

## **New IP Choices for Contact Center Virtualization**

In an August 2005 *BCR* article, "The Next Wave: IP Contact Centers," (see pp. 29-32), we made the argument that for the most part, the IP contact center solutions from existing vendors look identical to those vendors' TDM choices. So what advantages *do* IP contact centers bring? Why would an organization bother to make what is likely to be an expensive and technically complex transition?

### **Centralization vs. Decentralization**

One of the answers to the question of whether to implement an IP contact center takes us to the never-ending debate over the centralization vs. decentralization of operations within a large enterprise. It is an age-old battle of standardization versus autonomy, corporate efficiency vs. local effectiveness and pressure on costs and resources vs. accommodation of specific local needs. One can almost predict the cycles with which most organizations will vacillate between philosophies of strong centralization and strong decentralization.

Classic queuing theory tells us a single large call center is more effective at answering calls than several smaller centers. In addition, a centralized approach not only rationalizes the cost of a company's operations, it can produce a standard, branded front to the world.

Traditionally, tying geographically-dispersed call centers together involved the use of costly dedicated leased lines, or using network-based services to distribute calls to multiple sites, also an expensive alternative. Today, virtual private networks (VPNs) offer a cost-effective alternative to leased lines. VPNs use worldwide IP network services, including the Internet "cloud" and service provider IP backbones, to provide a service at much lower cost by using the shared public infrastructure rather than a private one.

### **Consolidating Applications**

The net impact of IP networking on the contact center world is to essentially allow the best of both worlds: the ability to take advantage of the local talent that is distributed across the many discrete locations of an organization, while allowing for all the cost benefits and efficiency of centralized contact centers.

Virtualization has two enormous effects on contact center operations:

\* Instead of multiple instances of both hardware and software in various sites, one site (or two, to allow for business continuity) can house the required applications. This paring-down of duplicated systems would include not just the core routing technology, but extends to reporting databases, administrative applications, interactive voice response systems (IVRs), quality monitoring systems and workforce management applications.

\* Sites and workers that in the past were in locations that wouldn't warrant the expense of dedicated contact center applications such as ACDs, IVRs and workforce management, can now benefit from those applications. Sites with just 1-2 agents, who might take calls just a few hours a month during peak hours, or home-based workers, can now easily be added to the contact center.

Over the past few years, contact center solution providers have fine-tuned their existing offerings, or created new ones optimized for centralized contact center operation. In the sections that follow, we'll discuss several vendors' solutions that are optimized for this kind of centralized, IP-based approach.

## **Avaya**

Compared to other vendors discussed in this article, the Avaya solution has probably changed the least. Scalability is one of the key attributes of a contact center application required for centralization of a multi-site operation, and Avaya has the ability to operate an IP-based contact center at massive scale with consolidated voice servers.

As proof points, Avaya is currently supporting global contact center deployments where more than 2,000 agents are operating on a single instance of Avaya Communication Manager software. A single Avaya S8710 Media Server has the ability to support 5,200 active agents, 8,000 trunks, 3,000 native prompts and announcements, 25,000 queue slots, and up to a 375,000 busy hour call completion rate.

But Avaya's reputation as a contact center leader did not come from resting on its laurels. Over the past few years, the company has added features to its Call Center 3.0 software that enhance its ability to help customers create cost-effective virtual contact centers. Two recently-announced features:

\* *Local preference distribution.* Saves bandwidth and/or trunking costs for enterprises who have a distributed call center by providing preference to a local agent.

\* *Locally sourced music and announcements (e.g., music on hold and queue announcements)*. Typically, with centralized contact center solutions these functions would also be handled centrally. The option for local sourcing can save on bandwidth and trunking, as well as allow these capabilities to be available in a survivability scenario.

Both of these features become particularly powerful in the case of a globally distributed contact center. For example, calls from the U.S. that are in queue for an agent in India can be given music on hold from the U.S., instead of tying up bandwidth halfway across the world.

### **Nortel**

In September 2004, Nortel announced the successor to its Meridian SL-100 system, the Communication Server 2100 (CS 2100.) The SL-100 is essentially an enterprise version of Nortel's DMS-100 central office switch, and the CS 2100 is the enterprise version of Nortel's carrier-grade softswitch, the CS 2000.

In April 2006, Nortel's latest version of its software, Nortel Contact Center 6.0, is scheduled to become available on the CS 2100. The CS 2100, combined with up to 30 Nortel Contact Center systems, is described as being capable of supporting up to 100,000 agents in a highly redundant, carrier-grade environment.

As is also true with the Avaya contact center solutions, with the CS 2100, customers can implement a hybrid or pure IP network. This can allow them to preserve existing investments in TDM equipment while adding new IP capabilities.

### **Siemens**

As was the case with Nortel, the key to Siemens' virtual contact center offers is a switch. In the Siemens case, however, the company has taken a softswitch, initially designed for the carrier space, and re-purposed it to work in the datacenter model increasingly being adopted by very large, multi-site enterprises.

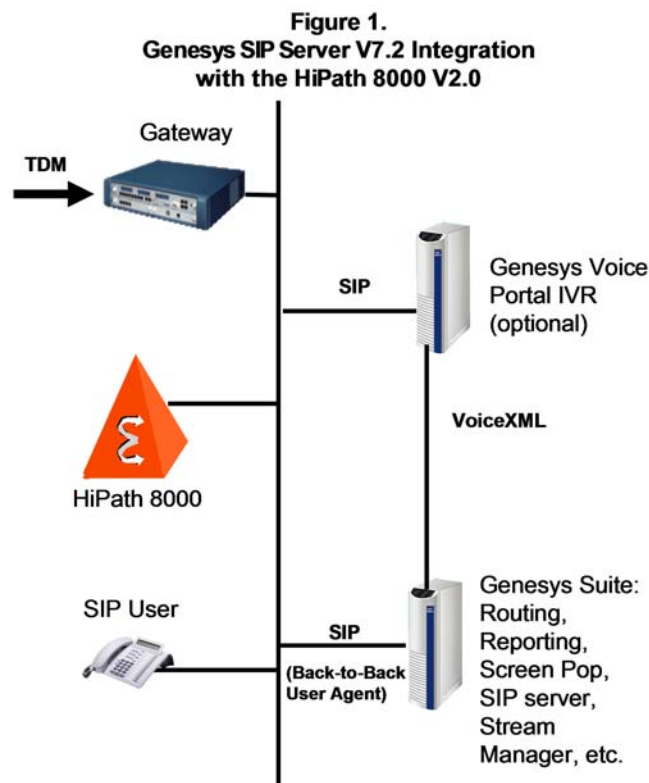
In 2004, Siemens delivered the HiPath 8000, a SIP-based platform that scales support up to 100,000 PBX users. The HiPath 8000 is based on core technology developed for the SURPASS HiQ 8000 softswitch that is sold in the carrier space and as such delivers carrier-grade availability and redundancy options.

With the second version of HiPath 8000 software, available in January 2006, two options for virtual contact center operation become possible. The first uses a version of Siemens' contact center solution, ProCenter Enterprise 7.0, to be announced at CeBit in March 2006.

With version 7.0, Siemens delivers HiPath 8000 connectivity for ProCenter, with scalability up to 2,000 agents per HiPath 8000 platform. Version 7.0 also adds a number of features tailored for multi-site contact center customers, including business unit partitioning for the supervisor application (routing, monitoring, reporting) and Web-based reporting via HTML, Citrix client or SDK-enabled browser-based portal.

## Genesys

The second virtual contact center alternative for the Siemens HiPath 8000 comes from collaboration with Genesys, a long-standing Siemens partner in the U.S. As seen in the accompanying **Figure 1**, the Genesys SIP Server is the integration point between the HiPath 8000 and the Genesys Suite.



In this configuration, the Genesys SIP Server is not doing the switching. Calls are accepted from the PSTN by a media gateway, which contacts the HiPath 8000. The HiPath 8000 recognizes the call as one destined for the contact center and contacts the Genesys SIP Server. The SIP Server then works with Genesys Suite components to identify the correct agent to handle the transaction and sends that information to the HiPath 8000. The HiPath 8000 passes that information to the gateway, which then establishes the voice path between the caller and the

agent. As is seen in Figure 1, the Genesys Voice Platform is an optional component in this configuration.

Customers today can use the joint Siemens/Genesys contact center solution in trial and lab environments. It will become generally available with Genesys Suite Version 7.2, scheduled for release in second quarter 2006, and will at that point support up to 15,000 agents.

### **Cisco**

Through its acquisition of Geotel in 1999, Cisco inherited an application, now known as ICM, that tied together multiple geographically-dispersed TDM call centers into a single infrastructure, as well as an impressive base of customers using the solution. Cisco then spent several years fine-tuning and enhancing the Geotel application to operate in an IP environment, creating a new solution, IPCC Enterprise.

Many ICM customers, however, have huge investments in the contact center infrastructure they have in place and have been in no rush to convert completely to IP. To help these customers gain the benefits of IP virtualization in some locations, in the summer of 2005 Cisco released a new feature for ICM, the IPCC Gateway. This IPCC Gateway allows multiple "child" nodal IPCC Express or Enterprise systems to connect to a parent ICM for enterprise-wide routing and reporting. This allows the ICM customer to continue to amortize existing applications and TDM infrastructure while beginning the migration to IP contact centers on a location by location basis.

### **Aspect Software**

Aspect Software is the new entity created last year from the merger of Concerto Software and Aspect Communications. The company released a new version of its flagship product, EnsemblePro, in December 2005. This new release added a number of capabilities relevant to the creation of a virtual contact center.

These new enterprise capabilities allow provisioning, monitoring, reporting and recording to be managed across as many as 32 different EnsemblePro systems. Aspect has also enhanced EnsemblePro so that the system can be deployed in an environment where servers are hosted by a carrier or other application service provider and the contact center application is used by tenants.

### **Transera**

Transera, a relative newcomer to the contact center software space, built and targets its solution directly to the virtual application. Delivered as a service from one of Transera's carrier partners, the

company's SIP-based Seratel application operates in a hardened data center on Linux-based servers.

All calls for the enterprise using Seratel query this platform for information on where to deliver each transaction. Calls can be delivered to agents at company headquarters, agents working at home or in a branch location or, most ingeniously, to agents at one or many different outsourced call center locations. Transera's core selling proposition is that it can offer visibility, control and quality management over operations across a global, multi-sourced call center.

### **Migration or Replacement?**

Organizations looking to benefit from both the economies of virtual contact centers, as well as the ability to extend applications to a larger population of agents, do not necessarily need to rip out their entire infrastructure and start from scratch. In fact, all of the solutions described above are designed to allow for some level of re-use of existing software and/or hardware.

For example, adding the Nortel CS 2100 to a network allows the use of existing Meridian 1s or Communication Server 1000s as survivable gateways to the now centralized applications of the CS 2100. The same is true of the Siemens HiPath 8000, which can include HiPath 4000s and HiPath 3000s in a network configuration. Even the Transera solution--which on its face may appear to require a complete re-engineering of the existing contact center to move toward a hosted solution--allows the reuse of existing telephone sets for the delivery of the voice path.

Replacement, however, is always an option as well. Given the age of your current systems and the specific needs of your application, starting with a clean sheet of paper and designing an optimal virtual contact center may be the right answer.

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