

Oracle Application Express

Niall O'Neill, November 2007

About the author

Niall O'Neill is a Senior Consultant with Curach Consulting, specialising in technical architecture and application design. Before joining Curach, Niall worked as a Consultant with Accenture for over 5 years, gathering an impressive profile from a number of significant enterprise systems. Niall has a strong technical background, with a deep understanding of the principles underpinning effective technical architecture and system design, complimented by effective leadership and proven project management skills.

Introduction

Most people in the IT industry would consider "Application Express" an oxymoron. Custom application development is often anything but express. With some technologies, even the setup of a development environment can be a project of its own.

It can be months before anything tangible is developed, and over time, business users have come to accept the black hole of custom application development to be the unavoidable and unquestionable cost of an application that will (in theory) fit their requirements.

For many business applications, the expense and risk of a custom web application is considered too great and packages such as Microsoft Access and Excel are used. The resulting databases and spreadsheets are often complex and, while 'doing the job', are subject to the inherent limitations of performance, security, scalability, concurrent access and maintainability.

Application Express - alternative

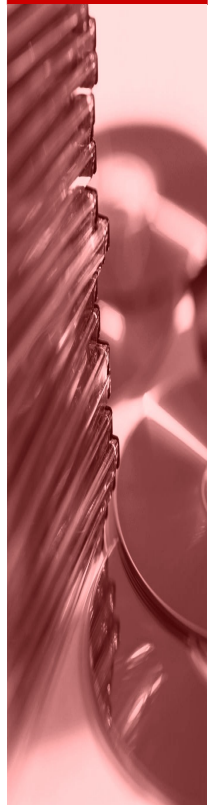
Oracle's Application Express aims to provide an alternative to Access and Excel, and to the lengthy development lifecycle that makes custom development a difficult option to sell to business managers. It is a 'rapid web application development tool' that is bundled with all versions of the Oracle database, from Express to Enterprise. Customers can use Application Express for development and execution with no additional licensing cost.

Uniquely, the development environment is web-based. This feature alone means developers can be productive from the first hour of the first day, rather than having to spend time installing tools, libraries, setting environment variables and all the other artefacts of a traditional development environment. Developers are given access to a workspace, which can be individual or shared. Within this workspace, they can create or edit applications through an internet browser.

Application Express applications are composed of pages, shared components, such as user interface templates and supporting objects such as database scripts. All components are created using wizards, or copied

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from existing components. Once created, all properties of a component are editable through property panels. Wizards allow the rapid creation of pages to perform common database-driven functionality such as listing rows from a database table or adding data without having to write a line of code. Once a page is created, it can be run instantly, without complex compilation or deployment processes.

Where finer-grained control is required, every aspect of the page's behaviour can be controlled through PL/SQL, CSS and Javascript. For example, an item on the page can be calculated by a PL/SQL routine. By underpinning Application Express with PL/SQL, Oracle are capitalising on the extensive PL/SQL skillbase, and enabling customers to either leverage existing code in new applications, or build logic that can be used in both front and back-end applications.

If you're an old hand in the Oracle world, you're probably thinking, 'Hang on, that sounds like Oracle Forms. And what about Oracle's J2EE Application Development Framework - I thought that was the successor to Forms'. Well, Oracle Forms is no longer in active development, and while the wide-scale use of Forms means it won't be disappearing overnight, developing entirely new applications using Forms is only compounding your migration headache. And while Oracle's strategic platform for large enterprise applications is J2EE and ADF, Application Express is intended for smaller scale development - a departmental application for example.

Applications run within the same Application Express framework as they are developed, though they can be moved to different instances for test and production by exporting and importing the application in the form of a SQL script. As the framework is part of the Oracle database, this means Application Express benefits from the performance, scalability and concurrency of the database - so it's not just the development that is 'Express'.

Curach Consulting experience

Curach Consulting has successfully developed a number of applications using Application Express, for internal use and for clients. Examples include:

- a time reporting application
- a financial projection application which we migrated from a complex, multi-sheet Excel workbook
- a point-of-sales order recording application
- an online forms system.

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