

Oracle Customers Manage Corporate and External Identities with Oracle Berkeley DB Embedded in Oracle Unified Directory and Oracle Directory Server Enterprise Edition

Oracle Unified Directory - Oracle's next generation Directory Server - is the identity store for Oracle Identity and Access Management solutions, as well as for tens of thousands of applications deployed by Oracle customers. Oracle Unified Directory has leveraged Oracle Berkeley DB Java Edition since 2011. Its ancestor product Oracle Directory Server Enterprise Edition (formerly iPlanet, Sun One DS, Sun DSEE) leverage Oracle Berkeley DB (C edition) to manage over three billion identities.

Oracle Unified Directory is designed to scale to the largest Telco and Finance deployments where specific needs can scale up into billions of identities across geographically distributed environments.

"By embedding Oracle Berkeley DB into Oracle Unified Directory, we are able to provide to our customers an efficient, highly scalable, easy to install and use Directory Service."

– Shirish Puranik, VP of Oracle Identity Management Development

Challenges

After the success of Oracle Directory Services Enterprise Edition, we began looking for a storage solution that would help us boost Directory Server performance for the future needs of modern directory services. We discussed goals in terms of both the number of managed entries, and level of performance delivered to applications.

As with all other Oracle products, it was important to provide a solution built on best of breed components developed in-house. We wanted a global solution that would facilitate our customers' deployments avoiding painful, costly, hard to maintain and error-prone integration steps.

Oracle Unified Directory customers, as did Oracle Directory Service Enterprise Edition customers before them, expressed the need for a self-contained solution with minimal administration overhead, no additional cost, and no dependency on an external database.

As Oracle Unified Directory is provided and certified on many platforms, it was essential to use an embedded identity store fully qualified on those certified platforms, and supported for the long term.

Solutions

- **[Oracle Berkeley DB Family of Products](#)**
Provides the best of breed platform for our products, which is fully integrated with the Oracle's stack of products from hardware to the directory services and even further to the Identity Management solution. Berkeley DB leverages Operating Systems, files systems and Java implementations. This helps the Oracle Directory Services team provide a solution that is tuned and optimized across the stack.

- **Oracle Berkeley DB**

Provides high performance, scalability, and high availability for our largest customers in the Telecom and Finance industries. It addresses their needs for hundreds of millions of users quickly expanding into billions with new Internet of Things (IoT) deployments.

Oracle Berkeley DB and Oracle Berkeley DB Java Edition drive market evolution. For example, customers have transformed their directories from pure read-only, white-pages into a centralized repository, or Identity Store, that stores dynamic data frequently updated.

- **Single Global Approach**

Oracle Berkeley DB Java Edition works with Oracle Unified Directory to provide one, global, Java-based approach to the directory services. This enables coherent optimization and tuning, with greater stability, and less exposure to memory leaks.

- **Embedded Storage**

Oracle Berkeley DB is fully embedded in our directory solution. This frees directory administrators from tasks related to using an external database.

- **Additional Benefits of the Berkeley DB product family**

- Leverages efficiently configured hardware with reduced database size. More customer data can be maintained on disk and in memory for a given hardware configuration.
- Enables Oracle Unified Directory to provide greater performance by leveraging Oracle Berkeley DB's indexes, caching, and file system structure.

Why solution from Oracle?

With years of experience between the two engineering teams, thanks to Berkeley, Oracle Unified Directory gets ahead of the competition with new features, unique optimizations, evolution, tuning, diagnostic tools, and quick turnaround whenever fixes are required.

The successes of our many customers in the Finance and Telecommunication industries are our best proof, illustrating the benefits of embedding Berkeley DB in our products.

Resources

- [Oracle Unified Directory](#)
- [Oracle Unified Directory White Paper](#)
- [Oracle Directory Server Enterprise Edition](#)