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OpenStack Trove: Evaluation and Interfacing with the CERN Database on Demand Service [1]

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Project Specification: As part of the ongoing migration of CERN?s virtual infrastructure to an OpenStack based solution the CERN IT-DB group, responsible of the Database on Demand service, is migrating towards OpenStack from an Oracle VM platform, on an effort to converge with the global CERN IT infrastructure platforms. The Database on Demand Service is a Database as a service developed in-house within the CERN IT DB group. The service manages the underlying infrastructure while providing the end user with an easy to use interface to perform database backups, recoveries, database configuration, and monitoring. Since its most recent release Icehouse, the OpenStack platform includes a new component, named Trove, which provides Database as a Service functionalities. Thus, the main goal of the project is to evaluate this component, OpenStack Trove, from the point of view of the feasibility of using it as a resource provider for the Database on Demand service. With this objective, some major points of interest are: the current status and maturity of the Trove project, ability to support additional database types, and compatibility with Scientific Linux as the computing platform running most CERN services. A secondary goal of the project is to evaluate different Java interfaces to OpenStack which would enable the service?s software to interact with the OpenStack service to create and manage instances for the database servers.
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