Using registries to integrate bioinformatics tools and services into workbench environments

- DTU Orbit (11/02/2019)

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The diversity and complexity of bioinformatics resources presents significant challenges to their localisation, deployment and use, creating a need for reliable systems that address these issues. Meanwhile, users demand increasingly usable and integrated ways to access and analyse data, especially within convenient, integrated “workbench” environments. Resource descriptions are the core element of registry and workbench systems, which are used to both help the user find and comprehend available software tools, data resources, and Web Services, and to localise, execute and combine them. The descriptions are, however, hard and expensive to create and maintain, because they are volatile and require an exhaustive knowledge of the described resource, its applicability to biological research, and the data model and syntax used to describe it. We present here the Workbench Integration Enabler, a software component that will ease the integration of bioinformatics resources in a workbench environment, using their description provided by the existing ELIXIR Tools and Data Services Registry.

General information
State: Published
Organisations: Department of Systems Biology, Center for Biological Sequence Analysis, Institut Pasteur, University of Bergen
Contributors: Ménager, H., Kalaš, M., Rapacki, K., Ison, J.
Number of pages: 6
Pages: 581-586
Publication date: 2016
Peer-reviewed: Yes

Publication information
Journal: International Journal on Software Tools for Technology Transfer
Volume: 18
Issue number: 6
ISSN (Print): 1433-2779
Ratings:
BFI (2019): BFI-level 1
Web of Science (2019): Indexed yes
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 1.79 SJR 0.33 SNIP 1.083
Web of Science (2017): Impact factor 1.077
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.14 SJR 0.628 SNIP 1.559
Web of Science (2016): Impact factor 1.612
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 1.59 SJR 0.641 SNIP 1.601
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 1.5 SJR 0.569 SNIP 1.565
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 1.62 SJR 0.699 SNIP 1.75
ISI indexed (2013): ISI indexed no
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 1.28 SJR 0.538 SNIP 1.403
ISI indexed (2012): ISI indexed no
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 1.65 SJR 0.641 SNIP 1.571
ISI indexed (2011): ISI indexed no
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.697 SNIP 2.054
BFI (2009): BFI-level 1