Cincom® MANTIS® and Cincom® AD/Advantage®

MANTIS and AD/Advantage

Rapid Application Development for the Mainframe

MANTIS Delivers
- High value
  - Improved quality and reliability of production applications
  - Optimized developer productivity
  - Complete integration at the data, application and system levels
- Low cost
  - Reduced development resources
  - Minimal training to be productive
  - Highly effective access to industry-standard data stores
- Rapid ROI
  - Rapid delivery of high-performance applications
  - Reduced application maintenance time
  - Reduced effort in customizing "off-the-shelf" packages
- Low risk
  - Uses open industry standards such as SOAP, XML, HTTP, HTML and TCP/IP proven technology
  - Prototyping identifies and eliminates potential problems early in the development cycle
  - World-class 24x7 support

Read on to find out how!

Rapid Application Development for Thin-Client/Server-Based Applications

MANTIS is a complete beginning-to-end rapid application development system, offering advanced capabilities for both the developer and the end-user, including:

- A service-oriented architecture
- Web-based rapid application development
- Thin-client deployment
- Prototyping for high-quality system design
- A full-function programming language
- Form and file generation tools
- An extremely short language learning curve
- Open integration with other applications and systems

MANTIS addresses the entire application development cycle, from the initial design phase through post-installation maintenance. This ensures that applications are reliable and responsive. MANTIS facilitates complete integration, not just at the data level, but also with other applications, languages and other Cincom products. MANTIS enables "intelligent" integration because you can programmatically apply business logic to the data and processes.

A Collaborative Development Environment

MANTIS developers are more productive because they can design prototypes; create transaction screens/forms/web pages and reports; define logical data views; write structured procedures; and dynamically test, correct, document, secure and release applications for production in a single, integrated, interactive session.

The unique capabilities of MANTIS combine to significantly improve the quality and effectiveness of all applications, while providing the power to handle your most sophisticated development requirements. MANTIS delivers this collaborative development environment by providing a rich set of components for faster system development, testing and implementation.

MANTIS Studio

Developer productivity enhancements to MANTIS Studio continue to make it the premier development and maintenance environment for MANTIS applications. MANTIS Studio is a fully self-contained developer's suite consisting of:

• An Eclipse-based developer's workspace

• MANTIS Web (with an Application Server)

• A Windows® MANTIS Server

MANTIS Studio provides a complete, feature-rich Integrated Development Environment (IDE) supporting the development and maintenance of any MANTIS application, including the new mobile development capabilities for Android™.

MANTIS uses the Luna build of Eclipse, which includes improvements to the user interface and navigation as well as new features such as Split Editors and optimized support for multi-monitor setups.

The new Flow tab shows a MANTIS program's logic flow, which is useful when you review unfamiliar code. It displays a diagram with labeled symbols for each program statement and connecting arrows showing logic flow.

Integrated Debugger

MANTIS Studio includes a debugger that enables you to detect and diagnose errors in your programs running either locally or remotely. The debugger allows you to control the execution of your program by setting breakpoints, stepping through your code and examining the contents of variables.

WSDL Generation Facility

This facility enables you to define a web service from your MANTIS programs and screens. With this automated Web Services Description Language (WSDL) generation, you can package your business processes as services for easy interaction with other SOA-enabled participants.

Universal Export Facility (UEF)

The UEF supports the generation of XML (both XSL and HTML) when exporting screens previously that were created on terminal MANTIS in the Screen Design Facility. However, MANTIS Studio allows for the direct generation of XML (both XSL and HTML) to a client workstation. This XML can then be incorporated into a MANTIS Web application for graphical display on a browser. You can also take XML created by other means or by MANTIS Studio, import it into MANTIS and save it as an application screen to be utilized by MANTIS programs. So whether you start with an already existing MANTIS application or design from scratch, you can build an application to interact with a browser or other web service applications.

You can also export prompters for use with MANTIS Web. When these prompters are displayed in a browser, a separate window opens up to display the prompter without interfering with the form that's already displayed in the browser.

Eclipse-Based Developer's Workspace

MANTIS Studio coordinates all of the facilities and capabilities of MANTIS into one easy-to-use graphical environment through the use of the Eclipse open source community. Eclipse is a publicly available, Integrated Development Environment (IDE) described at eclipse.org. Developers who are familiar with Eclipse will be familiar with the most basic usage of MANTIS.

MANTIS Web

MANTIS Web is comprised of the MANTIS Server (Cincom's proprietary Rapid Application Development system) and MANTIS Web, an open-source middleware web application. MANTIS Web extends MANTIS programming into the web programming environment for:

1. New applications, allowing collaboration with many open standards and technologies, including TCP/IP, HTTP, XML, SOAP, HTML and JavaScript. This open approach allows MANTIS to participate in Service Oriented Architectures (SOAs).

2. Rich Internet Applications (RIAs) via embedded AJAX support using the popular jQuery implementations.

3. Web-enabling existing MANTIS applications and potentially evolving them into RIAs.

4. Sharing information with other applications and technologies in an open, internet-enabled fashion.

MANTIS Web creates MANTIS entities as XML documents for access via a web browser and/or web design tools. MANTIS Web can also send MANTIS information to non-MANTIS applications in a web-services style.

Productivity aids such as XSLT (Extensible Stylesheet Language Transformation) are built-in features of MANTIS Web that transform MANTIS-generated XML data into an HTML format (default). Since MANTIS Web utilizes an "open source" methodology, users can transform the XML and XSL into any format needed by any receiving application.

Native XML File Views

Native XML file views enable MANTIS developers to use MANTIS File Design to create XML file layouts. MANTIS can then access a file in XML format as a native MANTIS file, allowing input and output of XML formatted data.

Web Services Capabilities

XML message views enable MANTIS developers to use XML View Designs to create an XML message view to send an XML message to any SOAP Web Service from a MANTIS program and get the reply. You can even import WSDL with MANTIS Studio for automated XML view creation.

PDF Output Support

When performing output printing (OUTPUT PRINTER) with MANTIS Web, the output will be directed to a local PDF file that will be displayed as another tab in your browser or as another window.

Windows MANTIS Server

MANTIS Studio has an embedded Native Windows or Windows MANTIS Server. This allows server-based, multi-user MANTIS to run on your IBM mainframe, Windows and Windows Server platforms under Microsoft's native Windows operating systems.

MANTIS Language Block Comments

Block commenting of code is available as well as single-line commenting.

MANTIS Message and Codes Guide

Help is available in searchable HTML format as well as PDF.

Documentation

All documentation is available in HTML help format, accessible and searchable from the MANTIS Studio Help menu.

AD/Advantage

The AD/Advantage component of MANTIS is a fully integrated, interactive environment that automates much of the development activity.

Supported Platforms

Users can easily move applications from one platform to another with little to no programming changes required.

Hardware	Operating System(s)
zSeries	z/OS, z/VM, z/VSE, VSE/ESA
Smart devices via browser	Internet

Supported Platforms for Interoperating MANTIS Systems

Hardware	Operating System(s)
Smart devices via browser	Internet
Touchscreen mobile devices	Android version 3.1 and above, Apple iOS
Alpha	OpenVMS
HP	HP/UX
Intel	SCO, UNIXWARE, Linux-Red Hat, Windows Server, Windows XP/7/8
Itanium	OpenVMS
Mac®	OS X®
RS/6000	AIX
SPARC	Solaris, SunOS
zSeries	SUSE Linux

Application Servers Supported by MANTIS

Oracle AS (OAS) 10g, Release 2 (10.1.2) and above
WebSphere Application Server (WAS), Release 6.0 and above
Apache Tomcat, Version 5.5 and above
JBOSS, Release 4.0 and above
BEA WebLogic, Release 8.1.4 and above

Data Access

All file and database specifications are maintained outside of the MANTIS program. This insulates the programs from physical data structures, providing an exceptional level of data independence. Regardless of which file or database technique is used, MANTIS programs have access to files and data using only four access verbs: GET, INSERT, UPDATE and DELETE, or via industry-standard SQL.

Native Access Support	
Databases	Cincom® SUPRA® PDM Cincom SUPRA SQL DB2 IMS/DB DL1
File systems	VSAM QSAM/BSAM
Message-oriented middleware	WebSphere MQ

Extended Access Support via MANTIS Web*	
Databases	Cincom SUPRA PDM Cincom SUPRA SQL DB2 Oracle MS SQL Server® MS Access® Rdb Any database with an ODBC driver
File systems	VSAM C-ISAM MISAM Native Sequential
Message-oriented middleware	WebSphere MQ

* These DBMSs and file systems can reside on any MANTIS-supported platform.

MANTIS also provides special interface routines that make it easy for MANTIS applications to access any database structure or file organization. So you can continue to use the existing data structure that you've already invested in and have become so familiar with.

About Cincom

Since 1968, Cincom has helped thousands of clients worldwide by solving complex business problems with its software and services. For more information about Cincom's products and services, contact Cincom at 1-800-2CINCOM (USA only), send an email to info@cincom.com or visit the company's website at www.cincom.com.