Building a Scalable, Dynamic Call Center Using VMware Virtual Desktop Infrastructure

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Company Profile

- IRMC is a premier provider of customer management solutions specializing in collections, accounts receivable management, and customer retention services through its global call center network of nearly 6,000 employees.
- We have 20 sites worldwide consisting of two major Data Centers in NJ and OH.
- We perform collections and accounts receivable for almost all major banks and credit cards within the US.
The Challenge

- Logistics were preventing us from having a truly flexible environment.
- Clients needing additional staff (usually by tomorrow), new business and expanding demand could not be accommodated without a team of technicians working throughout the night.
- Too much bench work imaging machines and redeploying/repairing old hardware.
- Consistent administrative problems.
- Bottom line: we weren’t being responsive enough to stay competitive.
Typical Call Center has 350+ employees with poor performing desktops. Each call center with varying degrees of hardware, IT staffing and number of clients.

Agents typically connect to multiple databases, application servers and dialers. (Our main business is taking or receiving calls.) The average agent connects to six applications across multiple physical and logical domains.

Limitations included a large on-site budget for technicians, unreliable local hardware and a dynamic environment that consistently needed re-engineering.

Expanding or adding new business was a project management nightmare.
VMware VDI Solution

- A VIRTUAL DESKTOP FARM – brilliant!
- My boss’ idea, not mine!
- VMware Virtual Desktop Infrastructure (VDI) Solution: Built a farm consisting of 22 ESX 2.5 servers hosting 400+ virtual XP machines.
  - All 400 machines are direct replacements for those old desktop units.
  - We have avoided buying 400 new machines to keep up with technology.
  - Centralized consolidation allows for administrative control.
- Ability to provide a new virtual desktop in about 8 minutes by cloning one of 6 images.
  - Have 6 standard images ready to deploy – many flavors, fully patched, client specific applications, etc…
Implementation Process

- Our slogan: “Any agent, any desk, anywhere…”
  - We could provide a workstation to any client, in any seat, at any office in the world.
- Only requirement was a thin client and RDP access to our Data Center in NJ.
- Evaluation was with a farm of 3 servers, a small test group and a weekend to convince the clients.
  - HP BL25P’s (2.4 GHz, 16GB RAM) attached to an HP EVA5000 (10 x 250 GB LUN’s).
- After proving that it worked, we expanded, and expanded, and expanded. (22 servers, 400+ machines)
- Biggest challenge during this phase was load balancing and utilization.
- N+1 model
Key Benefits of VDI

- Desktop Hardware:
  - Did not have to purchase new physical desktops.
  - Only new purchases were thin clients.
- Host Data Center Technology:
  - Blade technology / SAN storage.
- Administration:
  - No need for extensive team of desktop technicians and administrators.
  - Centralized administration.
- Operational Improvements:
  - Additional seats can be added within an hour.
  - No need for re-imaging desktops for new clients, switching seats and furniture overnight or adding space to offices.
  - No longer confined to one office for one client. Agents can be trained anywhere in the world.
Additional Discoveries

- VMware VirtualCenter access can allow for 24/7 monitoring.
- VMware VMotion allows for seamless load balancing.
- New customer images can be tested by using P2V.
- Reduced downtime by allowing agents with a problem to immediately connect to a “spare” VDI machine.
- Problem machines are “cloned” during down time to brand new images.
- New images take less than 10 minutes to get into production.
Summary

- **The Challenge:** Immediate need for a solution to stay competitive that allowed for a high rate of flexibility, reliability and centralization.

- **The VMware VDI Solution:**
  - Consolidating 400+ virtual XP machines into one farm of 22 servers
  - Met bus reqts, flexible, and proven (success with ESX already)

  “Any agent, any desk, anywhere.”

  Chris Vida
  SVP, IRMC

- Hardware savings = 400 desktops.
- Reduced IT support staff at each location.
- Flexibility to grow the business.
Frequently Asked Questions

- What is the overall ROI savings?
- What is the typical network traffic utilized/saved?
- How did you convince upper management that this was the right solution for the company?
- What technical obstacles did you have to overcome?
- How do you gauge capacity on each ESX server?
- Why did you choose Blade technology with a SAN storage solution?

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How Do I Learn More About VDI?

- Attend Other VMworld Sessions and Labs on VDI:
  - MED0062: How Collier County Public Schools Deployed the Largest Virtualized Desktop Environment in the World, Tuesday 11/07/2006 @ 11:45 am
  - MED9518: Best Practices for Building and Securing a VDI Implementation, Tuesday 11/07/2006 @ 2:00 pm
  - MED3499: Building a Scalable, Dynamic Call Center using VMware Virtual Desktop Infrastructure, Wednesday 11/08/2006 @ 11:45 am
  - MED9913: Healthcare Organizations and Virtual Desktop Solutions: Kindred Healthcare – A Case Study, Wednesday 11/08/2006 @ 2:00 pm
  - MED3757: VDI Customer Panel, Thursday 11/09/2006 @ 9:30 am
  - Plus many more partner sessions on VDI…

- Visit [www.vmware.com/VDI](http://www.vmware.com/VDI)
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