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## Datatel – Interactive Voice Response Services

### Scalability and 24/7 support: On demand and on budget



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#### OVERVIEW

Datatel is a successful global communications technology company that delivers turnkey hosted and managed Interactive Voice Response (IVR) solutions.

In order to dramatically reduce its costs and, most importantly, to compete in new markets that demand the most stringent service level agreements in the business, Datatel utilized Ardence Server Edition to “re-invent” its data and voice center operations.

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#### BUSINESS CHALLENGE

Datatel faced a significant profitability challenge when competing in opportunities involving very large customers who required on-demand scalability and disaster-recovery support. Datatel’s robust IVR platform had evolved during 10 years of research, development and continuous improvement, resulting in an IVR service model that provided their clients with reliability, flexibility and the ability to integrate into a wide range of emerging technologies, including mobile messaging and web services. Still, although the platform was both solid and reliable, achieving the on-demand scalability and 24/7 service support level demanded by larger customers, meant the architecture had to be overbuilt, resulting in larger initial costs and significant on-going maintenance expenses that put a serious crimp in Datatel’s profitability.

As a result, Datatel embarked on a mission to re-invent the definition of service in their industry – distinguishing and differentiating their solution in a way that would allow delivery of premium service to large customers without incurring a premium cost.

Datatel sought the ability to provision IVR capacity on the fly and on demand – a capacity not measured in days or hours, but measured in minutes or seconds. And Datatel wanted to be able to recover or fail over to IVR services in the time that it takes to reboot a computer, rather than re-image a computer. If Datatel could achieve this dynamic, on-demand provisioning, there would be no overbuilding of facilities and they would gain economies of scale because a set of servers could serve as hot standby for more customer volume. Of course, this capability would also lead to better profitability, even on very large implementations.

#### TECHNICAL CHALLENGE

Datatel’s technology team examined each component in their architecture and questioned all assumptions about traditional deployments. Their intense examination drove them to consider the IBM BladeServer, Intel NetStructure, and a RAID storage configuration.



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Datatel believed that deploying the IBM BladeServer and Intel NetStructure environment had potential to deliver the on-demand provisioning from the hardware perspective, but they had concerns about how to scale the software-provisioning process. In particular, they were leery about a notebook-class hard drive. The blade concept was very appealing because of its scalability and potential flexibility, but the notebook hard drive introduced too many limitations to scalability:

- Blade drives were very slow as compared to network attached storage (NAS)
  - (2400rpm vs. 7800rpm)
- Blade drives were small as compared to NAS
- Blade drives were far less reliable than NAS or RAID
- Blade drives consumed more net power and generated more heat than NAS
- Blade drives don't offer failover redundancy
- Worse still, the flexibility and scalability of the blade approach was limited by the ability to provision software onto each notebook class drive

In a fail-over scenario, how could Datatel load software onto a backup server that supports 100s of IVR ports? Re-imaging from a back up could still take hours and this would not be dynamic enough, nor dependable enough, because it would require human intervention.

Datatel realized that the solution was to take the drives out of the blades all together and rely only on network storage. There must be, they reasoned, some way to boot the blades from network storage and then run the blades diskless. If this were possible, then any blade could take on any image... on demand... in real time... any time.

### SOLUTION

In their search for a solution, Datatel tried various approaches before discovering the breakthrough available in the software-streaming solution from Ardence, Inc. and the Ardence solution for the data center known as Ardence Server Edition.

With Ardence Server Edition, the OS and applications are located on a network share drive and when the blade boots up, it looks to the Ardence streaming solution for its OS and applications. An administrator can assign a blade to boot from dozens of images and the whole process can be automated so there is no user intervention. Once the blade starts the boot sequence, it looks to the Ardence server to select the appropriate image and continues the boot process with the help of Ardence Server Edition, which streams the initial sectors of the OS to the blade – just enough for the blade to boot up. Then, as application libraries or files are required, they are streamed to the blade on demand. The rest of the files and libraries remain on the file share until the blades need or call for them.

This is the only TRUE on-demand scenario. Other data center provisioning tools and scalability tools require hours to copy or install the OS to the local blade before the blade or set of blades can be brought on line. With Ardence Server Edition, once the normal blade detects that there is a problem or that it has hit a watermark in terms of utilization, a preset image can literally be ready to go and a fail-over blade can be up in running in the time that it takes to boot. Datatel can change the IVR configurations for customers with a simple reboot.



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## RESULTS

Datatel's results have been impressive and better than expected. Datatel is able not only to offer premium services to its existing customers, but also enter new markets and successfully compete for projects previously beyond its grasp. Datatel is now confidently and profitably bidding on larger IVR projects because it knows it has the most efficient operation available.

Additionally, the price per square foot in a co-location facility is quite expensive and Datatel has been able to reduce its footprint by more than 50%. This savings arises because Datatel does not have to overbuild its infrastructure to insure it can satisfy a service level agreement. With the Ardence Server Edition's ability to provision server OS and applications on the fly, a single set of blades can serve as the hot standby for many customers rather than having one pre-configured hot standby for each. During a fail over, the backup blade can be up with a new image in the time that it takes the blade to boot.



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