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WHITE PAPER

Driving the Real Value from a CRM Solution in a High-Volume Contact Center

Sponsored by: Amdocs and IBM

Mary Wardley Carl W. Olofson

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IDC OPINION

Customer retention has become a key priority at most businesses, both large and small. While new customer acquisition is expensive, reacquisition of disaffected customers is much more expensive and may in fact be impossible in some cases. One of the most serious factors disrupting the flow of business is the loss of customers. Customer service–oriented contact centers are on the front lines in the effort to retain customers. The speed and completeness with which customer service issues are handled can make or break a customer relationship. Technology that enables customer service representatives (CSRs) to quickly access relevant customer information and resolve issues is key to any successful customer service center. Yet, as relevant customer relationship data grows ever more rapidly, such technology can become bogged down in the size and complexity of that data, forcing businesses to either offload key data, which impedes the speed with which some problems may be addressed, or increase the size of the database and its supporting storage, which causes diminishing returns in terms of performance.

Amdocs and IBM have teamed up to address this problem with a combination of Amdocs' CRM solution and IBM's Optim database archiving technology and DB2 relational database management system (RDBMS) as a preengineered, integrated solution that:

- Provides a tuned and optimized system for managing the growth of customer relationship data while offering constant performance and a satisfactory customer support experience
- Reduces the risks associated with managing the complexity of CRM systems and data by preintegrating these capabilities and offering support from a single source
- Delivers a much lower time to value when compared with the effort involved in installing, configuring, and tuning a CRM solution, its associated RDBMS, and database archiving facility

IN THIS WHITE PAPER

This white paper discusses the current state of high-volume contact centers. It considers the business and technical challenges involved in maintaining good customer support in the face of rising data volumes and correspondingly diminishing effectiveness in dealing with those data volumes from a customer management standpoint.

Global Headquarters: 5 Speen Street Framingham, MA 01701 USA P.508.872.8200 F.508.935.4015 www.idc.com

The document then examines the benefits of a preintegrated, factory-certified configuration of Amdocs and IBM software that includes a highly functional CRM application that has been integrated, optimized, and vendor certified with an RDBMS and a complete database archiving solution.

SITUATION OVERVIEW

Background

Traditionally, contact center operations were supported by in-house IT departments that would develop the many components and applications that help to provide quality service to their customers. Most organizations felt comparable solutions could not be obtained from external suppliers. If you are part of a large contact center today, your in-house IT staff are probably your primary support organization.

The best example of this trend is the primary CRM application. In the 1990s, larger call centers, especially those with heavy daily transactions, were only able to develop the customer information system themselves. Even today, we find that the in-house IT staff have developed many of these supporting applications within these contact centers. However, this dependence on in-house IT staff to develop the entire solution waned as CRM vendors began to address the needs of these large contact centers.

As a result of this heavy reliance on internal IT staff, many large contact centers pay high in-house support costs, making it difficult to reduce operating costs. This strategy may well have worked in the past, but times have changed. Considering the high cost of internal IT support, contact center management need to use a comprehensive total cost of ownership model to determine when to use in-house resources versus vendor-supplied applications.

Servicing Customers in High-Volume Contact Centers

Enterprises started using "call centers," known today as contact centers, to provide a central point of information for their products and services and to create a point from which to build a 360-degree view of their customers. Customers can turn to this central point of contact for help, further services, changes to their accounts, and a myriad of other important interactions that add depth to the relationship. However, almost from its inception, the call center has experienced conflicting operational objectives — maintaining customer satisfaction while keeping operating costs low.

These goals are often conflicting because, simply put, it takes an invested amount of time to keep customers satisfied. Because measuring customer satisfaction is a difficult exercise, operations teams often find themselves in a no-win situation. Supervisors of large customer service–oriented contact centers report that they are providing quality services to their customers and will produce statistics to support their claims. However, should you speak with contact center management, they will tell you that their operation, although it is doing a good job, still needs to be more productive. Reducing cost remains one of their major priorities.

Understanding the Customer

An enterprise understands that the more information it has about its customers, the better the chance of providing a high level of customer satisfaction. This results in increased loyalty with an increased share of the customer's wallet. Also, gathering this information in a standard format at a single source and making relevant customer information available to all of its customer-facing personnel will create consistency within the service function, again resulting in increased customer satisfaction. A critical problem that emerges from this information gathering activity is that it accumulates in a database that, as it grows, becomes slower and more difficult to maintain, until it actually interferes with the ability of the CSR to deliver good service in a timely manner.

An Explosion in Sources of Customer Data

The addition of new data sources will also be an ongoing issue in the contact center. An organization's CRM strategy is its go-to-market strategy. As the market evolves, so too do the ways to reach the market, or rather the customer. In the past 10 years, email and chat have been added to the traditional telephone and fax data sources feeding the contact center. The current explosion of social media sites is bringing more data sources to the contact center for storage. Because social media is still in its infancy, it is unclear what portion of the 140-character Twitter strings, Facebook wall postings, and LinkedIn connections is relevant to the customer and case records and thus will require storage in the corporate CRM system. Application providers are delivering integrations using the APIs published by the social media sites to bring this data back to the enterprise and link it to individuals. It is becoming possible to start a customer service thread by making a statement on Twitter, bringing that string into the enterprise, and opening a customer case. These additional data sources will put an increased burden on the CRM system as well as the database and archiving solutions.

Key Business Objectives and Challenges

Over the past decade, the primary source for the 360-degree view of the enterprise's customers has been the enterprise's CRM solution. When information from the CRM system and other enterprise applications is fed into sophisticated analytical and modeling tools, the results provide the enterprise with a comprehensive understanding of its customers. When done routinely and methodically, this process helps ensure that the enterprise creates satisfied and loyal customers.

A well-run contact center will know exactly what an average call costs the enterprise. Such costs can run from $50 to $150 per call. In a customer service–oriented contact center, the calls will last three to seven minutes on average. A customer transaction that cannot be completed during the initial call must be scheduled for a callback at another time. The CSR will make the call, removing himself/herself from the production pool. The result of fewer available CSRs is an increase in queue times for customers calling into the center. In a large contact center with many hundreds of CSRs and high daily volume, the customer dissatisfaction and additional costs will have a dramatic effect on the contact center's goals and objectives. In a well-managed contact center, the staff have measured and calculated the compromise between customer satisfaction and agent productivity; they know the exact cost of a callback to resolve a customer's request.

Internal Business Hurdles

We return to the conflict within the contact center — how to increase customer satisfaction levels while decreasing operating costs. By having as much information as possible regarding the customer readily available from the agent's desktop, the agent is prepared to answer a wide range of customer queries. There is no need to make a query that might access another system, which could incur a lag time while the customer remains on hold. How many times have you heard a CSR say, "Please hold. My system is slow today"? It is likely that the CSR is accessing a remote system for a specific piece of data. The relays between the systems may not be optimized, or the data store being accessed may be old technology, which can cause the time delay.

There are several potential penalties to pay for maintaining local access to the data. First, there must be local data stores in which to house the data. This adds cost to the environment. With increased local online storage, the amount of data can grow exponentially and desktop performance could suffer, increasing the average contact length and possibly creating a dissatisfied customer. This in turn can also increase ongoing maintenance and support services costs.

In summary, contact center management usually have two options, each of which is problematic:

- Allow the online database to grow infinitely, adding storage as needed. This results in mounting costs, in terms of both the storage and RDBMS license and maintenance fees and the increased amount of staff time required to maintain the database. In addition, as a database grows in size and complexity, it is nearly impossible to maintain the same level of performance. As the database slows down, so does the application, leading to longer call times and frustrated customers.

- Remove the older and less frequently used data from the online database in order to curb its growth, and put it in some sort of simpler secondary data store. This enables the CRM application to maintain its performance levels, but when a customer calls with a problem that requires access to that older or less frequently accessed data (as often happens), the CSR must turn to a secondary query tool, which can slow or interrupt the call, again resulting in a frustrated customer and a slower average turnaround time for service calls.

Large Financial Services Contact Center: Real-World Example

A large financial services customer service contact center in North America is dealing with serious cost-cutting issues. It is faced with the fact that it created a highly customized and largely in-house-developed customer information management solution. One of the primary issues is the downtime the center experiences due to the lack of a solid and supported interface between the applications within the contact center. Almost all of the primary applications, including the agents' desktops, have been either developed in-house or highly customized by the in-house IT staff to adapt to their process.

The result is that the call lengths are extended due to poor performance between the customer information system, the database system, the desktop solution, and the archiving solution. Thus, first call resolution (FCR) has slipped to 80% of all transactions, average call length has extended by 15%, average speed to answer has increased by 5%. And most critical, a customer satisfaction survey shows growing dissatisfaction with the customer support provided by the contact center.

As the need to reduce costs at this contact center continues to plague management, this company has begun exploring other alternatives to its current applications. But as the company told us, making such dramatic changes in the short term is just not feasible. However, going forward, it sees the benefit of a totally integrated and vendor-supported application suite.

All contact center management know exactly what their operating costs are and have a reasonable handle on the metrics they use to measure the level of customer service they are providing. Improving the percentage of FCR, reducing the number of agents necessary per shift by just a small percentage, and reducing the percentage of downtime and desktop response have a dramatically positive effect on the contact center's ability to exceed objectives.

THE KEY: EFFECTIVE DATA MANAGEMENT

To ensure that a CRM system meets the service-level agreement (SLA) required by the business, its database must be designed and tuned to fit well within the operational framework of the application. Such design, tuning, and configuration normally require the skill of an experienced database administrator (DBA), and even at that, the performance and operation of the database are usually not right after its initial setup. In addition, to prevent the database from growing to a size that impedes the performance of the CRM system, a contact center must employ database archiving. The best solution to these challenges is for the CRM system, the RDBMS, and the database archiving technology to be delivered together as a preconfigured, factory-certified solution that is supported by a single vendor.

Database Archiving as a Critical Element

Balancing Data Availability with Cost-Effectiveness

Ideally, every call to a contact center should result in a speedy resolution, without requiring delays or callbacks due to unavailable information. For this to be the case, the CSR should have all the information necessary to handle a call readily at hand. The problem is that CRM systems collect a tremendous amount of information, most of which is accessed very infrequently. They could, of course, maintain all of this information online in databases that would grow endlessly in size and complexity, but this would eventually become impractical from both a data management standpoint and a cost standpoint.

As a result, most systems are set up to remove older, less frequently accessed data and place it on secondary systems. This creates a problem for the CSR when a call comes in that requires access to some information that is available only through this older, offline data. In such a situation, the CSR is forced to either make the caller wait while running some query or reporting tool to access the offline data or suspend the call and call back after getting the necessary information. In either case, the extra time spent by the CSR translates into extra cost for the contact center, and the delay translates into frustration and dissatisfaction on the part of the caller.

Can't the data be kept in the database while the cost of the database is managed as the database grows? There are a variety of techniques for mitigating storage costs of such databases by partitioning the data and moving the older, less frequently used data to cheaper storage systems than those that are used for the primary, heavily accessed data. There are two problems with this approach:

- As any database grows, its indexes become larger and more difficult to traverse, which degrades database performance, requiring upgrades to the server and careful tuning.

- As the indexes grow and become harder to manage, they and their tables require more careful volume assignment, and overall tuning of the database becomes more complex and difficult, demanding more DBA time for maintenance tasks such as storage reallocation, database unloads and reloads, etc.

In other words, the actual cost of storage is only part of the picture. The larger and more persistent cost dimension is that of technical staff. Add to that general performance degradation that includes access to the recent and frequently accessed data, and it becomes clear that simply using partitioning and cheaper storage is not an effective solution for this problem in a CRM context.

Archiving as the Solution

Removing the older, less frequently accessed data from the database and moving it to an archive of some kind does enable the contact center to control database size and keep the database fairly simple and fast. The problem then becomes how can the archived data be managed in a way that enables quick access by the CSR so that delays don't occur in handling calls?

What is required is a database archive that is online, can be accessed in a fairly transparent way by the CSR, can provide its data quickly, and can be integrated into the same process used by the CSR to collect information from the online database in response to the requirements of a call without using special tools or techniques. Even better is if the CRM system is well integrated with the database archiving system so that the process is clear and straightforward to the CSR, enabling the CSR to concentrate on quickly and successfully resolving a customer's problem rather than having to focus on the problem of how to find this older data.

Solving the Problem

In-House Development

A common approach taken by some large enterprises has been to build their own CRM data archiving solution, with a facility for searching the archive and retrieving data. They would find some way to bolt this onto the standard CRM system so that data from the CRM system could be used to drive queries in their archive data retrieval system.

There are three important problems with this approach:

- Building custom code that is dependent on an application interface, such as an API, requires constant maintenance so that it continues to work as the CRM system changes, both in terms of the interface and in terms of the data format and organization, which are likely to change over time.

- Building a data archive for an application is actually a complicated software engineering effort that usually is much more costly and takes longer than the enterprise had expected. Once the data archive exists, the enterprise must continue to maintain it for all time as the CRM application, the operating system, the hardware, and the storage systems all change over time.

- Removing and archiving data from a database is an extremely tricky task because the data usually has dependencies on other data. If a complete subset is not captured, the integrity of the data and of the database itself can be compromised. The result can be wrong or incomplete data retrieval and even application failure.

Simply put, an internally developed data archive, especially one that is tied to an externally developed application, is a massive and expensive albatross that will hang around the IT manager's neck for a long time.

Commercially Available Database Archiving Solutions

It should be clear that the right way to address the problem of maintaining accessible archive data online is to use a commercially available database archiving solution. These products typically can identify referentially complete subsets of data (with varying degrees of completeness), move the data to an archive, remove the data from the live online database, and provide some means of querying the archived data. A number of these solutions are available in the market.

In most cases, however, blending database archiving solutions into the CRM environment is a fairly big challenge and will almost certainly not be transparent to the CSR. What is needed is a vendor-certified reference configuration of a CRM solution with a DBMS and database archiving product. In fact, the ideal solution would provide a database archiving solution with the CRM system, set up to install as an integrated component of the CRM system's data management layer, without requiring special integration or tuning by the IT staff and without requiring special training for its use by the CSR.

An Integrated Solution: Amdocs CRM Together with IBM's DB2 and Optim

Amdocs and IBM have formed an alliance to offer an integrated solution that consists of the Amdocs CRM application and IBM's DB2 and Optim. These three products not only are integrated but also have been tuned and configured to support a single, documented, and supported software installation and maintenance process. This solution is supported by Amdocs as a single point of contact. It is not just a solution of the moment; the two companies have also committed to an alliance that ensures customers ongoing joint development and support of the solution. This combined solution offers an unusual level of integration of a CRM system with data management capabilities and is designed to offer the following benefits:

- Maximized system performance and reduced storage management costs (hardware and staffing) through CRM database compression and archiving
- Reduced unplanned outage periods through automated data recovery utilities
- Smooth and efficient customer interactions through integrated access to archived customer data
- Reduced database administration costs and less business disruption, ensured by integrated data governance, regulatory compliance, and other audit tools

Amdocs

Amdocs is a well-established vendor of CRM applications, generating over $3 billion in annual revenue. It services a wide selection of vertical markets with a particular expertise in the communication industry. A public company (NYSE: DOX), Amdocs offers software solutions, consulting services, and managed services with a focus on business processes and operational support systems.

Its Customer Experience Systems (CES) solution focuses on customer management in three areas: digital commerce and service delivery, service and resource management, and revenue management. CES includes the Amdocs CRM solution, which, in combination with Amdocs' innovative desktop, Smart Agent Desktop, creates a highly simplified and accurate ordering process and can launch multiple applications, providing a 360-degree view of the customer. This system helps guide the agent into ensuring a completely satisfied customer with each contact.

Amdocs has had a historical relationship with the engineers at Optim and has worked closely with that team to ensure that the Amdocs CRM system and the database archiving solution have a high level of integration. The longevity of this relationship brings an added level of security to users who may question the long-term commitment between Amdocs and IBM. In addition, the long-term exposure between the two development groups brings a level of product intimacy that cannot be gained overnight.

IBM: DB2 and Optim Solution

IBM is a well-known technology leader in the area of data management. The firm has built into this combined offering two of its key information management software products: DB2 and Optim. DB2, a leading relational DBMS, has been configured specifically to support the requirements of the Amdocs software. Optim, a pioneering and leading product in the area of database archiving, completes the picture.

Optim Data Growth Solution for Amdocs CRM

Optim is well established as a leading technology in the area of information life-cycle management (ILM), which includes database archiving. Optim includes the ability to identify referentially complete subsets of data in a way that maintains the integrity of both the live database and the archived data, move the archived data to its own store, support queries against the archived data, and provide for integration of that query access with query access against the live database. Optim is designed to operate with all the leading RDBMS products, including, of course, IBM's own DB2.

Usually, the user needs to examine the data structures in the database schema and use Optim tools to identify data structure subsets for archiving as well as the rules for doing so. This configuration of Optim, called the Optim Data Growth Solution for Amdocs CRM, is preconfigured specifically to support the Amdocs CRM solution; therefore, the user does not need to do any of these things. The user also does not need to examine installation and configuration options and determine the right ones to use for this application because those settings have been established already. This also means that IBM engineers have taken pains to ensure that Optim will manage Amdocs CRM archive data in an optimal fashion.

The Optim Data Growth solution is designed to identify and archive Amdocs data at just the right point in its information life cycle. Operationally, this package is designed to fit together seamlessly so that the CSR does not need to switch back and forth between products or data access paradigms. Rather, the data access process, whether data is being pulled from the live online database or from the archive (which is also online), is smoothly integrated so that the CSR can use the Amdocs CRM application normally without taking any special actions to get at the archived data.

DB2 for Amdocs CRM

DB2 is a multifaceted, full-function transactional RDBMS, designed to support mission-critical enterprise databases. Installing and configuring it normally requires a fair amount of time and effort even for a highly knowledgeable DB2 DBA. This configuration comes with a preconfigured version of DB2, designed to fit right into the Amdocs CRM context, with the schema and tuning parameters predefined. As a consequence, installation and setup are relatively straightforward tasks, and again, the configuration is supported by IBM.

DB2 brings to the table features that are critical to any CRM application, including the continuous availability capabilities of automated recovery, mirroring and server switching for rapid failover, and replication for disaster recovery support. In addition to controlling storage growth through archiving, DB2 also helps control storage growth (while also providing better performance) through its comprehensive data compression capability. DB2 software is available for all of the leading distributed

systems platforms as well as for the mainframe. DB2 also fits into IBM's framework of information management products, including those in the Optim and InfoSphere product families.

Key Capabilities of Combined Amdocs and IBM Solution

Amdocs and IBM have combined their software to provide an integrated solution that is easy to install and configure, straightforward for CSRs to use, and operationally optimized, based on cooperative research and development efforts by Amdocs and IBM software engineers. Furthermore, the combined solution is sold and supported by Amdocs as a single point of contact. This is a significant breakthrough for the large customer service–oriented enterprise contact center, providing the opportunity for the management and the IT staff of the contact center to breathe a sigh of relief.

The contact center staff need not sit on pins and needles expecting a compromise of their goals and objectives due to poor performance at the desktop or unavailable data to resolve a customer transaction during the initial call. The management of the contact center need not be concerned with ever escalating people and hardware/software costs to support their enterprise goals and objectives. And the question of who is supporting the total application for the contact center no longer exists. The combination of the Amdocs Smart Agent Desktop application with the Optim retrieval capability is designed to require a minimum number of keystrokes for the CSR to access archived records and associated business objects quickly and easily. The preset configuration of DB2 that is also part of this offering is designed to enable the CRM solution to manage current data optimally. DB2's High Availability and Disaster Recovery (HADR) capability is engineered to ensure uninterrupted operation (a critical requirement for a contact center). Its pervasive data compression in buffers and on disk offers not just less storage usage but also better performance because the database server deals with smaller units of data in its internal operations than it would if the data were uncompressed. The following example illustrates how the benefits of the Amdocs/IBM alliance are realized in practice.

European Utility Provider: A Real-World Example

The primary customer service contact center of a large utility provider in Europe had been experiencing a bloated data storage system, which was creating a significant negative trend in CSR performance and related customer satisfaction surveys. The number of cases being closed on a daily basis was decreasing, while the contact center staff and IT support staff were growing. However, after the provider implemented the Amdocs CRM solution, which included the integrated Optim archiving application, it soon experienced the following:

- Reduction of IT support staff by 70%
- Reduction of contact center staff by 20%
- Dramatic increase in closed daily cases
- Substantial increase in customer satisfaction

Part of the justification for using the Amdocs CRM solution was that the Optim archiving solution provided by Amdocs also supports the provider's billing application and inventory control system.

CHALLENGES/OPPORTUNITIES

For large customer service–oriented contact centers seeking to upgrade their CRM applications and improve their customer service levels, the Amdocs solution — with the integrated and certified interoperability archiving solution from IBM (DB2 and Optim Data Growth) — deserves to be evaluated by IT/contact center management staff. However, the dependency on legacy solutions presents a couple of challenges to Amdocs/IBM in selling into these environments:

- The IT staff may claim that they already have an in-house-developed archiving solution/process used with the enterprise's CRM solution for all of the information system solutions throughout the enterprise (financial system, ERP, etc.). Because the solution has been developed in-house, integrating with all of the enterprise solutions (generic and legacy) is something that the IT staff may claim they do better and more cost-effectively. The problem with this argument is that a CRM solution has special requirements regarding the ready access to archived data that are not found in other applications. There is no manifest necessity to have just one data archiving solution; the right tool should be chosen for each job.

- It could be argued that the cost of converting from an in-house CRM system, and the associated risk involved in the conversion process, might not be worth the benefits. While it is true that there are definitely costs and risks associated with purchasing a new product and replacing an existing legacy CRM system, they are almost certainly less than the cost of ongoing maintenance of outdated technology and the risks to customer retention associated with poor performance. When management calculate the cost to support their in-house developed solution(s), they will most likely realize the total cost of owning their solution is far greater than the cost of the Amdocs/IBM solution.

CONCLUSION

Advancements in technology and proficient CRM solutions have helped contact centers become the window for and to the enterprise's customer. Supporting the contact center's technology is no longer viewed as a "black art." Industry standards and IP infrastructure have allowed IT staff to provide more generic support to the contact center's technology. Executive management no longer view the contact center as a drag on the enterprise's bottom line; rather, they view the contact center as a primary tool to increasing the top line and improving customer loyalty.

The contact center CSR is encouraged and prompted to engage the customer in upselling and cross-selling transactions. At the same time, the CRM application is collecting data from the agent's desktop, from the speech portal, and from chat and Web sessions. As more and more data is gathered about its customers, the enterprise is using sophisticated analytic tools to help it better understand and anticipate its customers' needs.

With a CRM solution tightly integrated with an effective and enterprisewide archiving solution, the need to collect as much data about the customer as possible will not conflict with the contact center management objectives and will give the enterprise the potential for a competitive edge. This requirement for the storage and access of large amounts of customer data will only intensify. The incorporation of social media data sources such as Facebook and Twitter is quickly coming online in organizations, thus representing additional storage requirements.

The combination of Amdocs CRM and IBM's DB2 and Optim products provides a compelling solution to contact center management designed to deliver a scalable solution that can accommodate the growing data requirements of the contact center while ensuring ongoing customer satisfaction. The combined solution achieves several corporate objectives:

- A state-of-the-art CRM application for agent use in servicing customers
- A database that has been tuned and configured by IBM engineers specifically for this application and provided in a form that is ready to "load and go"
- A data archiving facility also precisely preconfigured to serve the application, with robust and rapid retrieval capability for offline or infrequently accessed data
- An integrated combination of the previously mentioned technologies, fully supported by one provider solution

The ongoing relationship between Amdocs' engineers and IBM's Optim and DB2 engineers, which spans more than 10 years, demonstrates an established history of integration. This solution, embedding Optim and DB2 within an integrated Amdocs CRM offering, takes the relationship to the next level of formalization. The offering is not merely three separate technologies that work well together; it has become one integrated solution.

IDC believes that the Amdocs/IBM offering provides a solution that IT and contact center management would do well to evaluate for its comprehensive, packaged approach to solving the ongoing issues of performance, customer satisfaction, and cost in the contact center. Existing IT resources would be better deployed to address the plethora of other problems that are difficult to solve in today's technology world. Amdocs and IBM have shown that the integration of CRM applications, database, and archiving performance can be addressed — and addressed well — through this joint offering.

APPENDIX

Definitions

- API: Application programming interface
- ASA: Average speed to answer
- CRM: Customer relationship management

- CSR: Customer service representative
- DBA: Database administrator
- FCR: First call resolution
- TCO: Total cost of ownership