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VO-Dance an IVOA tools to easy publish data into VO and it's extension on planetology request.

R. Smareglia (1),M.T. Capria (2) and M. Molinaro (1)
(1) INAF-OATs, Italy (smareglia@oats.inaf.it, molinaro@oats.inaf.it)
(2) INAF-IAPS Italy (mariateresa.capria@iasf-roma.inaf.it)

Abstract

Data publishing through the self standing portals can be joined to VO resource publishing, i.e. astronomical resources deployed through VO compliant services. Since the IVOA (International Virtual Observatory Alliance) provides many protocols and standards for the various data flavors (images, spectra, catalogues …), and since the data center has as a goal to grow up in number of hosted archives and services providing, the idea arose to find a way to easily deploy and maintain VO resources. VO-Dance is a java web application developed at IA2 that addresses this idea creating, in a dynamical way, VO resources out of database tables or views. It is structured to be potentially DBMS and platform independent and consists of 3 main tokens, an internal DB to store resources description and model metadata information, a restful web application to deploy the resources to the VO community. It's extension to planetology request is under study to best effort INAF software development and archive efficiency.

1. Introduction

VODance allows our data centre to create VO compliant DAL services out of a database table or view, either on a local or a remote database, on the fly. The basic requirement was the ability of creating an arbitrary number of DAL services at runtime by simply filling in a metadata description of the service and of the individual columns. The data to export is supposed to be present in the form of a database table or view. The only requirement for the database is a JDBC Java driver to be available for the connection.

2. Deployment environment

VODance is currently deployed in a cluster environment. In particular, a number of shared-nothing instances of application servers host the web application. The internal database is in turn hosted on an high available MySQL cluster, and software load balancing is performed by means of Linux Virtual Server, in a redundant configuration.
A file server web application is deployed in the shared-nothing instances as well, for serving images accordingly to the SIAP services. The administration user interface is deployed on a different web server that shares the internal database cluster with the web application that actually serves the DAL services.

3. Planetology extension

The structure of VODance is mature to import additional VO or like VO standards, IVOA-TAP is now under implementation. It's can be use to implement also VO Planetology standards, mainly if there are similar to S*AP or TAP.

References

[1] IVOA : http://www.ivoa.net

[2] Smareglia, R.; Laurino, O.; Knapic, C., VODance: VO Data Access Layer Service Creation Made Easy., Astronomical Data Analysis Software and Systems XX. ASP Conference Proceedings, Vol. 442, 2011