

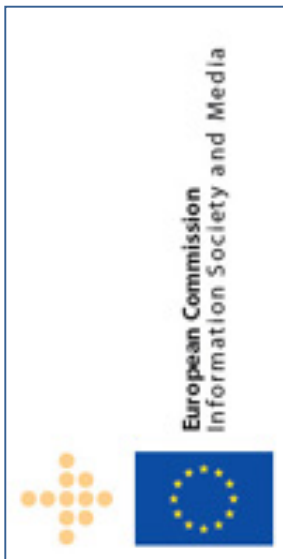


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<i>Authors</i>	<i>Leonardo Candela, Gianpaolo Coro, Luca Frosini, Nunzio Andrea Galante, Gabriele Giammatteo, George Kakalettris, Lucio Lelii, Valentina Marioli, Fabio Sinibaldi</i>

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Author(s)	Leonardo Candela (CNR), Gianpaolo Coro (CNR), Luca Frosini (CNR), Nunzio Andrea Galante (ENG), Gabriele Giammatteo (ENG), George Kakalettris (UOA), Lucio Lelii (CNR), Valentina Marioli (CNR), Fabio Sinibaldi (CNR)
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DISCLAIMER



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The goal of BlueBRIDGE, *Building Research environments for fostering Innovation, Decision making, Governance and Education to support Blue growth*, is to support capacity building in interdisciplinary research communities actively involved in increasing the scientific knowledge of the marine environment, its living resources, and its economy with the aim of providing a better ground for informed advice to competent authorities and to enlarge the spectrum of growth opportunities as addressed by the Blue Growth societal challenge.

This document contains information on BlueBRIDGE core activities, findings and outcomes and it may also contain contributions from distinguished experts who contribute as BlueBRIDGE Board members. Any reference to content in this document should clearly indicate the authors, source, organisation and publication date.

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GLOSSARY

ABBREVIATION	DEFINITION
BlueBRIDGE	Building Research environments for fostering Innovation, Decision making, Governance and Education to support Blue growth
FHNManager	Federated Hosting Node Manager
IAAS	Infrastructure As A Service

DELIVERABLE SUMMARY

Deliverable D10.1 – “BlueBRIDGE Resources Federation Facilities” reports the release of the BlueBRIDGE facilities for integration of resources from external infrastructures and management of integrated resources. The deliverable covers the first nine months of the BlueBRIDGE project. An update to this deliverable is expected at project month M28 with Deliverable D10.2.

This deliverable is of type “Other” and it consists of a set of wiki pages hosted on the BlueBRIDGE project wiki [1] plus a set of documentation pages for single facilities hosted by the gCube wiki [2].

The full version of this deliverable is available at the following URL:

http://support.d4science.org/projects/bluebridge/wiki/D101_BlueBRIDGE_Resources_Federation_Facilities

The deliverable is divided in three main sections following the structure of Work Package 10: T10.1 – facilities for integrating computing infrastructure resources, T10.2 – facilities for integrating data infrastructure resources and T10.3 – facilities for federated resources management. Facilities described in each section are briefly introduced below.

Section “Facilities for Integrating Computing Infrastructure Resources” includes the following facilities:

- **Federated Hosting Node Manager Service (FHNManager):** a service to interface with Infrastructure As A Service (IAAS) providers to instantiate and control new gCube nodes hosted on external infrastructures;

Section “Facilities for Integrating Data Infrastructure Resources” includes the following facilities:

- **Biodiversity Data Access:** a set of facilities to uniformly access biodiversity data sources of arbitrary location and size;
- **Geospatial Data Access:** a set of facilities to uniformly access geospatial data sources (e.g. environmental data) of arbitrary location and size;

Section “Facilities for Federated Resources Management” includes the following facilities:

- **FHNManager Portlet:** a front-end administration application integrated in the gCube portal for the FHNManager;
- **Accounting Framework:** libraries and tools to uniformly collect, aggregate and analyse accounting information;
- **Authorization Framework:** services and libraries to uniformly manage authorization in gCube resources;
- **Data Transfer Facilities:** a set of facilities to efficiently transfer data to, from and within the infrastructure;

FHNManager, FHN Manager Portlet, Accounting Framework, and Authorization Framework are completely new components entirely designed and developed in the context of BlueBRIDGE. Biodiversity Data Access,

Geospatial Data Access and Data Transfer Facilities are components that pre-exist BlueBRIDGE. In the context of BlueBRIDGE these components have been enhanced¹, e.g., Geospatial Data Access portlets have been revised to support ncWMS layers and COLORSCALERANGE, all the components have been revised to conform to the new authorization framework, some bugs have been resolved.

The deliverable provides, for each facility, a description, the documentation for developers and system administrators, how-to guides and usage instructions for different use cases and links to open source code and binaries.

The intended readers of this deliverable are (a) the community in the large willing to be informed on the solutions BlueBRIDGE offers for federated resources management, (b) the gCube developer community to know how to integrate, use and build on top of the facilities described by the document, and (c) the gCube administrators to know how to setup, configure and manage the integration of a gCube infrastructure with external resources.

¹ A detailed list of enhancements is included in the Wiki as well as in the gCube Release notes https://wiki.gcube-system.org/gcube/Software_Integration_and_Distribution:_Release_Log

REFERENCES

- [1] BlueBRIDGE project wiki - <https://support.d4science.org/projects/bluebridge/wiki>
- [3] gCube wiki - https://wiki.gcube-system.org/gcube/About_gCube