

Survey for the First Company using Virtual Desktop Infrastructure (VDI)

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Objective:

We interviewed 2 companies that actually are using VDI to understand what their experience was and to collect useful information for companies that are going to adopt this type of technology. The summarized output for the first company is shown below:

- **Expectations**

- What were the reasons that motivated your company to adopt VDI?
 - There are two current use cases and one proposed use case. (1) Application Development required desktops for dev and test. Rather than provide physical machines, we utilized VDI. (2) For end-users who are evaluating new software, we provide VDI desktops for testing purposes. (3) We are currently evaluating delivering VDI desktops in place of active desktops for the light user.
 - My long-term objective is to have disposable end-points: machines that are light-weight, portable, without data, and inexpensive.
<http://www.jwgoerlich.us/blogengine/post/2009/05/26/Disposable-end-point-model.aspx>
- What are the major advantages for your company to use VDI?
 - Reliability.
 - Roll-back capability thru snapshots.
 - Cost control (no additional hardware required).
- What are the overall benefits you obtain from the adoption of VDI? Short-term? Long-term?
 - Flexibility
 - If we replace several desktops with VDI and thin notebooks (e.g., Netbook style devices), we cut costs and improve performance.

- **Evaluation**

- How did your team go about evaluating VDI?
 - Partnered with a VAR for evaluating Citrix and Microsoft solutions
 - Four week pilot project
- What type of VDI was tested -- PC or thin client? What type was deployed?
 - Both.
 - In the current use cases, 1 and 2 above, people access their VDI desktops by RDP'ing from their standard daily desktop PC.
 - In the future use case, 3 above, people will access VDI using thin client notebooks or customized netbooks.
- How many applications were tested on the VDI environment?
 - Roughly a dozen.
- How did you calculate for the size of the backend server infrastructure?
 - We went with a standard 4:1 model for licensing purposes and performance.

- We ran performance counters over a four week period to gather usage statistics on our desktops, and estimated the required processor and memory count.

- **Challenges**

- What challenges did your company encounter during the integration process with existing equipment?
 - None, really. It was very straight forward.
- How geographically dispersed is your VDI and did this cause performance issues?
 - The current usage is all over the local network.
 - The future usage will be local plus remote over a VPN.
 - Performance issues of RDP from a dedicated terminal over a VPN are nominal for most Internet connections.
- What challenges have your technical staffs had to confront?
 - It was, at first, difficult to build the Windows XP and Windows Vista VDI images. There were some challenges in running the Integration components. But these were minor, and quickly overcome.
- What challenges has your management had to confront?
 - The main challenge is in designing a VDI infrastructure with a cost model significantly more attractive than simply maintaining the desktops. The trouble here is that server and storage hardware is significantly more expensive than commodity desktops, which erodes the cost advantages of a centralized model.
- How does your organization perform patch management on the VDI?
 - We use Microsoft System Center Configuration Manager to deploy, patch, and maintain both physical and virtual desktops.
- How successful were you in creating a secure profile?
 - Very successful.
- What challenges have your security professionals had to confront?
 - The primary consideration is that the physical hardware is the security boundary, not the virtual machine. Thus all VMs that run on a particular hypervisor must be in the same security tier.
 - Securing Windows Core as our hypervisor was significantly easier than securing the full installation of Windows due to its limited footprint.
- How long has your company been performing technology “renewals”?
 - My firm has been around since 1985. Our technology “renewal” track record stretches back to when there were typewriters.
- How has that (the technology renewals) impacted VDI adoption?
 - Not applicable. My goal is to have disposable end-points and manage them as inexpensive replaceable devices. We will likely continue a three year refresh cycle, which corresponds to the warranty period.
- How has VDI altered your disaster recovery plans?
 - Not yet. The combination of VDI and notebook thin clients or netbooks strengthens our pandemic response plan. The plan calls for people to work from home. Rather than providing loaner notebooks, which are costlier, we provide people with standard devices that have no data and access the VDI desktop over the VPN. This reduces our risk exposure for data loss and breach should the devices be misplaced.

- **Costs**

- What kind of training have you allocated for your staff?
 - On the job training, as part of the pilot, was all that we required.
 - VDI utilizes the same desktop OS and thus does not require additional training or tools to support.
 - VDI utilizes the same hypervisor (Hyper-V) and, again, does not require additional training or tools to support.
- What kind of training have you allocated for your users?
 - We demonstrated how to use Remote Desktop to connect to their workstations.
- What was the cost increase in the transition period?
 - Nominal.
- What is the maintenance cost of DVI compared to traditional infrastructure?
 - Comparable for software support. Significantly less for hardware support (approximately 75% less time spent on supporting hardware.)
- How long did it take for your company to complete the switch over to VDI?
 - Not applicable, as we are currently running mixed VDI and traditional desktops.

- **Overall evaluation**

- What is the major disadvantage using VDI versus traditional infrastructure?
 - The expense of data center grade hardware and storage.
- How have you dealt with laptop deployments?
 - Using netbooks with WiFi and VPN access.
- Based on your experience, what do you recommend to a company that would like to adopt VDI?
 - Companies should absolutely consider adding VDI to their desktop support toolkit. The key metric is the best end-user experience at the lowest price-point. Application virtualization (such as Terminal Services and Citrix XepApp), desktop virtualization, and traditional desktop delivery all have a role to play in meeting the metric.