

Two Factor Authentication

For

Oracle Access Manager

Using

Swivel

By

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Two Factor Authentication with OAM and Swivel

1. Background

The project was initiated by a client who desired to perform two factor authentication using Oracle Access Manager and Swivel Secure's PINsafe - <http://www.swivelsecure.com/core/pinsafe/> using single sign on (SSO). Initial task involved development of a java and C plug in to connect Oracle Access Manager (OAM) with PINSafe.

Once the development was completed, Coexl decided to offer the solution in a product form enabling its clients to cost effectively implement 'Two Factor Authentication' using OAM and PINsafe. As this paper explains, the solution can be extended to other scenarios. This would save costs and time while providing a proven solution.

2. Why Envision IT Solution for Two Factor Authentication?

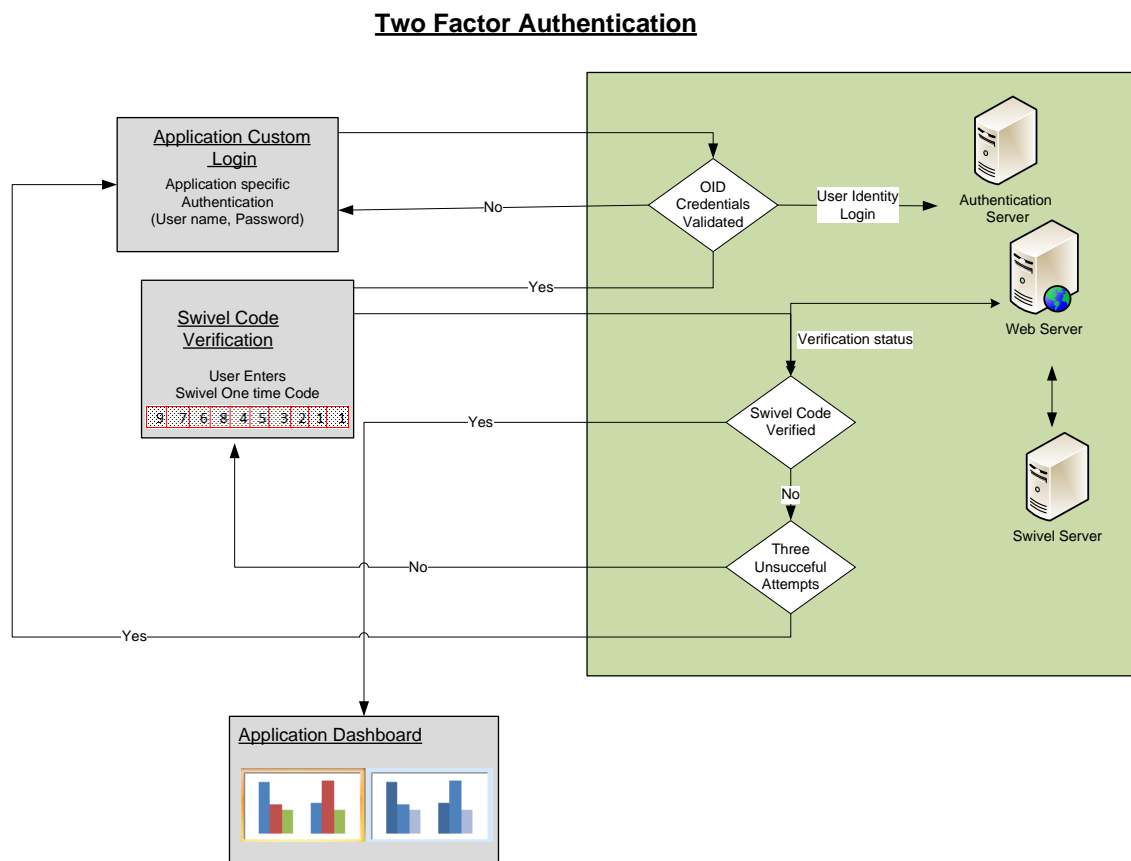
While it is always possible to develop a solution in-house, Coexl offers a ready to use solution. Besides saving in upfront costs, the solution has many other advantages, such as:

- Lesser effort by IT department in implementing the solution. They no longer have to go through the rigors of implementing test servers and testing. As the solution is already proven, it can be quickly deployed on Test server and then moved to production server. This would save enormous time for IT consultants.
- Unlike a solution to be built from ground up, the solution has built in capabilities and will be delivered in a short time. Further, no longer client will need to find common time between different consultants to implement. In our experience, this could delay project by months.
- Coexl will spend time in fine tuning the product for client needs then development. Hence clients a better product in lesser time and costs.

3. Solution Design

The solution adds an additional second factor authentication besides Oracle Access Manager authentication. Second factor authentication is performed by a generic Swivel's PINsafe plugin developed by Coexl.

The following figure shows two factor authentication application logic. Initially user is presented with application specific custom login screen. On successfully login, user is presented with Swivel Code Verification page. Swivel code verification page displays a bit map with numbers. Users when initially configured for two factor authentication, will chose a onetime code which should contain 4 digits. Users are presented with a bitmap with a sequence of numbers e.g. 9768453211. If the user's one time code is 2357 he/she need to enter digits, 7642 to successfully authenticate via swivel PINsafe authentication. Users are presented with a different random set of digits every time they log in, in a machine unreadable bitmap format which makes this authentication foolproof against ingenious machines and humans.



4. Other Possible implementations

Other possible implementations with variations from the above generic two factor authentication scenario described above are possible.