



# Research Report

## CA Chorus: Lowering Management Costs to Enable the Dynamic Data Center

### *Introduction*

Today's business consumers require rapid access to new tools, applications and services (mobile, social, analytics) and have become impatient with the slow application development/testing cycles and the inefficiency of today's data centers. CA Technologies believes that this situation needs to change. From CA Technologies perspective, enterprise data centers need to become more "dynamic" (more flexible and responsive to user demands for access to new applications and services). To become more dynamic, these data centers need to focus on: 1) building a flexible and efficient computing infrastructure upon which new services can be easily deployed; 2) finding ways to accelerate service delivery; and, 3) automating information systems management whenever possible to drive down management costs.

*The new, dynamic data center focuses on accelerating data center responsiveness while helping to lower data center operational costs. To help its customers drive down data center costs CA Technologies has focused on streamlining operations, on automating management, on collaborative knowledge sharing, and on simplifying user interfaces – all activities that can very significantly reduce the cost of human labor while making information systems more efficient.*

To help customers build dynamic data centers, CA Technologies is aggressively developing a broad portfolio of products and services that can be used to unify and modernize management operations. *CA Chorus* is one such product.

A few years ago we published our first [report](#) on CA Chorus, recognizing it as "one of the most impressive mainframe management innovations that Clabby Analytics has ever seen". From our perspective CA Chorus continues to provide the most innovative interaction model for mainframe management – one that offers a highly-visual workspace environment that mainframe managers and administrators can use to launch various activities based upon their particular disciplines. These disciplines include DB2 Database Management, Security and Compliance Management, Storage Management, and Infrastructure Management for Networks and Systems – and each discipline contains a set of highly integrated capabilities that can help IT managers/administrators do their jobs more efficiently.

*Since our initial report, CA Technologies has been able to quantify some of the cost savings that its customers are seeing after deploying the CA Chorus management environment. In some cases customers have seen greatly increased return-on-investment (ROI) that can range up to 70% or 80%. A good example*

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*of improved ROI can be found in storage where savings of up to 80% can be achieved through better storage management and lowered storage acquisition costs. Another example can be found in workload management where customers are able to reduce costs related to managing their workloads by up to 70%. From a productivity perspective, some customers are seeing productivity increases of up to 400% by automating management tasks. (Note: ROI results will vary; CA Technologies provides ROI advice [here](#) that can help IT managers determine cost savings relevant to their specific organizations). With savings such as these, it is easy to see how enterprises can save BIG MONEY by empowering more efficient dynamic data centers.*

In this *Research Report*, *Clabby Analytics* revisits the CA Chorus offering. First, we describe what CA Chorus is – and how it works. We then describe CA Chorus “disciplines” (management environments that include network and systems management, DB2 database management, and security management that can be launched from within CA Chorus). We conclude with a strong recommendation: “enterprises looking to very significantly lower IT costs while improving service delivery need to consider using the integrated CA Chorus management environment to make their data centers more dynamic while preparing for the next generation of consumer-driven/business-driven application environments”.

### ***What Is CA Chorus?***

At first blush CA Chorus appears to be a graphically driven management interface for mainframe systems. But closer examination shows it to be a new approach for managing mainframes and associated systems, DB2 databases, security, storage and network environments. This product is a highly-integrated, discipline-based, collaborative, highly-visual workspace that can be used to automate management activities and thus greatly improve productivity of mainframe managers and system administrators (See Figure 1).

***Figure 1: The Chorus Interface***



Source: CA Technologies – January, 2014

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What we find particularly “special” about this environment is that it helps *guide* administrators through solutions. CA Chorus screens can be set up the way the administrator wants them to be organized – so work can be set up in a flow that makes logical sense. And CA Chorus also features a knowledge database (complete with team problem solving tools) that allows mainframe management activities to be tracked and logged. Using this knowledge database, mainframe managers can see how problems were tackled in the past or work collaboratively to solve problems in the present. Administrators do not have to “reinvent the wheel” every time an issue arises – they simply look in the knowledge database to see how others dealt with a problem in the past and follow the same procedure. Also worthy of note, this knowledge database serves as a great tool for training newer mainframe managers in problem solving while helping develop new mainframe skills.

***A Closer Look at the CA Chorus Disciplines***

The way that CA Technologies develops “disciplines” (activities centered around job functions such as database administration) is that the company makes use of products that are already in its existing portfolio as a starting point – and then builds extensions to these products and integrates them with one another in order to create feature rich, logical, integrated management workflows. So, for instance, the DB2 database management environment might include database object migration tools, workflow tools and other discrete database management tools. These tools are integrated into the CA Chorus graphical workspace environment where they can work in concert to help solve database problems or optimize database performance.

At present there are four disciplines offered by CA Technologies (and more are on the way):

1. Networks and Systems Management
2. DB2 Database Management;
3. Storage Management; and,
4. Security and Compliance Management.

The remainder of this section takes a closer look at each of these environments.

***CA Chorus Infrastructure Management for Networks and Systems***

This newest CA Chorus discipline focuses on identifying system and application performance degradation issues that affect networks, systems, DB2 and more – enabling IT managers and administrators to quickly identify the source of problems and more rapidly remediate those problems. Functions in this discipline include:

- Enterprise health monitoring;
- System resource topology;
- Interactive problem and diagnostic tools;
- New alerting modules; and,
- Consolidated performance reporting.

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*What we like best about this discipline is that it works across systems and networks to help troubleshoot problems, such as the causes of latency – is the network at fault or does the system need to be optimized? Using the health monitoring tools combined with the topology tools, the sources of problems can be visualized, problems can be isolated, and solutions can more quickly be implemented.*

*CA Chorus for DB2 Database Management*

CA Chorus for DB2 Database Management helps streamline and automate repetitive DBA tasks enabling organizations to reduce the cost and complexity of managing mission-critical DB2 workloads. CA Chorus for DB2 Database Management offers:

- Automated the tracking and graphing of comparative historical data;
- Improved productivity and visualization;
- Alerts on DB2 threshold exceptions;
- In-context domain documentation with third party integration;
- Performance monitoring visualized through graphical displays; and,
- Support for real-time statistics.

*The beauty of this offering is that it wraps together all of the tools needed to effectively manage a DB2 environment – making it possible for a DB2 manager to visualize problems, receive alerts, tune the database for performance, and track and graph historical trends. Further, database activities such as setting thresholds can be automated, making DB2 administrators more productive.*

*CA Chorus for Storage Management*

CA Chorus for Storage Management automates several aspects of storage management, reducing the amount of time, experience and effort required to manage storage resources. It is especially important to note that this product takes a vendor neutral approach to storage management, thus enabling the management of heterogeneous storage infrastructures.

One of the most important features offered in this discipline is the cost analysis feature that helps determine if storage systems are running efficiently, helps identify possible anomalies, and enables the discipline manager to analyze cost information. Other features include the abilities to:

- Visualize the topology storage assets;
- Automate monitoring and gather historical storage trend data for analysis;
- Accelerate problem resolution;
- Build scenarios to model storage behaviors;
- Connect to multiple storage engine instances; and,
- Analyze object logical relationships.

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*What we like best about this discipline is that it is vendor neutral – making the management of heterogeneous storage possible. We also like the storage cost estimator function. In the world of information systems, many enterprises have already virtualized their systems and networks environments – while storage has been slow to follow. What this means is that enterprises have a lot of unused storage capacity that has not yet been pooled for reuse. Tools found in CA Chorus for Storage Management can help identify this unused capacity and make it available for use, potentially saving enterprises millions of dollars by forestalling the need to purchase additional storage.*

*CA Chorus for Security and Compliance Management*

CA Chorus for Security and Compliance Management monitors systems, analyzes security status information and reports on security compliance. Administrators can receive real-time notification of potential security breaches and issue alerts to immediately notify administrators of security violations. Actions can quickly be taken to immediately remediate security breaches. From a compliance perspective, access to audit and compliance is provided, enabling security reports to be generated.

Key security/compliance features include:

- Real-time access to state and event;
- Advanced reporting capabilities (which are particularly valuable for assessing security risks as well as for compliance reporting); and,
- Security data model extensions.

*The importance of protecting and security data is paramount – failure to do so risks major customer dissatisfaction and can potentially cost enterprise executives their jobs (and in cases of severe neglect, executives can be liable for jail time). For example, in recent months: major retailers have announced critical security breaches, one in which over 40 million credit cards were compromised. When these breaches occur at critical times, such as holiday shopping season, it can have significant impact on sales and revenue (one retailer reported a 2.5% drop in holiday sales which it attributed directly to a credit card breach). Products such as CA Chorus for Security and Compliance Management help build security skill sets; help place security tools into a common workspace where monitoring and remediation can happen quickly; and they gather data necessary for ensuring compliance.*

*Summary Observations*

Consumer-driven IT is placing new demands on data centers. Consumers want increased access to new generation applications – and they want greater systems efficiency in order to achieve results more quickly. Existing data centers need to evolve to be more dynamic and flexible in order to accommodate the growing needs of IT consumers and the business. In short, data centers need to support established business processes with greater efficiency – while at the same time accelerating delivery of new business services and lowering overall IT costs.

System z plays a critical role as a central cloud, security and analytics hub in the dynamic data center of the future. The mainframe architecture is particularly good at virtualizing resources – and this leads to higher utilization rates and a better return on investment.

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Mainframes also offer best-in-the-industry security (EAL level 5+) and providing the ideal host for new generation Java and open source applications thanks to specialized, accelerated processing facilities.

*The IBM System z mainframe is a key enabler of the dynamic data center. To manage the mainframe we strongly recommend that IT executives take a close look at CA Chorus. This set of highly-integrated management solutions enable administrators to manage databases, information infrastructure, security and storage in a way that no other vendor in the market does. By using CA Chorus, IT organizations can expect to lower their cost of operations, improve operational efficiency – while at the same time making it easier to deploy and manage the new generation of mobile, social and analytics and services that users now require.*

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