



# CoherentPaaS

Coherent and Rich PaaS with a Common  
Programming Model

ICT FP7-611068

## Local Transaction Manager for all Cloud Data Stores

D4.3

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PU Public

**PP Restricted to other programme participants (including the Commission)**

RE Restricted to a group specified by the consortium (including the Commission)

CO Confidential, only for members of the consortium (including the Commission)

## Revision History

Date	Editor	Status	Version	Changes
8.03.2015	Iván Brondino	Draft	0.1	Initial draft
20.03.2015	Marta Patiño		0.2	Updating several sections
25.03.2015	Dimitar Nedev		0.3	Minor MonetDB integration clarifications
26.03.2015	Marta Patiño		1	Final version

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## More information

Additional information and public deliverables of CoherentPaaS can be found at: <http://coherentpaas.eu>

# 1. Executive Summary

This deliverable describes the integration of the Holistic Transactional Management (HTM) with the different data stores in CoherentPaaS. The HTM uses a component called Local Transactional Manager (LTM) to orchestrate the transaction lifecycle. The LTM is the component that acts as interface between the data store and the HTM. For this purpose it uses the interface defined in [1]. The LTM is the component to be integrated with each of the data stores in CoherentPaaS.

The CoherentPaaS HTM provides ACID transactions based on snapshot isolation for applications accessing heterogeneous data stores. Since the HTM implements snapshot isolation, it uses multi-version. Thus, each data store must implement multi-versioning for the stored data.

This deliverable describes how the different data store clients in CoherentPaaS have been integrated with the LTM. Some of them use their own transaction manager and coordinate with the CoherentPaaS HTM and other data stores fully delegate the transaction management to the CoherentPaaS HTM.