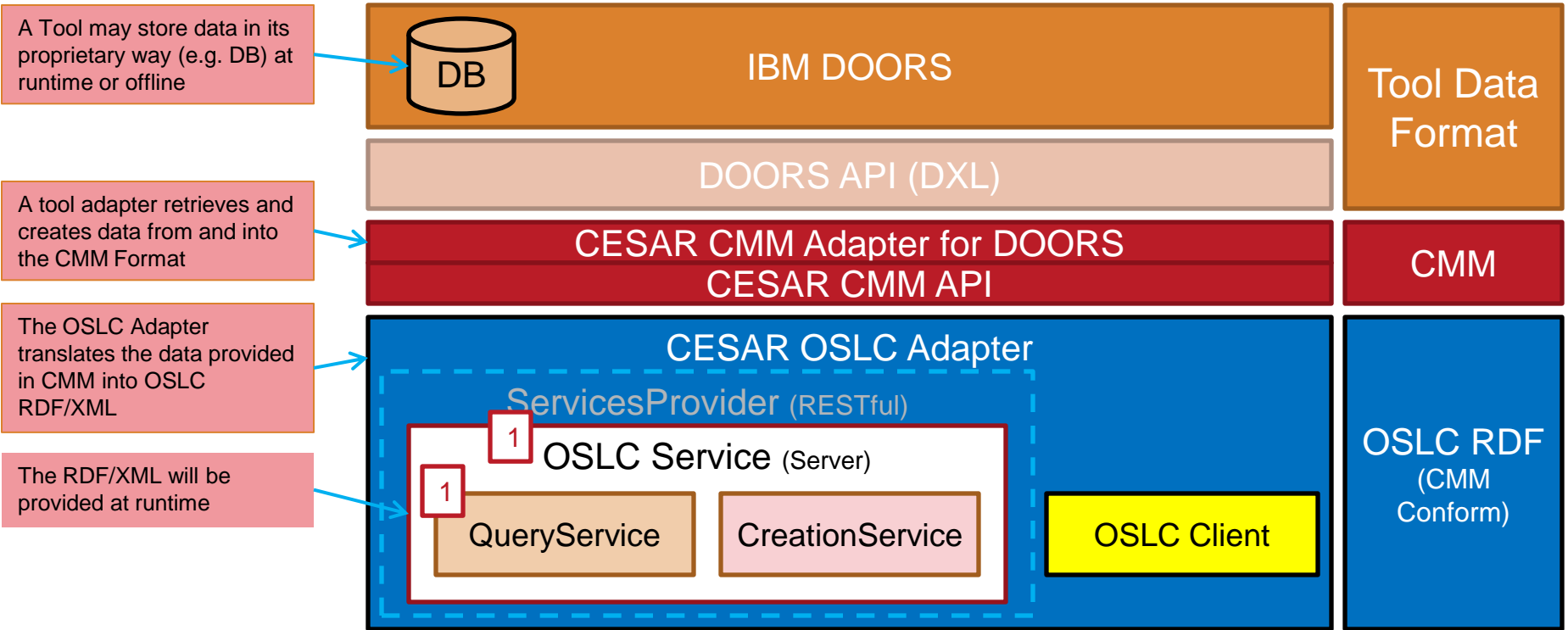
S Service (server): A tool or repository may be requested for data from other tools. It may create new resources or response to queries.

Development Plan for OSLC Services

- Step 1. Provide services for querying resource: Tool A (Client) can query resource from Tool B (Server) or a Repository.
- Step 2. Provide services for creating resource: Tool A (Client) can request a Tool B (Server) or Repository to create a resource based on the data provided by Tool-A. Tool A can store this data in Tool B or the Repository.
- NP. It is not planned that Tools provide services and UIs to present resources over the internet. For this cases we may use the IBM DesignMananger Tool.

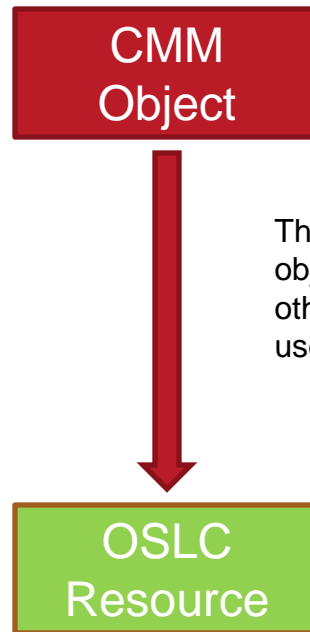


OSLC Integration into the actual CMM Adapter (example based on the DOORS adapter)



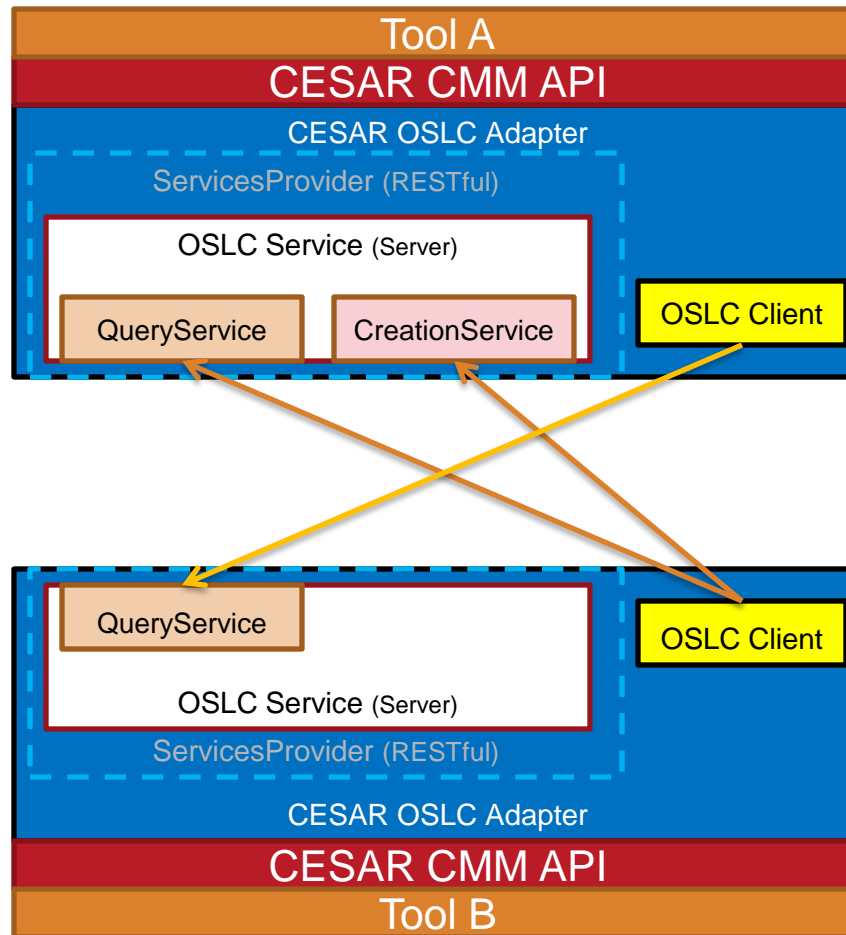
Many OSLC components are available based on the OSLC Reference Implementation (RIO, Lyo), the SPRINT Project (<http://www.sprint-iot.eu/>) and open available IBM Jazz implementations. These components needs to be customized and adapted to fulfil the CESAR use case!

From CMM objects to CMM/OSLC Resources (short term solution)

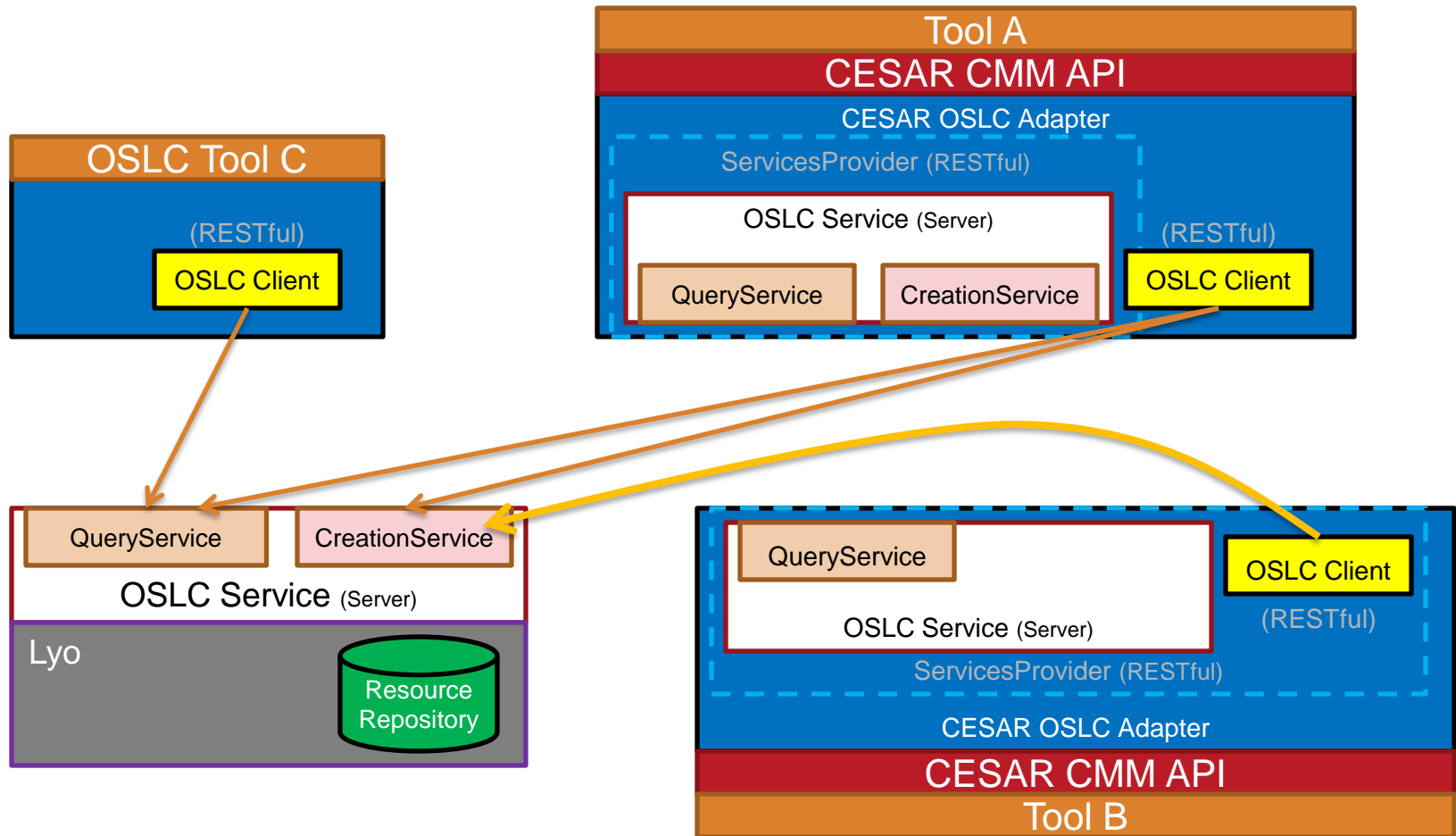


The CESAR CMM API will provide a CMM Object. This object contains all data which needs to be shared with other CESAR tools. The Attributes and Values can be used to generate the OSLC Resource.

Interoperability platform architecture overview for a runtime based communication scenario

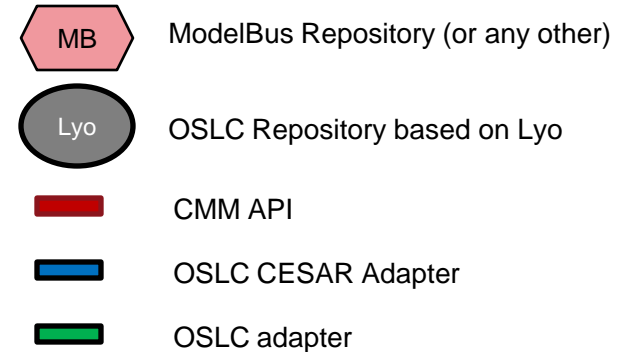
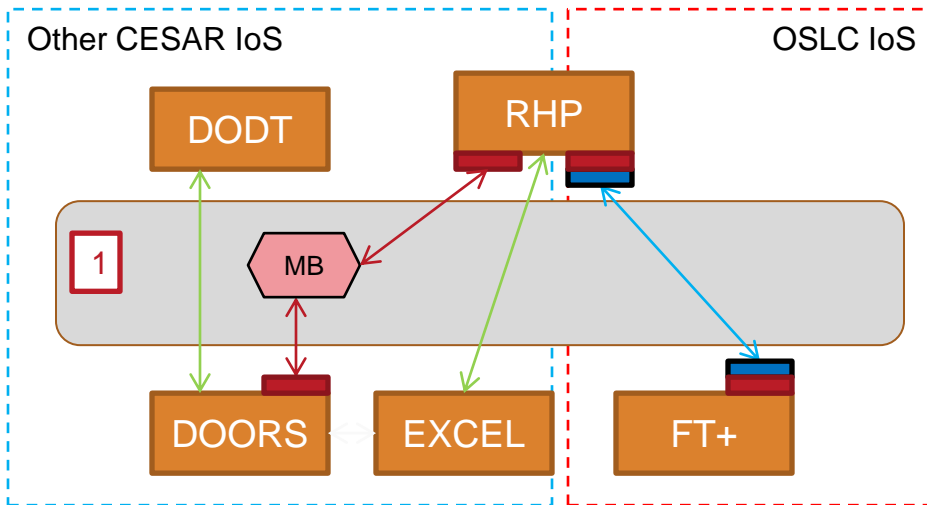


Interoperability platform architecture overview for an RDF Repository based communication

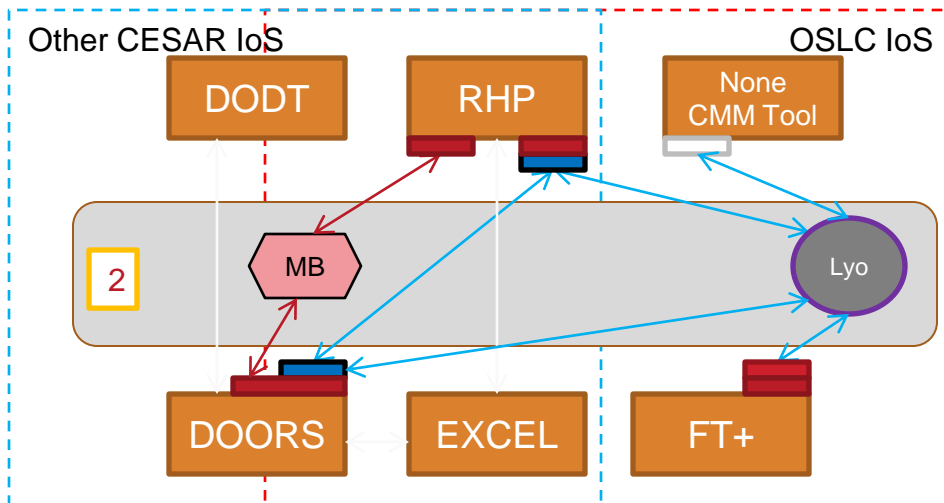


Steps of implementing the OSLC based IoS

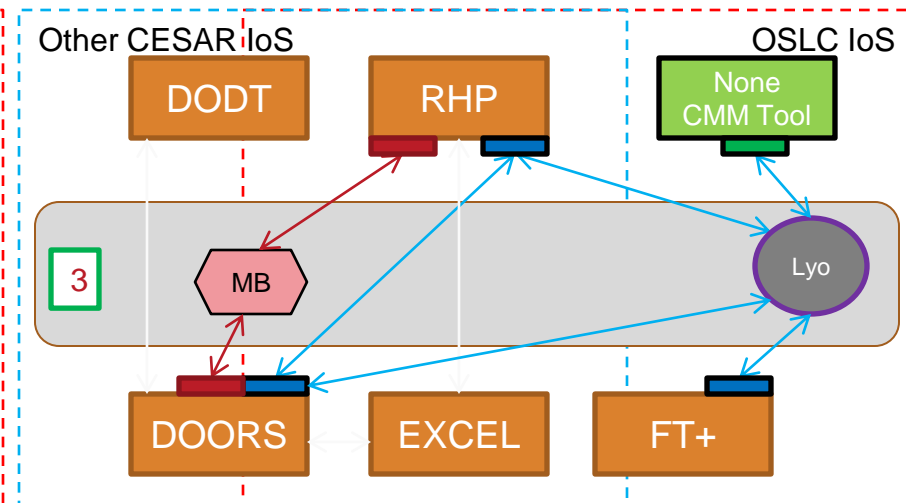
Implementation over the CMM API without an OSLC Repository



Implementation over the CMM API with an OSLC Repository for offline storage of resources but also runtime communication



Implementation without the CMM API



The architecture allows the usage of many different IoS as well as communication forms and repositories. However for the OSLC IoS only a RDF repository like the Lyo (previously RIO) will be used.

Possible CESAR Tools Interoperability Scenarios

Standard Tool: Point to Point Data Exchange (Tool A and Tool B are non CESAR non OSLC tools)

- Tool B can understand the data of Tool A or a Mapping between Tool A language and Tool B must be applied.

CMM Tool: CMM API Data Exchange (Tool A and Tool B are CESAR tools)

- Data of Tool A will be translated into the CMM common format. Tool B and any other CMM tool can now understand this data

CMM/OSLC Tool: OSLC CMM Adapter Data Exchange

- Data of Tool A will be translated into the OSLC CMM RDF format. CMM/OSLC Tools can understand the OSLC domain properties as well additional CMM properties OSLC tools can just understand the OSLC domain part

OSLC Tool: OSLC Data Exchange

- Data of Tool A will be translated into the OSLC Format based on a OSLC domain. Any OSLC tool can understand this data and also any CMM/OSLC Tool

CESAR OSLC Resource Specification

Providing resource structures for possible CMM model shapes!
Start with the CESAR Safety Domain – Define a ResourceShape

General OSLC Implementation approach

Thank you for your attention!

Time for your Questions



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