An Introduction to OGSA-DAI

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OGSA-DAI Overview

- **Web/Grid middleware that provides uniform access to a variety of data resources**
  - **Relational**
  - **XML:DB**
  - **Files, indexed files**
- **Exposes data resources' capabilities**
  - **e.g SQL queries, XPath statements, etc.**
  - **Resources' metadata**
  - **The underlying data model is not hidden**

Web/Grid Services Standards

- **Web Services Resource Framework**
  - **Based on Globus Toolkit 4**
- **Web Services Interoperability – Basic Profile**
  - **Both based on vanilla axis and on OMII platform**
- **Open Grid Services Infrastructure**
  - **Until OGSA-DAI release 6**
- **WS-Data Access and Integration**
  - **Aims to standardise WS interfaces to access data resources on grid environments**
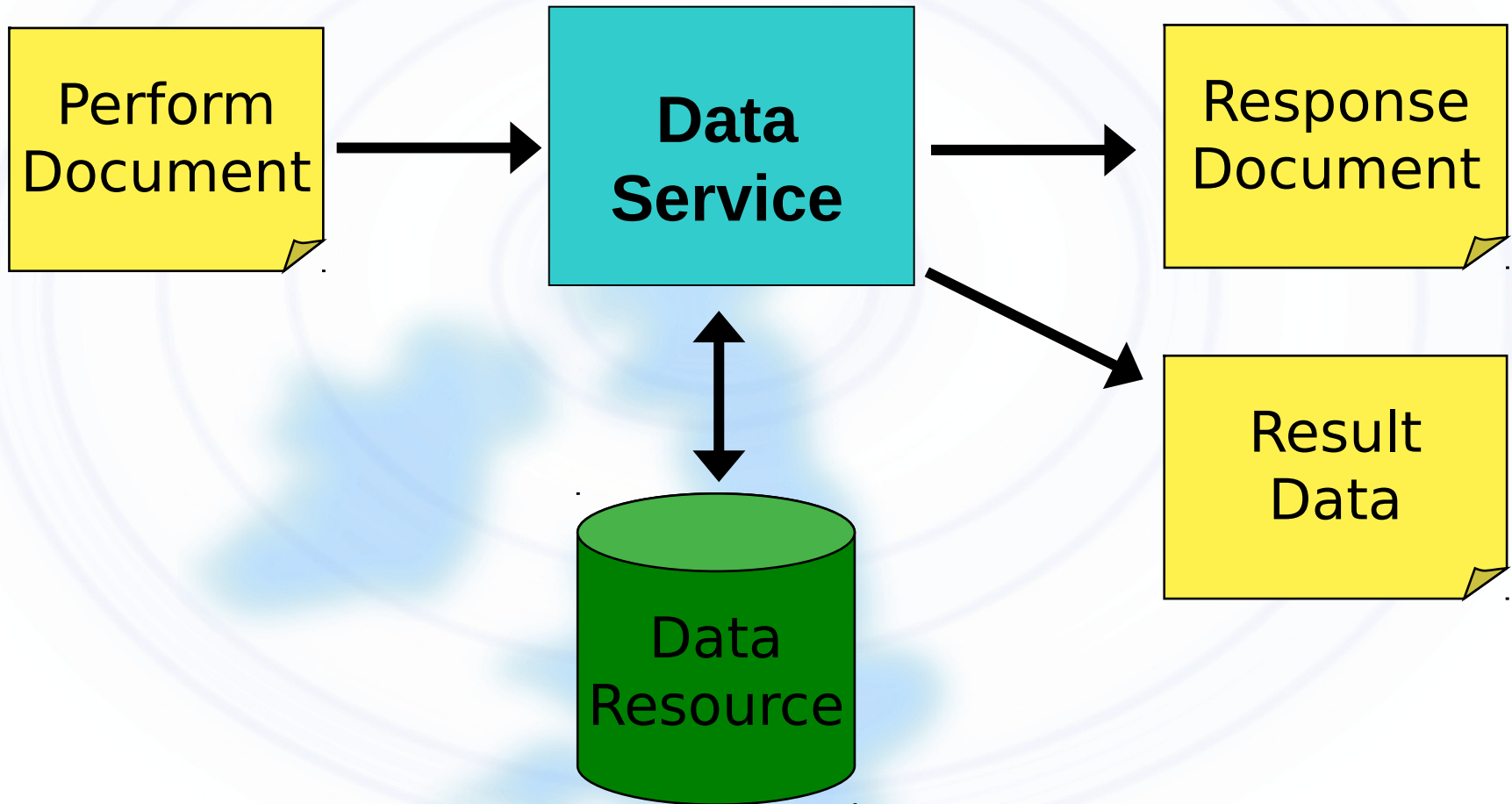   - Relational and XML

Key Characteristics (1)

- **Extensible framework**
  - **Data resources**
    - ▸ Integration/federation
  - **Activities**
    - ▸ Statement
    - ▸ Transformation
    - ▸ Delivery
- **Basic Workflow**
  - **Activity aggregation**
  - **Chain activities**
  - **Parallel/sequential execution**
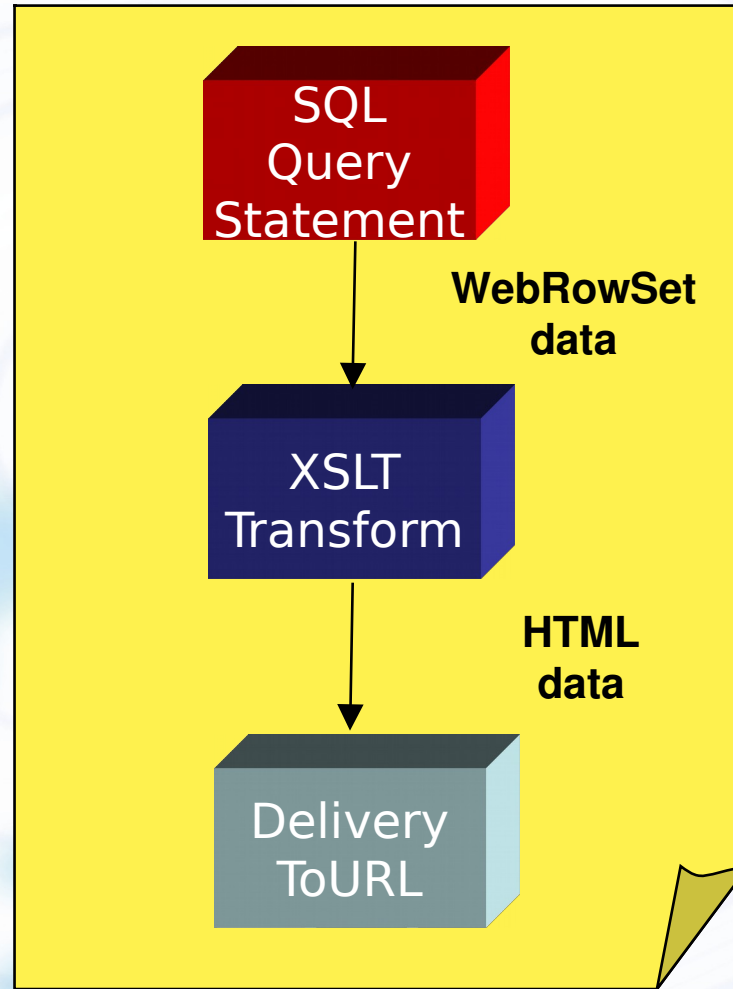
Key Characteristics (2)

- **Client Toolkit**
  - **Developer productivity**
    - ▸ One API
    - ▸ Hides XML details and connection mechanism
  - **Protects developers from changes**
    - ▸ Future OGSA-DAI releases
    - ▸ WSDL interfaces
    - ▸ WSI/WSRF
- **Sessions**
- **Concurrency**
- **Transactions**

Example (1)

Example (2)

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Summary

- **Web/Grid services that enable access to data resource on grids**
- **Extensible architecture**
  - **WMS/WFS/WCS (OGC) data resource and activities – EDINA**
  - **PostGIS data resource and activities**
- **Workflow functionality**
- **Client Toolkit**
- **Based on Web/Grid standardisation efforts**
- **www.ogsadai.org**