TECHNOLOGY AUDIT

CA Insight Database Performance Manager for Distributed Databases r11.3
CA

OVUM BUTLER GROUP VIEW

ABSTRACT

CA Insight Database Performance Manager for Distributed Databases (CA Insight DPM) is aimed at reducing the costs and complexities involved in managing a distributed, multi-vendor database environment. The solution offers a unified view of all databases in an organisation’s IT infrastructure, with drill-down capabilities to monitor and analyse Key Performance Indicators (KPIs) and overall health. It offers tight integration with CA TSreorg for Distributed Databases and CA Fast Unload for Distributed Databases, and Ovum is impressed with the integration options with other CA tools that are all part of CA’s Enterprise IT Management (EITM) vision. The target market is large organisations with a large heterogeneous database population.

KEY FINDINGS

- Strong integration with many CA infrastructure management tools.
- Supports remote or agent-based monitoring.
- CA Database Command Center is free to download, and no licence fee is payable.
- CA TSreorg and CA Fast Unload are not included in the CA Insight DPM licence.
- Single UI for managing multi-vendor databases in a distributed environment.
- Supports multiple clustered database environments.
- Supported databases include MS SQL Server, Oracle, Sybase, and DB2 LUW.
- Support for MySQL databases is not included but is in CA’s product plans.

LOOK AHEAD

Planned enhancements to the solution include aspects of dealing with issues around cloud implementations and virtualisation, as well as more automation.
FUNCTIONALITY

The increasingly global nature of doing business today, combined with an increased demand for business agility, has seen the adoption of Service Oriented Architecture (SOA) rise, and as a result the size and complexity of the database environment has increased. The result is that the database is now more important to organisational success, but from a management perspective it is less visible than the hardware. Although database vendors themselves offer management tools along with their database, the associated management functions are often disparate and can be performed only by a database administrator (DBA) with database-specific skills. It is no surprise that the complexity of managing databases in such an environment has resulted in a rise in management overheads, and has left business decision-makers with the twin challenges of reducing IT costs while at the same time improving service availability.

Product Analysis

CA's overall database management solution addresses areas that deal with database design and modelling, database performance management, database administration, and database back-up and recovery. This Technology Audit covers products that deal with the challenge of managing database performance monitoring, and focuses in particular on CA Insight Database Performance Manager for Distributed Databases (CA Insight DPM). Ovum considers database performance to be a key component of an end-to-end IT infrastructure management approach. However, from an organisational perspective the significant proportion of a DBA’s time that is spent on undertaking aspects of database performance management with the objective of ensuring that organisational Service Level Agreements (SLAs) are met can be excessive.

CA Insight DPM offers a single source of information for monitoring multi-vendor databases in a distributed database environment. It is integrated with CA Database Command Center (CA DCC), within which an enterprise view provides administrators with information on the overall health, KPIs, and database quality of service for all managed databases. These may be a combination of MS SQL Server, Oracle, Sybase, and DB2 for Linux, Unix, and Windows (LUW) databases. Databases within VMware or Hyper-V virtualised environments are also addressable, as are those within cloud environments. Drill-down capabilities facilitate the monitoring of granular metrics related to database internals such as CPU, memory, I/O, and database procedure metrics. All of this information is presented in real time, with an option to view historical data for the purpose of analysis. Figure 1 illustrates the performance summary screen, and Figure 2 shows the detailed performance metrics screen.

CA Insight DPM is tightly integrated with other CA database management products such as CA TSreorg and CA Fast Unload via CA DCC. It can also be integrated with other CA tools such as CA NSM, CA eHealth Performance Manager, CA Spectrum Infrastructure Manager, CA Spectrum Service Assurance, and CA Wily Introscope. All of these out-of-the-box integrations integrate both KPIs and events into the respective products so that the database health is displayed within the user interface of the integrated product. In recent years the company’s approach to product integration has been comprehensive and deep, based on a common data model. Ovum sees this as a particular strength because integration at this level enables CA to offer end users a tool that has the same look and feel across many products, giving the perception of being seamlessly usable. The products can also behave with context awareness, ensuring that information is provided at an appropriate level for the user. This has been one of the key elements around which CA’s Enterprise IT Management (EITM) vision has been built, and is one which we believe could greatly enhance comprehensive, end-to-end IT infrastructure management – although notably this is not provided by many vendors as part of an integrated IT systems management capability.
A key area where the CA solution can be seen to bring about a tangible benefit to the end-user organisation is in the use of a single management interface for clustered databases. Large organisations typically have database clusters to support high-end enterprise applications from a scalability and availability standpoint. The CA solution provides DBAs with an overall view of databases that are in clusters as well as those that are not. This ‘at-a-glance’ view also provides a view of the physical nodes in a clustered database, highlights issues that could act as potential bottlenecks, and supports the ability to drill down into specific databases to run diagnostic checks.

**Product Operation**

CA Insight DPM, CA TSreorg, and CA Fast Unload are integrated with CA DCC, which acts as a single user interface for the product set (see Figure 3).

**CA Insight Database Performance Manager for Distributed Databases**

CA Insight DPM is aimed at simplifying the task of managing a distributed database environment, while at the same time improving service availability by leveraging its capability to detect factors that affect database availability through remote and/or agent-based monitoring techniques, multi-threshold events, and alert notifications. These thresholds can be custom-defined or administrators can utilise pre-defined thresholds to facilitate fast-track deployment.

CA Insight DPM also has the ability, through a Wizard-driven approach, to automatically detect all the databases in an organisation’s infrastructure environment and let administrators make a decision on what databases need to be monitored by the solution. Supported databases include Oracle, Microsoft SQL Server, Sybase, and DB2 for LUW. The MySQL open source database is not currently supported but is in CA’s roadmap.
All metrics related to database performance are captured by CA Insight DPM and can be viewed in real time. Metrics are grouped by type within drill-down views to enhance comprehension, and include composite metrics such as quality of service. The solution facilitates historical analysis by capturing and storing past performance data in a common repository for which CA Management Database (MDB) is the default platform. In addition, CA Insight DPM can also federate the storage of the data by utilising local flat files and, if desired, the deployment can mix the use of the central repository and federated files. CA Insight DPM has the intelligence to retrieve the required data for display regardless of where it is kept. This provides flexibility in deploying CA Insight DPM in a variety of environments. The flexible deployment provides the ability to configure CA Insight DPM based on the business needs and supporting environment while still unifying information as a foundation for end-to-end IT infrastructure management.

**CA Database Command Center**

The CA DCC offers a common interface for the management of multiple database types and also for the CA Insight DPM, CA Fast Unload, and CA TSreorg products. Via CA DCC, DBAs can perform core administration tasks such as schema management. Its portal capabilities enable the creation of customisable workspaces based on user groups, secured by defined user security privileges and roles. CA DCC supports z/OS core administration; although for specialist administration requirements organisations still need a separate product such as CA’s RC/Query, CA RC/Update, or CA RC/Migrator. The CA DCC portal provides a Really Simple Syndication (RSS) feed from CA to keep users informed of the latest news from CA Database Management. Users can add their own RSS feed by adding a new portlet to the DCC, or can change the default RSS feed.
CA TSreorg

CA TSreorg is aimed at increasing the availability of databases and recovering wasted space by helping administrators perform tasks related to database restructuring. The solution reduces the complexities involved in restructuring databases by eliminating the need for users to be familiar with the different syntax or procedures specific to a vendor’s database. Ovum believes this ‘normalisation’ of commands is a key capability that will enable organisations to extract significant value from the deployment of CA TSreorg in a multi-vendor database environment. The solution also comes with features such as on-line and off-line restructuring, scheduling, and single sign-on.

CA Fast Unload

CA Fast Unload is a data movement and export solution aimed at reducing the time required to unload data, thereby increasing the availability of database tables for applications. Users can specify rows and columns to extract from a database table and the solution leverages multi-threaded row processing techniques to unload multiple data formats in a single execution. It also comes with features such as the ability to extract data into different output files in one pass of a table, which is beneficial when large extractions exceed available storage.
Architecture

The solution architecture (see Figure 4) consists of three main components: the client, the server components, and the database Knowledge Agents (KAs). Server components are made up of the MDB, CA DCC, and the Unicenter Management Portal (UMP).

The solution scales well with respect to both the number of databases and the volume of data to be managed. Scalability (in terms of the number of databases) depends on the type of agents that have been configured because the local agents are more scalable (the monitoring work is supported by the database server). As a result of the network not having to deal with the two-way information exchange between the client and the server, network failure or performance issues become less of a problem. However, in organisations where the network is of sufficient capacity these concerns are less of an issue, and therefore have less of an impact on scalability. Regarding storage and management of historical information, organisations with thousands of databases (and consequently large volumes of data) can choose the federated approach to archiving of agent-based storage, rather than a central repository storage approach. This again helps with scalability requirements. However, Ovum believes that scaling of databases is a complex issue that must be fully investigated and designed for the specific usage and infrastructure requirements.
Product Emphasis

CA Insight DPM has been developed for organisations that have hundreds of distributed databases from multiple vendors. The solution acts as a ‘one-stop shop’ for all issues regarding database performance management by providing a consolidated view of all databases and reporting on KPIs. By offering a scriptless management platform it should deliver efficiencies by enabling DBAs to carry out administration tasks without the need for vendor-specific database skills, and by enabling management of database issues to be more responsive.

DEPLOYMENT

CA Insight DPM can be implemented by any DBA with sufficient security privileges to do so. The time taken for implementation is governed by variables such as the size and power of the server and the number of agents to configure. The company claims that the average implementation time for deployments so far has ranged from an hour to half a day. However, if the client organisation has already implemented CA MDB and CA UMP as a part of the installation of other CA products, this could be reduced to less than 30 minutes.

The solution can be deployed using a modular approach, in the sense that CA Insight DPM can be deployed on one or more databases and can be added to at any time. The server discovery Wizard aids in the exercise of adding more databases to CA Insight DPM by automatically discovering all database servers in an organisation’s IT infrastructure environment. Agents can be configured at different times or as and when DBAs choose to add new database servers.

The company provides education courses for CA Insight DPM. Ongoing technical support is optional and is provided through a self-service interface on the CA Web site. Support may also be engaged by raising ‘trouble tickets’ online or via the telephone. The company has put together a ‘SWAT’ team to be placed on site if the complexity of the problem warrants such an option. This on-site support is provided through a contractual agreement between the client and CA.

The CA MDB needs to be implemented either on an existing Microsoft SQL Server or Oracle database. Successful implementation of CA Insight DPM depends on database drivers from the vendors as well as CA drivers.

CA Insight DPM comes bundled with CA TSReorg and CA Fast Unload, which are completely integrated. The administration options associated with CA TSReorg and CA Fast Unload are initially ‘greyed out’ in the CA DCC Web-browser interface used by CA Insight DPM because these options are not available unless purchased and licensed.

CA Insight DPM replaces a number of CA’s products for monitoring databases including CA Unicenter NSM v3.1 Database Performance Monitor Option, Unicenter Database Performance Management, and the CA eHealth Oracle and SQL Server Application Insight Modules (AIM).

PRODUCT STRATEGY

The target market for CA’s solution is typically large companies that use multiple, distributed databases with large deployments and that have a requirement to adhere to SLAs for critical business activities. Ovum believes that this solution would also benefit companies that see database management as a critical component of their end-to-end IT infrastructure management strategy. CA Insight DPM is vertically agnostic and can find its use justified in almost any vertical with a heterogeneous database environment.
The primary ROI driver lies in its ability to proactively detect and provide alerts for potential bottlenecks or problems that might result in service disruption. The other aspect that drives organisational benefit is its capability to reduce management overheads and eliminate the need for implementing individual management components for each database type installed. There are additional overhead savings by having CA Insight DPM integrate into CA’s system, network, and application performance products thereby eliminating the overhead and costs of implementing separate technology to provide database health for an end-to-end view.

CA’s route to market for Insight DPM and other related products has largely been through direct sales. However, it has recently placed an emphasis on channel partnerships and is looking to leverage them as part of its growth strategy. Because CA Insight DPM has replaced the previously available CA eHealth Oracle and SQL Server AIM it is also sold by the CA eHealth channel organisation.

CA states that it does not have any business partnerships for this solution that it can reference externally. In terms of technology partnerships, the product is a part of a partner programme with Microsoft, IBM, and Oracle.

CA Insight DPM has a three-tier, server-based licensing model and it depends on the number of Central Processing Units (CPUs) on the physical system. The licence includes database support for DB2 for LUW, MS SQL Server, Oracle, and Sybase, as well as the integration components required to integrate with other CA database management and CA performance management solutions. From its past deployment experience, CA reports that the average project value for the installation of the solution is between US$25,000 and US$50,000, with large-scale implementations stretching to over US$500,000. The figure varies according to the size of the infrastructure being managed.

Annual maintenance and support is offered at 20% of the license cost through the company’s Web site. Support is through a self-help interface that gives users access to the CA knowledge base and FAQs about issues experienced by customers, complete with the appropriate solution. Users can also use online support to escalate issues to CA technical staff if a resolution attempt through self-help fails. In addition, the annual fee provides users with patches and product fixes that can be downloaded through the Web-based interface.

CA has significantly enhanced the integration between CA Insight DPM and other parts of its infrastructure management portfolio. One of the important recent developments involves the data-model-level integration with CA Spectrum Service Assurance, which enables staff to view database health as part of the overall service assurance. Extensive further developments relating to portfolio integration are in the pipeline, and will leverage CA’s Catalyst integration platform to provide a common model that can be leveraged by third-party tools.

**COMPANY PROFILE**

CA, Inc. is one of the world’s largest IT management software providers. Founded in 1976, CA today is a global company with headquarters in the US and 13,200 staff in more than 40 countries. CA serves more than 99% of Fortune 1000 companies, as well as government entities, educational institutions, and thousands of other companies in diverse industries worldwide. It is a publicly traded company on the NASDAQ, with the stock symbol CA.
Revenues and operating income for the last three fiscal years are as follows

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<th>Year ending 31 March</th>
<th>2009</th>
<th>2008</th>
<th>2007</th>
</tr>
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<tbody>
<tr>
<td>Revenue (US$ Million)</td>
<td>4,271</td>
<td>4,277</td>
<td>3,943</td>
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<tr>
<td>Change on Previous Year (%)</td>
<td>0</td>
<td>8</td>
<td>5</td>
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<tr>
<td>Total Net Income/(Loss) (US$ Million)</td>
<td>694</td>
<td>500</td>
<td>121</td>
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CA states that its software and expertise unify and simplify complex IT environments - in a secure way - across the enterprise for better business results. CA calls this Enterprise IT Management (EITM), a clear vision for the future of IT in the enterprise, securely and dynamically managing systems, networks, security, storage, applications, and databases. CA also has a stated policy to enhance and protect its clients’ IT investments by integrating a wide range of systems in heterogeneous environments. To maintain this stance, it has a wide range of partnerships with technology vendors, systems integrators, and IT consultancies.

**SUMMARY**

In Ovum’s opinion, CA Insight DPM is one of the market’s leading products, offering enterprise-class, unified database performance management in a distributed database environment. Organisations with significant investments in CA products can leverage the integration of CA Insight DPM with other CA products. Databases are key elements in an infrastructural set-up, along with applications, networks, and systems. A unified approach to the management of these elements has an impact on reducing service disruption, and at the same time aids quicker root-cause analysis for problem resolution. Overall, CA Insight DPM is a good solution geared heavily towards catering for the requirements of large organisations to streamline all aspects of IT management and contribute to a unified IT infrastructure management strategy to improve service availability.
### Table 1: Contact Details

<table>
<thead>
<tr>
<th>CA World Headquarters</th>
<th>CA EMEA HQ</th>
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</thead>
<tbody>
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<td>Ditton Park, Riding Court Road</td>
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<td>New York 11749</td>
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Source: CA

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