# CA 2E r8.5

CA 2E incorporates application development design models, native code generation, and deployment facilities into a single development environment. Using a data-driven approach, CA 2E automatically generates the code, database designs and definitions, help text, and other objects necessary to build applications for the IBM i® server (formerly called AS/400®).

## Business Value

CA 2E supports rapid development of high-quality applications that can be easily maintained. It leverages both traditional and new IBM i supported technologies addressing significant application development trends such as the integration of data across systems and platforms, and component-based architecture. CA 2E provides a solid foundation for data-driven systems that can be modernized at a pace that makes business sense for an organization.

## Solution Overview

Today's business climate requires that organizations have business applications that help improve customer service, reduce costs, increase profits, get to market faster, and respond more rapidly to competitive challenges. CA 2E provides a single, integrated environment that accelerates development projects for mission critical applications. Central to CA 2E are pre-built, pre-tested templates to help development teams quickly design, create, and maintain large-scale business applications for the IBM System i®.

## Delivery Approach

CA provides a portfolio of mainframe services delivered through a network of established partners chosen to help you achieve a successful deployment and get the desired business results as quickly as possible. Our standard service offerings are designed to speed deployment and accelerate the learning curve for your staff. CA's field-proven best practices and training lower risk, improve use/adoption, and ultimately align the product configuration to your business requirements.

## What's New in CA 2E r8.5?

The current release of CA 2E provides:

WEB SERVICES CREATION Created directly from the CA 2E model utilizing the IBM i Integrated Web Services Server for ILE, the CA 2E model stores the appropriate meta-data to enable generation and re-generation of services. CA 2E model impact analysis provides usage and reference for all modeled web services.

ILE SERVICE PROGRAM GENERATION CA 2E functions defined as ILE modules are built into ILE service programs, complementing the web services generation capabilities in the base product and enabling applications for incorporation into a Services Oriented Architecture (SOA) based framework.

NEW WEB ENABLEMENT ENHANCEMENTS User data is now stored in separate data libraries, known as Web Option Environments. This simplifies the management and upgrade of CA 2E Web Option systems.

IMPACT ANALYSIS ENHANCEMENTS Improved functionality to take account of commented-out function calls in the action diagram.

SEARCHING AND POSITIONING ENHANCEMENTS Ability to quickly search and position on Edit Functions, Edit Database Relations, and related panels.

ENHANCEMENTS TO THE 2E CHANGE MANAGEMENT OPTION Upgrades to support the new function types in r2E r8.5 as well as address several other customer-requested improvements.

## Features

In addition to the above new features, the CA 2E base development environment includes:

MODEL-BASED DEVELOPMENT: Modeling enables you to design applications with business requirements in mind rather than technical specifications. Changes in business requirements can be easily incorporated by making a change in the design model that ripples throughout the application.

DATA DRIVEN DESIGN: Producing a correctly designed database requires a rigorous analysis of the data stored in the system. This can be achieved through relational database design, which is a cornerstone of the CA 2E development environment.

NATIVE SOURCE CODE GENERATION: CA 2E generates 100 percent of the native RPG, RPG ILE, COBOL or COBOL ILE code required to build System i applications based on design model specifications. It also handles the creation of DDS or SQL for database schema, screen and report generation and the generation of help text.

OBJECT-BASED APPROACH: Platform neutral syntax is incorporated in the application modeling process. The resulting design is expressed in terminology that is easily understood by both the designer and business manager with prototyping functionality available to present both initial and ongoing designs to end-user teams for collaborative input.

OBJECT REUSE: CA 2E lets you focus on creating reusable components. Actions and objects that represent common routines are defined once and can be reused in multiple applications, accelerating development.

DIRECT-TO-WEB FUNCTIONALITY: The CA 2E Web Option generates HTML for IBM i application panels that can be quickly deployed into a standard web browser when the built-in runtime facility is merged with the 5250 data stream. It provides a pure browser-based implementation, with no need to download software to each client PC. If a screen has not been previously converted, the runtime will automatically transform any 5250 screen into HTML just-in-time.

FULL LIFE CYCLE SUPPORT: The design, coding, generation, building, and ongoing maintenance of applications are handled within a single development environment. The built-in runtime environment handles remote communication to limit the need for low-level coding.

WORKGROUP ENVIRONMENT: Teams of developers can work on the same project simultaneously with all changes added to a single, central repository. CA 2E automatically provides the necessary security and object locking.

IMPACT ANALYSIS FACILITIES: A set of functions for managing design objects is supplied with CA 2E. These can be used either as tools to work with and manage objects or to manually control changes to the design model.

TOOLKIT FOR IBM I: This integrated set of over 100 commands and utilities contains tools for programming, user access, documentation, and design that provide a wide range of productivity benefits for IBM i programmers, administrators or end-users, whether or not they use the CA 2E base product.

CONTROLLED CHANGE MANAGEMENT OPTION: The CA 2E Change Management Option was designed to provide you with a controlled way of moving objects into production. Using a developer-centric approach, the center is a workbench from which developers can check out objects to be edited, and then compile, promote, and deploy them to other environments on the local or remote machine. To meet the challenge of multiple developers working on the same program, automatic developer conflict notifications effectively manage the team development process.

## Benefits

For thousands of worldwide organizations and many vertical markets, the IBM i continues as the undisputed server and platform of choice. Its integrated environment, low maintenance cost, high degree of security, consistent high customer satisfaction ratings, and ease-of-use help ensure that it will remain popular for years to come.

For more than two decades, CA 2E has established itself as a Rapid Application Development (RAD) tool largely focused on three key elements: Models, Templates, and Generators, all of which contribute to key developer benefits. The integrated modeling environment of CA 2E contributes to a development methodology that can be easily understood by both business and technical people.

ACCELERATED DEVELOPMENT: The properties of CA 2E business objects or templates can be incorporated directly into the design phase, eliminating the need for recoding repeatable elements of applications, and saving considerable time and cost.

TECHNOLOGY INSULATION: Based on the design model, CA 2E generates 100 percent of the native code required for entire applications – client code, server code, and database objects. Developers are not required to know low-level details of specific programming languages such as RPG or COBOL.

SIMPLIFIED MAINTENANCE: With CA 2E, the time and costs of application maintenance are significantly reduced. Full impact analysis is built into CA 2E, so that required modifications can be easily identified throughout the model. The appropriate changes are simply made in the model, then the application is regenerated and redeployed within the CA 2E environment.

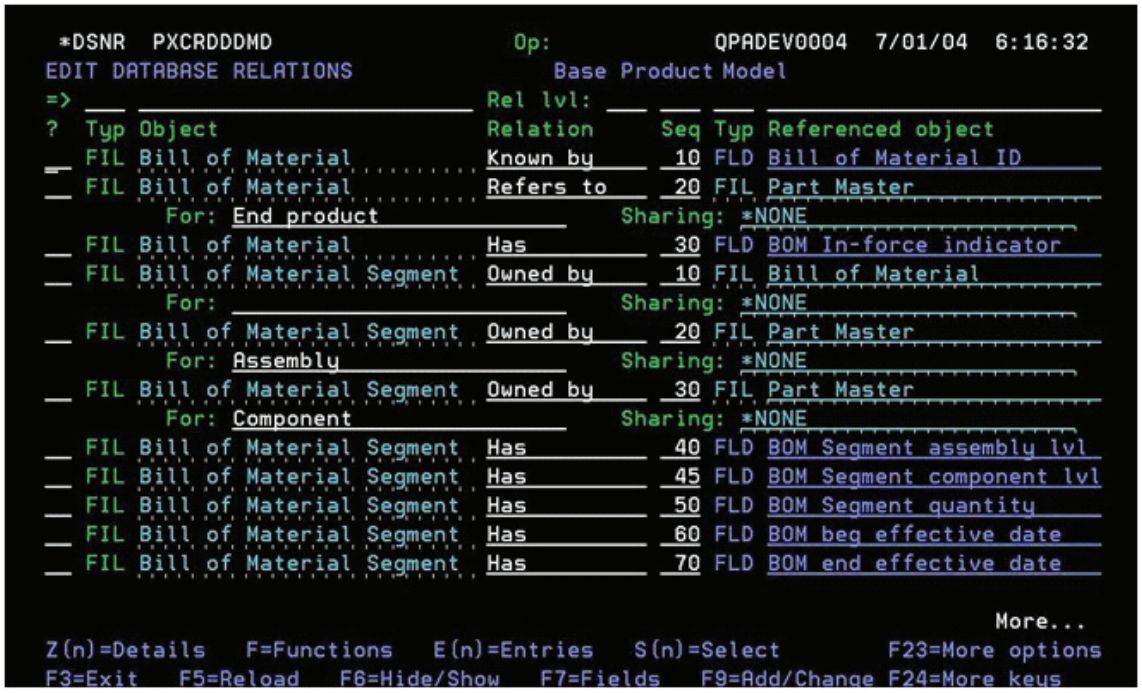
FOCUS ON TEAM DEVELOPMENT: Multiple developers can work on the same project simultaneously resulting in significant productivity increase.

MODERNIZATION OPTIONS: Applications built in CA 2E serve as the groundwork for legacy modernization-based business and technical requirements – whether it is web enablement, transitioning to additional distributed platforms, or the creation of Web Services that are the standard for Service Oriented Architectures.

## Why CA?

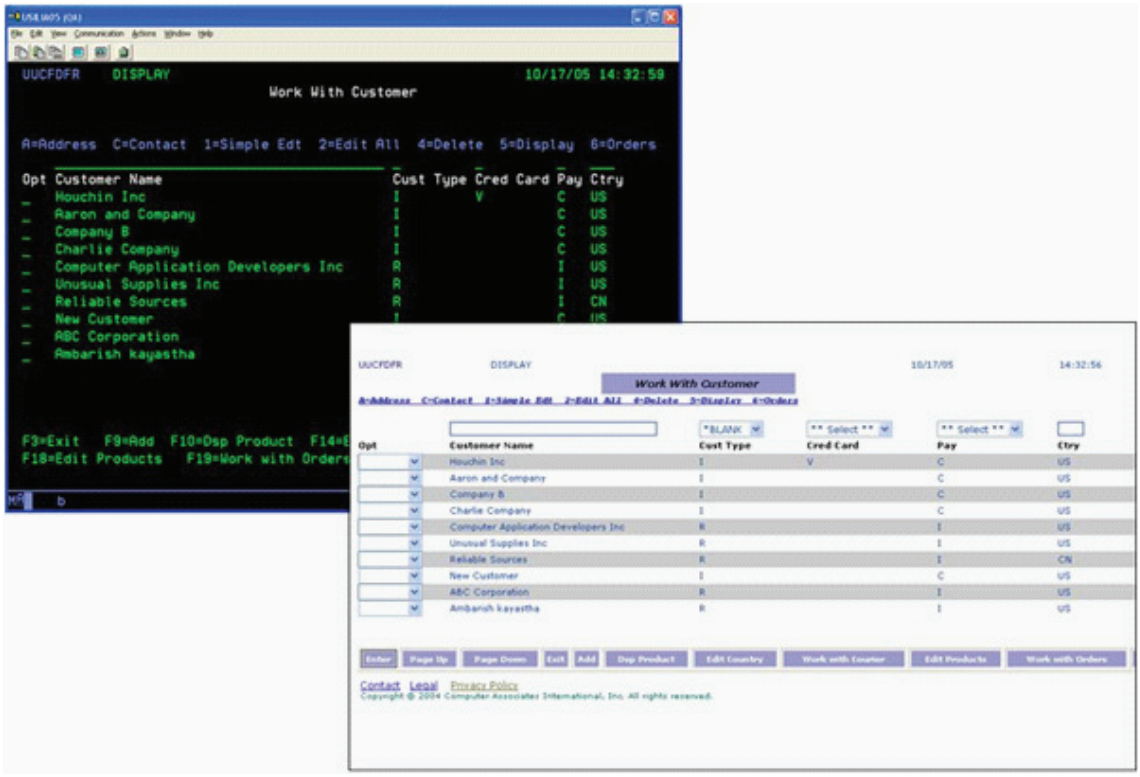
CA application development solutions are an integral part of CA's vision to provide a higher level of management control known as Enterprise IT Management (EITM). EITM is a dynamic approach that is designed to securely integrate and automate the management of information technology applications, databases, networks, security, storage, and systems across departments and disciplines to optimize the full potential of each. CA's comprehensive portfolio of modular IT management solutions helps the enterprise unify, simplify and secure IT to better manage risk, costs and service, and verify that IT meets the business needs of the enterprise.

FIGURE 1.




At the heart of CA 2E is a design model based on an intuitive relational data modeling language. Changes to the data model are automatically reflected in generated business logic, database schema, 5250 screen designs, and HTML web page designs.

FIGURE 2.




The CA 2E Web Option contains direct integration with the design model to help instantly enable web application screens with little or no HTML programming skills.


MP34512