



**Driving Innovation
Through the Information
Infrastructure**

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Leveraging Existing Investment in Storage to Expand to Virtual Desktops

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District Overview

- PreK-12 District
- 3900 Students
- 600 Staff
- 1700 User Machines
- 600 virtualized machines
- 80 applications virtualized
- 8 Buildings



Technology Overview

- Centralized data center for all buildings
- Dark Fiber between each site
- 10 Blade and 3 “pizza box” servers for virtualized environment running VMware as hypervisor
- Hitachi SAN storage with 46tb raw disk space
- Citrix virtualized applications & VDI’s for users
- Wyse Thin clients in labs and classrooms
- HP Tablets for teachers



Why Virtualize Desktops & Applications

- Centralized management
- More control over end user experience
- Control application licensing
- Install applications more rapidly



Server Role in Virtualization

- CPU's
- RAM
- Cost per VDI



Storage Role in Virtualization

- Centralized
- SAS vs SATA drives
- SSD's
- I/O's
- Cost Per VDI



Desktops & Thin Clients

- Virtualizing existing desktop computers
- Purchasing thin clients



Virtualization Gotcha's

- Network issues
- Storage issues
- Boot storms
- Applications not compatible
- Applications not cost effective



Questions?