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RESEARCH NOTE SALESFORCE.COM'S SANDBOX: A NEW REASON TO GO ON DEMAND

THE BOTTOM LINE

Sandbox is an on-demand environment in which developers can build, test, and deploy Salesforce.com-related applications. Developers can use Sandbox to avoid costly parallel development environments, protect their operating environment, shorten project cycle times, and expand usage of the Salesforce.com offering.

WHY IT IS WORTH LOOKING AT ON-DEMAND DEVELOPMENT

Currently developers can create and test new applications in either one of two ways: either test applications in the live operating environment or create a separate one for testing applications. Both have substantial drawbacks.

Typically, companies test an application under development by introducing it to the live operating environment, but this can disrupt the live environment and make data or applications unstable. An alternative is to shut the operating down temporarily for testing purposes, but this is costly and disruptive.

In order to prevent development activities from disrupting the live environment, some companies build separate physical environments in which to test and refine their applications. This is problematic for a number of reasons:

- **Cost.** Replication of an operating environment requires investments in software, hardware, maintenance, and personnel.
- **Time.** Creating and customizing parallel environments is labor intensive and lengthens project cycle times.
- **Accuracy.** Cost constraints force organizations to create test environments that can't accurately mirror the live environment.

As companies' enterprises become increasingly integrated both internally and with partners, it becomes more important to protect them from disruptions caused by either development and testing activities or deployments of defective solutions.

BENEFITS FOR SALESFORCE.COM DEVELOPERS

Developing in Sandbox's on-demand development environment enables users to both avoid the substantial cost of a parallel environment and protect the operating environment from testing activities. Benefits of the platform include:

- **Improved operating environment stability.** Developing and testing in Sandbox rather than the live environment does not consume server space or bandwidth that would slow the operating environment down. Additionally, the live Salesforce.com environment — including the data, users, and applications —

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are protected from defects in an application that is being developed or tested in Sandbox.

- Shortened project cycle times. By developing and testing in Sandbox, developers can spend less time protecting the operating environment from development activities. Sandbox also makes developers more productive because it replicates the operating environment more quickly than other on-demand environments. One Sandbox user said, *"I now spend more time thinking about solutions and their benefits than the tactical issues of testing and deploying."*

When DoubleClick deployed a project management solution from AppExchange, its use of Sandbox for development and testing shortened the project cycle time from three months to two months.

- Improved application quality. Working in an on-demand environment enables developers to test more frequently, increasing both application quality and user acceptance. Additionally, rapid replication of the operating environment enables a tighter fit between development activities and the live environment. One Sandbox user said, *"I can take a copy of my production data and move it to Sandbox. That is pretty key because it enables more rounds of testing, changes, edits, and fixes."* Additionally, key users can beta test new applications in Sandbox, which helps increase user benefits and user acceptance.
- Greater breadth of Salesforce.com usage. Better operating environment stability, improved productivity and better application quality all add up to a more flexible use of Salesforce.com. In Sandbox, developers can experiment with solutions from AppExchange, AppExchange Mobile or even existing solutions in order to bring users valuable functionality. A sales operations manager at DoubleClick said, *"I am more able to experiment and explore features and functions I don't know about or never tried. I am sure I don't use everything in our Salesforce.com environment. Sandbox is where I can experiment with applications and see if their features and functionalities are beneficial to my staff."*

CONCLUSION

Developers can use Sandbox to avoid the substantial cost of building and deploying development and testing environments. With a price of 20% of total Salesforce.com license fees, Sandbox should generate ROI if it will eliminate the cost of a parallel environment. For companies who develop and test in their live operating environment, switching to Sandbox will accelerate project cycle times and minimize costly disruptions to their operating environment.

Sandbox should cause companies not already using Salesforce.com — or other on-demand applications for that matter — to consider on-demand. Development and testing has long been a matter of the lesser of two evils: build a costly parallel environment or risk disruptions to the live environment by testing in it. Sandbox offers a third way that is relatively low cost, shortens product cycle times, makes developers more productive, and lets them spend more time thinking about solutions than disruptions.