

White Paper



Unicenter® Database Management

Command Center Architecture

March 2006

Preface

This document is intended to familiarize you with Unicenter® Database Command Center (Unicenter DCC), its architecture and components.

Enterprise IT Management

Enterprise IT Management (EITM) is a vision for how to unify and simplify the management of enterprise-wide IT, so that organizations can better manage risk, improve service, control costs, and align IT with business needs. To make this vision a reality, an architectural foundation, a platform, is required that enables the integration and sharing of management processes, data and user interfaces. CA is delivering precisely such an open, service-oriented integration platform that enables rapid time to value for CA solutions. It is also open to ensure customers and partners can leverage their existing IT management investments to deliver significantly enhanced value to the enterprise.

CA Solution for Multi-Database Management

Unicenter DCC is a browser-based multi-database management solution that unifies and simplifies the complexity and management of different Relational Database Management Systems (RDBMS). You can perform a variety of database administration operations on different databases without changing tools. You can purchase and plug-in advanced product technology to enable advanced capabilities and automation.

Unicenter DCC is built on the CA EITM Integration Platform that includes CA's Management Database (MDB). The MDB is deployed on standard relational database technology. With CA products, the MDB enables data to be retrieved for optimally managing your IT infrastructure without the overhead of overlapping data collection or cost encountered from point product tools. The MDB is open so customers and third-parties can use the MDB also for IT management from non-CA software products.

Product

Available at "No Charge", Unicenter DCC from CA enables you to centralize multi-database administration within a single browser-based interface. CA advanced technology, integration and portal services conceal database complexity from users and give different RDBMS a common look-and-feel.

Unicenter DCC is a launch pad for CA database management products and is expandable. Seamless integration enables even more capabilities and automated database management operations with advanced functionality that can be purchased and plugged in. This modular yet integrated approach helps you easily add functionality as needed.

Current advanced product functionality available for purchase:

- **High Speed Data Unloading for DB2 UDB for Linux, UNIX, Windows (LUW) databases.**

Unicenter® Fast Unload® for DB2 UDB for LUW improves availability of corporate data by reducing the time for unloading and moving DB2 data.

- **High Speed Data Unloading for Oracle databases.**

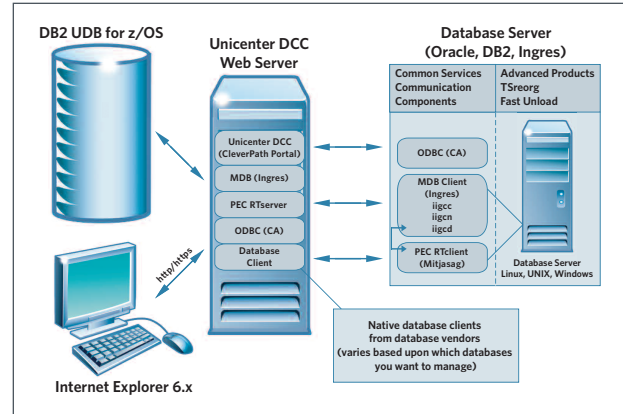
Unicenter® Fast Unload® for Oracle improves availability of corporate data by reducing the time for unloading and moving Oracle data.

- **Online and Offline Oracle Database Reorganization.**

Unicenter® TSreorg™ for Oracle improves efficiency of Oracle databases by recovering wasted space and restructuring objects that have become fragmented due to data inserts, updates and deletions.

Architecture

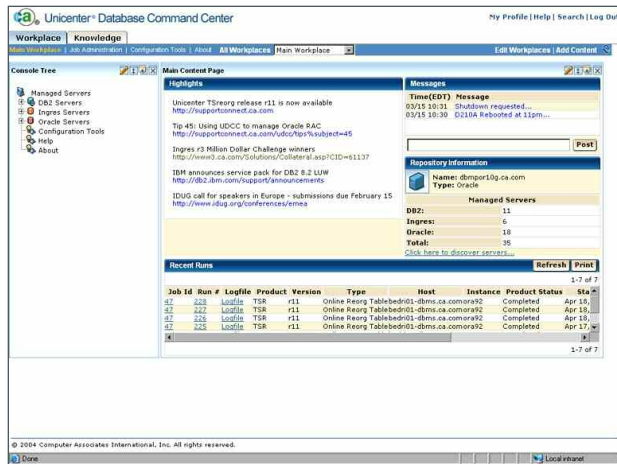
The following diagram shows the components that comprise Unicenter DCC:



Components

Portal and Web Server

Based on CA's CleverPath technology using J2EE standards, the Unicenter DCC Portal is JAVA-based and the main application enabling information display within a personalized workplace.



Powering the browser-based display is an Apache Tomcat Web Server. In production environments, web servers like Tomcat should be situated on a server that is reachable enterprise wide and can handle multiple requests.

MDB

This is the common operational store or repository that CA products use to store data. An example of the type of data that is stored is the host name, domain, and plug-in components that are installed on a specific server. In this release, Ingres r3, an open source database, has been included so customers do not have to purchase anything additional to use the product. CA has also announced support for Microsoft SQL Server and Oracle databases as part of future releases. Communication with the MDB is achieved using SQL calls through ODBC drivers that are also included and installed as part of the installation.

Clients and Common Services

Database Client Libraries

ODBC drivers are included and installed for communication with the MDB and for administering Oracle, DB2, and Ingres r3 databases remotely without agent installation. Native database connectivity supplied by your database vendor needs to be installed and configured for Unicenter DCC to connect to the databases you wish to connect and manage (e.g. Oracle SQL*Net, DB2 Connect etc...).

MDB Client Processes

- **iigcn** provides information to user processes that enables a connection to a local server.
- **iigcc** monitors outgoing communication from local applications to remote servers and incoming communication from remote applications to local servers.
- **iigcd** translates requests from the JDBC Driver and .NET Data Provider into MDB internal format and forwards the request to the appropriate server.

Database Job Administration Service Process

mitjasag monitors for when job parameters are entered into the GUI, checks in the MDB for the action to perform and then passes them on to the appropriate product for execution. Job execution could be immediate or deferred to execute at a scheduled time.

RTServer

One of two middleware communication layers is referred to as "PEC" and is used by Unicenter DCC and its components to pass messages between cooperating client and agent processes. At a minimum, there will be one process/executable called an RTserver running on a server (usually, the same server as Unicenter DCC Portal). On other servers where agents have been purchased and installed for advanced capabilities, there will be one or more RTclient processes that will connect to the RTserver and communicate through the RTserver to other RTclient processes via PEC. An example of the type of communication that uses PEC is the scheduling of a job to be executed on a remote host to reorganize or unload a table. The other communications layer is ODBC that Unicenter DCC uses to connect and browse databases.

Included Advanced Functionality

Ingres r3 database reorganization and unloading capability is included with Unicenter DCC at no additional cost. Advanced technology agents can be deployed on to any number of servers when you want to manage Ingres r3 databases within your environment.

Advanced Product Functionality Available for Purchase

Everything is included in the packaging; all you need to do is purchase a license key from your CA sales representative and install it to use these additional advanced capabilities from Unicenter DCC:

To reduce the amount of time to unload a database or automate database unloading and reloading processes just choose the appropriate agent selection from within the installer, and it takes care of the integration into Unicenter DCC for you. Advanced fast unloading product functionality currently is available for DB2 UDB for Linux, UNIX, Windows (LUW) and Oracle databases.

- Unicenter Fast Unload for DB2 UDB for (LUW) (product code UNIFUU99000)
- Unicenter Fast Unload for Oracle (product code UNIFUO99000)

To eliminate wasted storage space caused by database fragmentation and automate offline or online reorganization processes you can choose the appropriate agent selection from within the installer, and it takes care of the integration into Unicenter DCC for you. Advanced reorganization product functionality currently is for Oracle databases.

- Unicenter® TSreorg™ for Oracle (product code UNITSR99000)

These advanced technology product agents provision processing and enable autonomous automation without overloading networks or overburdening the management server.

Prerequisites for Multi-tier Installation

Unicenter DCC and Web Server

- IBM-PC or compatible, 1 GHz or higher processor recommended
- Microsoft Windows environment
 - Microsoft Windows 2000 SP4
 - Microsoft Windows 2003 SP1
 - Microsoft Windows XP Professional SP2
- 1 GB RAM (recommended)
- 2.4 GB disk space (recommended)
- 32-bit native database connectivity installed (provided by database vendor)
- Database environments managed
 - Oracle database versions 9i (9.2.0), 10g (10.1)
 - DB2 UDB for Linux, Unix, Windows versions 8.1, 8.2
 - DB2 UDB for z/OS versions 7, 8
 - Ingres r3

Management Database (MDB) installation

- IBM-PC or compatible, 1 GHz or higher processor recommended
- Microsoft Windows environment
 - Microsoft Windows 2000 SP4
 - Microsoft Windows 2003 SP1
 - Microsoft Windows XP Professional SP2
- 1+ CPU (recommended)
- 1+ GB RAM (recommended)
- 4 GB disk space (recommended)

Browser

- Microsoft Internet Explorer 6.0

Pre-Installation Preparation

Before installing Unicenter DCC check the following:

- View the README file to determine that the computers you plan to use meet requirements.
- Verify that host name resolution is consistent throughout your network.
 - Unicenter DCC products store their connection information within the MDB. All components connecting to the MDB need to be able to connect to any managed database using the connection information in the repository. Note: the MDB stores only one name for each database or host. Aliases are not stored in the repository.
 - Ensure that the databases you want to manage are accessible from any Windows computer where you will be installing Unicenter DCC components or from any computer running agent components. This includes the computer where you plan to install Unicenter DCC.
 - If you have overriding entries or aliases in your local hosts file, jobs may not run properly. It is recommended that you use DNS for consistent host name resolution. NSLOOKUP can be used to test name resolution.
- Choose a computer to host the Unicenter DCC web server and MDB.

For more information visit ca.com.

