Desktop as a Service Proof of Concept

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ABSTRACT
Desktop as a Service is an idea that has taken root in enterprises today, but has not reached consumers. In order to show this, a proof of concept lab was constructed. The proof of concept lab that the authors devised shows that this idea is viable. The lab uses a virtual desktop infrastructure environment. The environment uses VMWare’s View solution on top of their hypervisor and virtualization management server. These solutions provide the backbone of the environment that is used to access desktops from mobile devices anywhere and anytime. The desktops provided are persistent which allows users to keep their settings and data in a single location.

Categories and Subject Descriptors
K.6.4 [Management of Computing and Information Systems]: System Management

General Terms
Management, Performance, Design.

Keywords
Operating Systems, Service, Virtual Desktop Infrastructure.

1. Significance and Relevance
The market for mobile devices is large and highly in demand. As mobile devices become more readily available, consumers gain more freedom with where they use their devices. Consumers want access to their desktop and their data whenever possible. The solution that the authors came up with uses a full virtual desktop infrastructure environment. The solution is to use a VDI environment to offer customers a persistent, highly available desktop that can be accessed from all of their mobile devices. This is significant because right now there are no services that are available that offer those services. The idea is to take the burden off of the customer by removing the tedious upkeep that they must regularly go through. Desktop as a Service, or DaaS, is used in enterprises for a similar reason. The employees no longer have to worry about maintaining a PC since the operating system would be centrally managed. The idea is to reduce complexity by centralizing management which leads to a more productive and efficient IT organization.

This is significant because as the times change consumers are looking for different, innovative solutions to their problems. One problem that consumers have is that they have to regularly maintain their data and hardware. Consumer DaaS would provide a turnkey solution for consumers looking for a simpler computer experience.

The reason for the proof of concept lab was to show that the idea is feasible. There is little to no documentation of DaaS that uses persistent desktops. The small setup of the lab showed that the idea is feasible if you maximize the number of virtual machines that the hardware can maintain.

2. Content
The poster would be a way to show how we set up a small virtual desktop infrastructure in order to prove the concept of DaaS. The poster would show the basic structure of the VDI environment. This would show hardware specifications that the system was built on. It would show the MacPro, as the server, and the Dell workstation that was used to run all of the necessary components. Also, it would show the software components that were used to create the VDI environment. The setup used the VMWare View solution which consists of the ESXi hypervisor, the vCenter Server, and the VMWare View components. There will be a diagram that shows the level at which the software components are situated. The components will all have a separate description explaining their purpose in the VDI environment. The disadvantages and advantages to DaaS will be in a table for comparison. Some of the disadvantages that will be shown are that there can be lag issues, data security issues, and licensing issues. The poster will compare the differences between Commercial and Enterprise DaaS. One difference is that Commercial DaaS looks to provide a space for users to do as they please with a single, persistent interface while Enterprise DaaS looks to provide a workspace managed by the business.

There will also be a handout with information to allow the audience to recreate the setup for themselves. The information will be in a data flow detailing what occurs in each step.