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DBaaS with Enterprise Manager [1]

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The new release of Oracle 12c contains new features which satisfy continuously growing needs demands for resources. Large enterprises nowadays may use hundreds or thousands of databases combined with different platforms on multiple physical servers. Because of improvements in hardware technology, especially the increase in the number of CPUs, servers are able to handle heavier workloads than before. A database may use only a fraction of the server hardware capacity, which can waste hardware resources. To show the problem in reduced scale, Figure 1depicts 11 databases, each with its own application and server. A head DBA oversees a team of four DBAs, each of whom is responsible for two or three databases. One possible solution to the problem is to consolidate data from multiple databases into one database on one computer which is known as database consolidation. Database consolidation is feasible by using new features proposed by Database 12c Release, i.e. Multi-tenant Environment and Pluggable Databases. Multi-tenant environment of Oracle, also, offers a path-breaking technology that delivers ?Database as a service?. Database as a Service (DBaaS) is a paradigm where end users (DBAs, Developers, QA Engineers, Project Leads, etc.) can request database services, consume it for the lifetime of the project, and then have then automatically de-provisioned and returned to the resource pool. The final goal of this project is to investigate and test the aforementioned features in practise. In the following chapters, we implemented a few test cases related to Pluggable Databases both in Oracle Enterprise Manager12c (EM12c) and SQL Plus environments. These use cases include topics related to users, manipulation of databases and database locations. It is studied the paradigm to make a request for a ?Database as a Service- DBaas? and the necessary steps are described combined with the possible alerts or problems faced and resolved. In chapter 3.5, we have a presentation about the integration of Oracle VM Manager and Oracle Enterprise Manager 12c and a comparison is made between these two tools During this project, some scripts were developed to ease managing of both databases and related users. These support scripts are described in chapter 4.
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