



# CoherentPaaS

Coherent and Rich PaaS with a  
Common Programming Model

ICT FP7-611068

## Profiling instrumentation of cloud data stores

D8.2

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16.02.2015	J. Pereira	Draft	0.2	Integrate sections for data stores.
01.03.2015	J. Pereira	Draft	0.3	Corrections by authors.
15.03.2015	J. Pereira	Draft	0.4	Improvements after first review.
31.03.2015	J. Pereira	Draft	0.5	Corrections after internal review.

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## More information

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

# 1. Executive Summary

The X-Ray subsystem aims at a fine-grained analysis and real-time visualization of performance and resource usage of cloud applications deployed on CoherentPaaS. This enables the identification of each request, which software modules it uses, and associates resource usage to them. In particular, it allows cloud data stores to provide detailed profile information about the executed queries such as their cost, selectivity, and so on.

This document describes how each data store is instrumented to provide information to the X-Ray subsystem. The first alternative for Java data stores is to use the X-Ray bytecode instrumentation to generate monitoring events, making the most use of the generic subsystem. The second one is to translate existing information or to directly generate monitoring events that are processed by X-Ray.

This document also describes briefly how to install or configure X-Ray instrumentation for each data store. The configuration files and scripts are available in the CoherentPaaS git server, in project xray-integration and make use of the X-Ray Subsystem release 0.5.0. The X-Ray Subsystem is described in *D8.4 X-Ray Subsystem (initial implementation)* [1], containing detailed design and implementation information as well as a tutorial and evaluation.