Infor VISUAL Concepts and Common Features

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Contents

Chapter 1: Introduction 1–1
Introduction 1–2
Starting VISUAL 1–3
Changing Your Password 1–3
Application Security 1–3
Using the User Guides 1–4
Using Bookmarks 1–4
Using Links 1–4
Accessing User Guides from VISUAL 1–4
Troubleshooting User Guides 1–5
Available User Guides 1–5
Using Help Files 1–7
Accessing Help Files 1–7
Using the Online Help Toolbar 1–7
Using the Table of Contents 1–8
Using the Index Tab 1–8
Using the Search Tab 1–8
Wildcards and Operators 1–8
Adding Your Own Help Content 1–9
Using the Video Library 1–11
Contacting Support 1–12
Microsoft Windows Display Settings 1–13

Chapter 2: Fields, Buttons, Menus, and Other Window Controls 2–1
Windows 2–2
Window Layout 2–2
Menus 2–3
File Menu 2–4
Setting up the Recently Used Documents List 2–4
Edit Menu 2–5
View Menu 2–5
Options Menu 2–5

Help Menu 2–5
Info Menu....2–6
Notes Menu 2–6
Macros Menu....2–6
User Reports Menu 2–6
Toolbars....2–7
ToolTips in Toolbars 2–7
Toolbars....2–7
Arranging Toolbars 2–10
Toolbar Gripper 2–10
Resizing Toolbars....2–11
Turning Toolbars On and Off....2–11
User Toolbars 2–11
Right-click Menus 2–12
Supported Applications....2–13
Using Fields....2–14
Required Fields 2–15
Using Drill-down Arrows 2–15
Dynamic Field Validation 2–16
Using Option Buttons....2–16
Using Check Boxes 2–17
Using Tables....2–18
Window Table Buttons....2–18
Table Components 2–18
Selecting Table Rows....2–19
Inserting Table Rows....2–19
Modifying Information in Table Rows 2–20
Deleting Table Rows 2–20
Using the Keyboard with Tables....2–20
Sorting Tables 2–21
Scrolling in Tables 2–21
Configuring Line Item Tables....2–21
Moving Columns....2–21
Resizing Columns....2–21
Showing/Hiding and Renaming Columns....2–22
Grids 2–23
Opening a Document from a Grid....2–23
Sorting and Grouping Information in a Grid....2–23
Text Color in Grids....2–23

Aligning Text in Grids 2–23
Adjusting Column Sizes....2–24
Graphs 2–25
Types of Graphs 2–25
Working with Graphs 2–25

Chapter 3: Entering Information....3–1
Creating Records....3–2
Understanding IDs....3–2
Understanding Master and Work Order IDs 3–2
Using Auto Numbering 3–3
Setting Up Auto Numbering....3–4
Modifying Existing Records 3–5
Site-level Overrides for Certain Records 3–5
Copying Records 3–5
Deleting Records 3–6
Locking Records....3–6
Refreshing Information from the Database....3–7
Browsing for Information 3–8
Using Simple Browses....3–8
Search 3–8
Sorting 3–8
Send to Excel 3–9
Using Advanced Browsing....3–9
Opening an Advanced Browse Dialog....3–9
Using Automatic Browsing 3–9
Keep Browse Visible 3–10
Searching on Initial Entry 3–10
Searching Advanced Browse Tables....3–11
Advanced Browse Wildcards and Operators....3–11
Applying Quick Filters....3–11
Using Dynamic Filtering 3–12
Removing a Filter 3–12
Using Query by Example....3–12
Browsing by SQL Statement 3–13
Sorting by Visible Columns....3–13
Stopping the Searching Process 3–14
Saving Search Profiles 3–14
Running a Saved Search....3–14
Using Sites in Browse Tables....3–14
Selecting a Search Item from the Advanced Browse Table 3–15

Editing Information in the Browse Table 3–15
Editing Information Directly in the Advanced Browse Table 3–16
Importing from Excel 3–16
Customizing the Browse Table Column Layouts 3–17
Resizing Browse Window Columns 3–17
Exporting to Excel 3–18
Printing the Browse Result Set 3–18
Using Picture/Object 3–19
Specifications and Notations 3–20
Accessing Notations and Specifications 3–20
Showing Multiple Notations & Specifications Windows 3–21
Sizing and Positioning Notations and Specifications Windows 3–22
Working With Specifications 3–22
Working With Notations 3–22
Viewing Notations 3–22
Adding Notation Entries 3–23
Modifying Notation Entries 3–23
Deleting Notation Entries 3–23
Using Spell Check in Notations and Specifications 3–23
Loading Dictionaries into the Spell Check 3–24

Chapter 4: Customizing VISUAL 4–1
Choosing a Language 4–2
Removing a Language Assignment 4–2
Choosing a Main Menu Interface 4–3
Modifying the Graphical Menu 4–3
Changing the Background Color 4–3
Adding Headings 4–3
Adding Programs to Headings 4–4
Removing Programs from Headings 4–4
Changing Program Settings 4–5
Adding Sub-Menus 4–5
Changing Sub-menus 4–5
Resetting the Graphical Menu 4–5
Viewing the Standard Menu Interface as a Ribbon 4–6
Setting Up Custom Menus and Toolbars 4–7
Setting Up the Personal Menu 4–7
Customizing the Appearance of the Personal Menu 4–7
Customizing the Content of the Personal Menu 4–8
Adding Commands to Existing Groups 4–8
Adding Non-VISUAL Commands to Groups 4–9

Adding New Groups 4–9
Editing Group Captions 4–10
Editing Commands 4–10
Removing Commands from Groups 4–10
Removing Groups 4–11
Using the Personal Menu 4–11
Customizing the Personal Menu within an Application 4–11
Adding User Toolbars 4–12
Activating the User Toolbar Function 4–12
Using Toolbar Buttons to Pass Information to Custom Applications 4–13
Setting Up User Toolbars 4–13
Setting Up Toolbar Bitmaps 4–16
URL Links Toolbar 4–18
Adding URL Links 4–18
Previewing Toolbar Buttons 4–18
Activating the Links Toolbar 4–19
Deactivating the Links Toolbar 4–19
Setting Up User-defined Field Labels 4–20
Setting Up Site-specific Default User-defined Field Labels 4–20
Maintaining Preferences 4–21
Accessing Preference Maintenance 4–21
Loading Values from the VISUAL.ini file 4–21
Adding Preferences 4–22
Default Preferences 4–22
Editing Existing Preferences 4–22
Deleting Preferences 4–23
Printing a Preference Report 4–23
Selecting Viewable Sites 4–24
Setting System-wide Viewable Sites 4–24
Overriding System-wide Viewable Sites 4–24
Macros 4–26
Double-byte characters in Macros 4–27
Language Choices 4–27
What to Expect Using Macros 4–28
Storing Macros 4–28
Working with Macros Stored on the Workstation 4–29
Setting Up VISUAL to Store Macros on Workstations 4–30
Copying Macros from the Database to a Workstation 4–30
Creating a User Toolbar Button for a Workstation Macro 4–31
Troubleshooting Macro Toolbar Buttons 4–31

Working with Macros Stored in the Database 4–32
Setting Up VISUAL to Store Macros in the Database 4–32
Copying Macros from a Workstation to the Database 4–32
Assigning Shared Macros to Profiles 4–33
Creating a User Toolbar Button for a Database Macro 4–34
Troubleshooting Macro Toolbar Buttons 4–35
Selecting a Macro Language 4–35
Selecting the Default Macro Language 4–36
Selecting a Program Macro Language 4-36
Types of Macros 4–36
Creating Macros 4–37
Automatic Macros and the Manufacturing Window 4–38
Using Customizable User Defined Fields in Macros 4–39
Running Macros 4–39
Deleting Macros 4–40
Controlling Access to the Macro Edit Menu 4–40

Chapter 5: Activities and Tasks 5–1
About Activities and Tasks 5–2
Activities 5–3
Setting Up Activities 5–3
Creating Activity Categories 5–4
Deleting Activity Categories 5–4
Creating Activity Types 5–4
Deleting Activity Types 5–4
Creating Activities 5–5
Adding User-defined Information 5–6
Activity Reminders 5–7
Activating Reminder Features 5–7
Adding Reminders to Activities Assigned to You 5–8
Creating a Reminder for Another User 5–8
Using the Reminder Dialog 5–8
Dismissing Activity Reminders 5–9
Postponing Activity Reminders 5–9
Using the Activity Tray Icon 5–9
Activity Maintenance 5–10
Starting Activity Maintenance 5–10
Reviewing Activities 5–12
Exporting Activity Maintenance Information 5–14
Editing Activities 5–14
Editing Activities in Activity Maintenance 5–14

Editing Activities in Activity Entry 5–15
Drilling to Related IDs 5–16
Deleting Records with Attached Activities 5–17
Activities and CRM 5–17
Specifying CRM Connection Settings 5–18
Editing CRM Tasks in Activity Maintenance 5–18
Opening CRM from Activity Maintenance 5–18
Tasks 5–19
Creating Task Groups 5–19
Assigning Tasks 5–20
Completing Tasks 5–21
Viewing Tasks 5–21
Approving Tasks 5–22
Rejecting Tasks 5–23
Processing On Hold Tasks 5–23
Canceling Tasks 5–24

Chapter 6: Notifications and Email 6–1
Notifications and Email 6–2
Setting Up Your System to Send Email 6–4
Setting Your Installed E-mail Client as the Default 6–4
Configuring SMTP E-mail Settings 6–5
Using SMTP to E-mail Reports 6–5
Notifications 6–7
Selecting Tokens 6–7
ShiptoID Tokens 6–8
Specifying Send From Alternate Email Addresses 6–9
Creating Email Templates 6–9
Restoring Default Template Settings 6–10
Setting Up Notifications for Sales Transactions 6–10
Setting up Default Notification Settings for Customers 6–11
Setting Up Notifications on Customer Orders 6–12
Reviewing Notification History for Sales Transactions 6–13
Setting Up Notifications for Purchasing Transactions 6–14
Setting up Default Notification Settings for Vendors 6–15
Setting Up Notifications on Purchase Orders 6–16
Reviewing Notification History for Purchasing Transactions 6–17
Manually Emailing Reports 6–19
Reports That Can Be Emailed to Customers 6–19
Reports That Can Be Emailed to Vendors 6–20

Specifying E-mail Lists for Documents 6–20
Emailing Reports 6–21

Chapter 7: VISUAL Search Bar 7–1
VISUAL Search Bar 7–2
Adding the Search Bar 7–2
Using the Search Bar 7–3
Using the Search Results List 7–3
Exporting Information from the Search Results Table 7–5

Chapter 8: Document Lifecycle 8–1
Viewing Document Lifecycles 8–2
Purchasing Lifecycle 8–2
Sales Lifecycle 8–3
Accessing the Lifecycle Document Viewer 8–3
Choosing a Lifecycle Document Display 8–3
Key Differences in Lifecycle Document Views 8–5
Document Lifecycle and VISUAL Global Financials 8–5
Security and the Document Lifecycle 8–6
Using the Tree Display 8–6
Viewing Document Details 8–6
Configuring Document Details 8–7
Selecting Details to View 8–7
Saving Widths and Positions 8–8
Viewing Details in Separate Tables 8–8
Opening a Related Document 8–8
Printing the Document Lifecycle Report 8–8
Using the Graphical View 8–9
Viewing Information about Documents in the Lifecycle 8–9
Purchasing Transactions 8–9
Sales Transactions 8–10
Customizing Card Information 8–11
Customizing Card Size 8–12
Selecting the Size Preference to View 8–13
Customizing Card Color 8–13
Restoring Original Settings 8–14
Attaching the Lifecycle Viewer to a Window 8–14
Lifecycle Source and Target Buttons 8–15

Chapter 9: In-context View Panels 9–1
In-context View Panels 9–2
Displaying and Arranging View Panels 9–4

Resizing View Panels 9–5
Customizing the View Panel Interface 9–5
Choosing a Button Display 9–5
Removing Buttons 9–6
Rearranging Buttons 9–6
Setting Up the Summary View 9–6
Setting Up the Info View 9–7
About the View Panel Charts 9–8
Customer View Panel Chart 9–8
Order Line View Panel Chart 9–10
Order Line View Panel Chart and the Standard Costing Method 9–12
Performance Leadtime View Panel Chart 9–13
Part View Panel Chart 9–13
Production Cost & Gross Profit Panel Chart 9–16
Order Line View Panel Chart and the Standard Costing Method 9–18
Vendor View Panel Chart 9–18

Chapter 10: Dashboard 10–1
About the Dashboard 10–2
Accessing the Dashboard 10–2
Setting Up the Dashboard 10–3
Creating a Dashboard 10–3
What Information Is Saved when You Save a Dashboard? 10–4
Opening a Dashboard 10–4
Displaying the Dashboard on Start Up 10–4
Editing a Dashboard 10–5
Creating a Local Copy of a Shared Dashboard 10–5
Deleting a Dashboard 10–6
Data for Metrics 10–7
Reporting Database Tables 10–7
Loading Existing Data into the Reporting Database Tables 10–7
Manually Loading Existing Data into the Reporting Database Tables 10–7
Using the Reporting Data Loader Service to Load Existing Data 10–8
Updating the Reporting Database Tables 10–8
Installing the Visual Reporting Data Loader Service 10–9
Scheduling the Service 10–9
Monitoring the Service 10–10
Removing the Reporting Data Loader Service 10–10
Dashboard and VISUAL Financials Global Edition 10–11
Analytics 10–12
Adding an Analytic 10–12

Changing an Analytic....10–13
Using the Slider in an Analytic....10–14
Viewing Analytic Data....10–14
Viewing Transactions for a Data Point....10–14
Printing an Analytic....10–14
Removing an Analytic....10–15
Available System Analytics....10–16
Amount Purchased From Supplier....10–16
Bookings vs. Shipments....10–17
Delivery Performance....10–17
Open Accounts Receivable....10–18
Open Accounts Payable....10–18
Process Activity % Over Std....10–18
Process Activity Average Performance....10–19
Sales Bookings....10–19
Shipments....10–19
Tasks....10–20
Top Customers by Open Balance....10–20
Top Customers by Overdue Balance....10–21
Top Customers by Revenue....10–21
Top Vendors by Open Balance....10–21
Top Vendors by Overdue Balance....10–22
Vendor Performance....10–22
Vendor Price Performance....10–23
Work Order Estimated vs. Actual....10–23
Work Order Estimated vs. Actual Overall....10–24
Work Order Estimated vs. Projected....10–24
Work Order Estimated vs. Projected Overall....10–24
Top Projects....10–25
Project Summary....10–25
Detail Grids....10–27
Adding a Detail Grid....10–27
Changing a Detail Grid....10–28
Sorting Detail Grids....10–28
Drilling to Related Records....10–28
Exporting Information to Excel....10–28
Removing a Detail Grid....10–29
Available System Detail Grids....10–30
Amount Purchased From Supplier Detail....10–30

Bookings vs. Shipments Detail 10–30
Customer Revenue Detail 10–31
Delivery Performance Detail 10–31
Open Accounts Payable Detail 10–31
Open Accounts Receivable Detail 10–31
Process Activity % Over Std 10–32
Process Activity Average Performance 10–32
Sales Booking Detail 10–32
Shipments Detail 10–33
Tasks Detail 10–33
Top Customers by Open Balance Detail 10–33
Top Customers by Overdue Balance Detail 10–34
Top Customers by Revenue Detail 10–34
Top Vendors by Open Balance Detail 10–34
Top Vendors by Overdue Balance Detail 10–34
Vendor Performance Detail 10–35
Vendor Price Performance Detail 10–35
Work Order Estimated vs. Actual Detail 10–36
Work Order Estimated vs. Projected Detail 10–36
Project Actual Cost Detail 10–36
Project Info 10–37

Chapter 11: Custom Dashboard Metrics 11–1
Custom Metrics 11–2
About Data Sources 11–2
About Analytics 11–2
About Detail Grids 11–3
Creating Data Sources 11–4
Selecting Tables for the Data Source 11–4
Joining Tables 11–5
Selecting Columns for the Data Source 11–6
Adding Column SQL Statements 11–7
Drill To Columns 11–8
Specifying Drill-to Columns 11–10
Using the Project ID Class in Drill-to Columns 11–11
Specifying Filters 11–11
Adding Color 11–14
Specifying Static Colors for Columns 11–15
Specifying Conditional Colors for Cells 11–15
Filtering the Data Source 11–16

Specifying a Filter for the Data Source....11–16
Viewing the Query....11–17
Testing the Query....11–17
Activating the Data Source....11–18
Copying a Data Source....11–18
Deleting a Data Source....11–18
Building Analytics....11–19
Analytic Types....11–19
Measurement Basis....11–19
Creating Value-based Analytics....11–20
Creating Period-based Analytics....11–22
Creating Top N Analytics....11–24
Formatting Analytics....11–25
Specifying Default Settings....11–27
Testing Analytics....11–28
Activating Analytics....11–28
Copying Analytics....11–28
Building Detail Grids....11–30
Detail Grid Types....11–30
Creating Detail Type Grids....11–30
Creating Top N and Bottom N Detail Grids with Individual Values....11–31
Creating Top N and Bottom N Detail Grids with Aggregated Values....11–32
Copying Detail Grids....11–33
Exporting User-defined Metrics and Data Sources....11–35
Importing User-defined Metrics and Data Sources....11–36
Specifying Security Settings for Metrics....11–37
End Users and Custom Metrics....11–38

Chapter 12: Reporting....12–1
Reporting....12–2
Accessing Reports....12–2
Choosing Information to Print in Reports....12–2
Selecting Sites in Reports....12–3
Receiving QRP Files in Rich Text Format....12–3
E-mailing Reports....12–3
Setting your Installed E-mail Client as the Default....12–4
Configuring SMTP E-mail Settings....12–4
Using SMTP to E-mail Reports....12–5

Chapter 13: Query Tool 13–1
About the Query Tool 13–2
Prerequisite Knowledge 13–2
Starting the Query Tool 13–2
Setting Preferences 13–2
Creating a Query 13–3
Creating Interactive Queries 13–4
Adding Drill-to Buttons to Query Results 13–4
SQL Commands 13–10
Running the Query 13–20
Viewing Query Results 13–20
Saving a Query 13–21
Clearing Query Output 13–21
Printing Query Results 13–21
Exporting Query Results to Excel 13–22
Customizing Table Join Relationships 13–22
Query Toolbar Buttons 13–23
Adding a Query Button to the Query Tool Toolbar 13–23
Adding a Query Button to Other Application Toolbars 13–23

Chapter 1: Introduction

This chapter includes the following information:

Topic	Page
Introduction	1–2
Starting VISUAL	1–3
Using the User Guides	1–4
Using Help Files	1–7
Contacting Support	1–12
Microsoft Windows Display Settings	1–13

Introduction

Infor VISUAL® is a sophisticated, comprehensive software system that helps you run every facet of your business. Your unique business practices demand that VISUAL be adaptable to diverse business environments.

This guide contains information on the general principles and common features of the user interface. Because of the complexity of installing software and setting up your database, this guide does not cover these two processes. Your Infor Partner can help you design an implementation plan that ensures your maximum return from VISUAL.

Before you start using your system, take some time to read through the rest of this guide and the online user guides. This documentation will provide you with a solid foundation for working with your VISUAL products.

You should be familiar with Microsoft® Windows® terminology and procedures before using your VISUAL system. For more information on Windows terminology, refer to your Windows documentation or the Microsoft web site.

Starting VISUAL

From the Windows start menu, select All Programs, Infor, VISUAL. Your system administrator may have also installed a program icon on the workstation. You can double-click the icon to launch VISUAL.

Depending on how your system administrator has set up VISUAL, you may need to log in.

Specify this information:

User ID – Specify the user ID you use with the database.

Password – Specify the password you use with the user ID.

Database – Enter the name of the database to which you are connecting.

Click Sign In.

The main window is opened.

Changing Your Password

You can change your password at any time.

1 While logged into VISUAL under your user name, select **Change Password** from the Security menu.

   The Change Password dialog box appears.

2 Enter your old password in the password field.

   This confirms that you have the right to change it. The system uses asterisks to hide the characters you enter.

3 Enter the new password to use in the New Password field.

   Your password may have to meet certain criteria such as a minimum length, a minimum number of letters, a minimum number of digits, etc. Contact your company's system administrator for details on password limitations.

4 Retype your password in the Repeat Password field. If you do not type the password exactly as you did in the New Password field, the system will not allow you to save your new password.

5 Click **OK** to commit the change, or **Cancel** to exit the window without resetting your password.

Application Security

Your system administrator controls your access to the various applications. If you find that you cannot access an application, it may be because your system administrator has denied you access to the application. Contact your system administrator if you cannot access an application that you think you should be able to access.

Using the User Guides

The user guides use these text conventions:

Numbered instructions – Indicates a series of instructions you must follow. If you are new to VISUAL, you may find it easier to enter information in the order in which it appears in the documentation.

Bold text – Indicates menu and button selections.

> **Caution:** Cautions indicate that a procedure that can permanently alter your database follows. The Caution message explains the consequences of continuing with the procedure. You should seriously consider the consequences of the action before continuing.

Using Bookmarks

When you open a user guide, a list of bookmarks is displayed by default in the left pane. The bookmarks correspond to the table of contents. They remain in the left pane regardless of the page you are viewing.

Click a bookmark to navigate to the topic in the guide.

To hide the bookmarks, click the **Collapse** button to the right of the word Bookmarks.

Using Links

When you click a page number in the table of contents, index, or a cross-reference, the system navigates to the appropriate page. To navigate back to the previous page, click the **Go To Previous View** button on the toolbar.

If Adobe Reader does not display this button on the toolbar, select **View**, **Show/Hide**, **Toolbar Items, Page Navigation, Previous View.**

Accessing User Guides from VISUAL

You can access the user guides directly from the main VISUAL window.

To access the user guides:

1. Select **Help**, **Online Books**. A list of the available guides is displayed.
2. To open a guide, click the name.

Troubleshooting User Guides

To open a PDF from VISUAL, the PDF must be located in the same directory as your VISUAL executables.

Available User Guides

These user guides are currently available:

Concepts and Common Features – This guide describes features you find throughout VISUAL. It describes how to navigate the interface, how to enter information, how to retrieve information, and how to customize VISUAL.

System Administrator Guide – This guide describes the procedures that a system administrator performs. It describes how to manage user access to the database, how to customize VISUAL, how to set up database audits, and how to use the features designed to integrate VISUAL to other products.

Multi-entity and Multi-site User's Guide – This guide describes how to set up and use VISUAL in a multi-site and multi-entity environment. It describes how to set up accounting entities and sites. It also describes how to buy and sell between sites, how to make consolidated purchases for sites, and how to perform cross-entity transactions.

System-wide User's Guide – This guide describes functions and features that impact how you conduct your business. It describes how to set up global application settings, how to select a costing method, how to add employee records, and how to add documents that you can attach to database records. It also describes how to create workflows and system-wide messages.

Sales User's Guide – This guide describes the sales functions. It describes how to set up customer information, how to create quotes, how to enter and ship customer orders, and how to generate invoices for your customers. It also describes sales reporting features.

Purchasing User's Guide – This guide describes the purchasing functions. It describes how to set up vendor information, how to enter purchase requisitions, and how to enter and receive purchase orders. It also describes purchase reporting features.

Inventory User's Guide – This guide describes how to manage your inventory. It describes how to set up parts and warehouses and how to move inventory from one location to another. It also describes inventory reporting features.

Manufacturing User's Guide – This guide describes manufacturing functions. It describes how to set up shop resources, how to create engineering masters and work orders, how to schedule work orders, and how to enter labor tickets for work orders. It also describes manufacturing and scheduling reporting features.

Aerospace and Defense User's Guide – This guide describes how to use VISUAL Enterprise Aerospace & Defense® features. You must be licensed to use these features. This guide describes how to set up projects, how to execute projects, and how to review project report data.

Financials Administrative User's Guide – This guide describes how to set up the financial system in VISUAL. It describes how to set up financial calendars, reporting calendars, G/L interfaces, and currency. It also describes the report writer and costing tools.

Accounts Payable User's Guide – This guide describes payable functions. It describes how to set up vendors, how to create payable invoices, and how to pay invoices. It also describes how to generate payable inquiries.

Accounts Receivable User's Guide – This guide describes receivable functions. It describes how to set up customers, how to generate invoices, and how to receive payment. It also describes how to generate receivable inquiries.

General Ledger User's Guide – This guide describes how to set up your general ledger. It describes how to create accounts, how to create general journal entries, how to generate manufacturing journals, and how to post transactions. It also describes consolidation and revaluation.

Cash Management User's Guide – This guide describes how to manage cash flow and how to create bank information.

Using Help Files

VISUAL comes with an extensive Help system. The Help system features:

- An easily navigable Contents displayed on the left side of the Help window.
- A full Index you can use to open topics from an alphabetical list.
- A search function you can use to search for topics that use any word or phrase you specify.

The Help systems are context-sensitive. When you access Help from any window other than the main window, the topic relevant to the current window is opened.

Accessing Help Files

To access the online Help system from the main window, select **Contents** from the Help menu or press the **F1** key.

To access the online Help system from all other windows, select **Help Topics** from the Help menu or press the **F1** key.

When you press the F1 key, the Help system opens to the appropriate topic in the help file. For example, if you are working in Part Maintenance and want to view the help for Part IDs, click in the Part ID field and click the F1 key. The help system opens at the Part Maintenance book and Part ID topic.

Clicking the **What's This?** toolbar button, then clicking on a field also opens the help system at the appropriate topic.

The left pane shows the table of contents, index, and search function. Use the tabs to navigate between functions. When you select a topic, the contents of the topic are displayed in the right pane.

Using the Online Help Toolbar

The Online Help toolbar contains these buttons:

Hide/Show – Click Hide to hide the left pane and show only the topic. Click Show to show the left pane.

Back/Forward – Click Back to go back to the previous topic. If you are viewing topic B, then click Back to view topic A. You can then click Forward to return to topic B.

Print – Click Print to print the current topic. To print multiple topics, click a book in the Content pane. For example, to print all topics in the Inventory table of contents book, click the Inventory table of contents book before you click Print.

Using the Table of Contents

To view the online help table of contents, click the Contents tab. The online help contents is divided into books with related topics. To view the topics included in a book, double-click the book icon or click the **Plus** button.

To open a topic, click the topic name. The topic appears in the right pane.

To close a book, click the **Minus** button to the left of its name.

Using the Index Tab

The Index tab contains an alphabetical listing of keywords within the Help system. Because the Index tab contains a vast number of topics, you may find it helpful to type the first few letters of the subject you want to find. As you continue to type, the Help file populates the topic list with the topics that match what you typed. For example, if you enter **`Using`**, the topics starting with the word “Using” appear in the pane.

To select a topic from the Index tab, double-click the index entry in the list. If only one topic is associated with the index entry, then the topic is displayed. If multiple topics are associated with the index entry, then a dialog box is displayed. Double-click the topic to view it.

Using the Search Tab

Use the Search tab to find individual words or phrases that are used in the body of any topic.

To use the Search feature:

1. Click the **Search** tab.

   The first time you click the **Search** tab, the Help system guides you through the creation of a word database it will use for your searches.

2. In the **Type in the keyword to find** field, specify your search terms.
3. From the topics listed in the Choose topic to display list, select the topic you want to view.

Wildcards and Operators

You can use these wildcards and operators when you search help:

Quotation marks – Use quotation marks around words to search for a phrase. For example, to find all help topics with the phrase Customer Maintenance, specify “Customer Maintenance” as your search term. Topics that use the phrase Customer Maintenance are listed. If you enter Customer Maintenance without the quotation marks, then any topic that contains the word Customer or the word Maintenance is listed.

Asterisk – Use an asterisk to indicate missing characters. For example, if you specified custom*, any topic that included a word that began with custom, such as customer, customize, and customs, is listed. You can use the asterisk anywhere in the text string. For example, if you specified pa*t, then any topic that includes words that began with pa and ended in t, such as part or payment, is listed.

Question mark – Use a question mark to indicate a single missing character. For example, if you specified populate?, any topic that includes the word populates or populated is listed. You can use the question mark anywhere in the text string. For example, if you specified pa?t, then any topic that includes words such as part, past, or pact is listed.

AND – Use AND to search for topics that contain both terms that you specify. For example, if you specify customer AND maintenance, any topic that included both the word customer and the word maintenance is listed. Topics that contained only one of the two words would not be included.

OR – Use OR to search for topics that contain either term you specify. For example, if you specify customer OR maintenance, any topic that includes the word customer is listed, and any topic that includes the word maintenance is also listed.

NOT – Use NOT to search for topics that contain the first term you specify, but not the second term. For example, if you specify customer NOT maintenance, any topic that includes the word customer is listed, provided that the word maintenance is not also in the topic.

NEAR – Use NEAR to search for topics that contain both terms that you specify, but only if the terms are within eight words of each other.

You can use multiple wildcards and operators in your search. Use parentheses to indicate how to evaluate the operators. For example, if you specified customer NOT part OR maintenance, then topics containing the word customer without the word part are listed, and all topics containing the word maintenance are also listed. If you specified customer NOT (part OR maintenance), then topics containing the word customer, but not containing the words part or maintenance, are listed.

Adding Your Own Help Content

The Help files allow you to add your own content. You can use these files to add notes and other information specific to your company. To use this feature:

1. Click the **User Defined** button at the bottom of the help topic.The system opens the related user-defined help topic.
2. Click one of the buttons at the bottom of the topic. If you have not created text for this area of functionality, the system creates the file. If you have created text for this area of functionality, the system opens the existing text file.
3. Add your text.
4. Click **Save**.
5. Close the text file.

Click the User Defined .TXT button again to view and edit the text you added.

User-defined help text must reside within the doc folder that exists in the same directory as your online Help file. You cannot change the name of any of the text files. You can copy the text files from one client to another, provided that you paste the documents in the proper location.

User-defined help in the VISUAL Financials online help functions in a similar way. When you click the user-defined button at the bottom of a topic, however, the system immediately opens or prompts you to create the associated text file.\

Using the Video Library

Use the Video Library to watch videos that demonstrate key features and functions of VISUAL.

To watch a video:

1 From the main VISUAL menu, select **Help**, **Video Library**, or double-click the VMVIDEO executable in your VISUAL directory. If you open the Video Library directly from your VISUAL directory, you do not need to sign into the database.

2 Double-click the title of the video that you want to watch. The video is opened in the program that you use to watch MP4 files.

Note: a video viewer is not provided with VISUAL.

You can sort the list of videos by title or by description. Click the appropriate column header to sort the table. Click the column header again to toggle between ascending order and descending order.

Contacting Support

If you have questions about Infor products, go to Infor Customer Portal at https://customerportal.infor.com/csmcore/.

If you do not have an account, click Register, and complete the registration.

When you access Infor Customer Portal, you have these options:

- To access Infor knowledge bases, incidents, documentation, solutions, and community discussion forums, click one of the links from the top menu of the home page.
- To add an incident, select one of these options from the Incidents menu:
  - Add Product Incident: To ensure that your report reaches the correct support group, specify your product, version, and other details.
  - Add General Information Request: Use this option for all other requests.
- To find the Customer Support telephone number for your region, click Contact Us on the About menu of the home page.

If we update this document after the product release, we will post the new version on Infor Customer Portal. We recommend that you check this Web site periodically for updated documentation.
If you have comments about Infor documentation, contact https://docs.infor.com/en-us.

Microsoft Windows Display Settings

You must use the Smaller - 100% option in Windows Display settings. If you use any other Windows Display setting, the VISUAL interface will not display properly.

To set the Windows Display Settings:

1. Click the Windows Start button and select **Control Panel**.
2. Select **Display**.
3. Click the **Smaller - 100%** option.
4. Click **Apply**.
5. Log off from Windows and then log back on.

Chapter 2: Fields, Buttons, Menus, and Other Window Controls

This chapter includes the following information:

Topic	Page
Windows	2–2
Menus	2–3
Toolbars	2–7
Right-click Menus	2–12
Using Fields	2–14
Using Drill-down Arrows	2–15
Using Tables	2–18
Grids	2–23
Graphs	2–25

Windows

Nearly every action you take in VISUAL is done through one of the VISUAL windows or its associated dialog boxes. To use VISUAL effectively and efficiently, it is important to understand the basics of windows.

Windows are made up of menus, toolbars, fields, option buttons, check boxes, and tables. Menus and toolbars help you to perform functions in the window like saving, printing, and browsing for information. You can also use menus and toolbars to access additional information that is not displayed in the window. You use fields, option buttons, check boxes, and tables to add information into the database.

Many windows also feature dialog boxes, notation windows, and specification windows. Use these elements to add additional pertinent information to the record you create. You access these secondary features from menus and toolbar buttons.

Window Layout

The title bar is at the top of the window. The title bar lists the name of the window you are currently using and the database you are connected. If you are viewing the main window, the system also displays the ID of the user connected to the database.

The menus are displayed under the title bar.

By default, the toolbars are displayed under the menus. You can move the toolbars to any position you would like. For more information, refer to "Toolbars" on page 2–7 of this guide.

Fields are displayed in the main body of the window. In many windows, the system organizes fields into sections and tabs.

Sections are used to categorize similar fields. For example, the Application Global Maintenance window has a Display Trace IDs for the Labor and Receiving section, Customer Price Effectivity in the Shipping section, and Default Directory for the Documents section, among others.

Tabs are used to organize additional, pertinent fields that cannot fit on a single window. For example, the Customer Maintenance window has several tabs, such as General, Contact, Accounting, and VAT, among others.

Click a tab to view the fields on the tab. When a tab is in view, the system highlights the tab.

If the system cannot display all the available tabs in the width of the window, it activates the scroll arrows to the right of the tabs. Use the scroll arrows to view additional tabs.

Menus

Menus run across the top of the window.

The menu names indicate the type of options you are likely to find when you select them. The majority of windows contain the menus described in this section. Other windows have menus specific to the application.

To select a menu, click it. The system displays the list of options available.

Click the menu item to use.

If a menu item is unavailable, then the menu item text is light gray.

In some menus, an arrow is displayed after the text. These menus have secondary, “fly-out” menus. For example, if you select the Purchasing menu item in the File menu, a second menu is displayed from which you would make another selection.

You can also navigate menus using the ALT key. To open a menu item, press and release the ALT key, and then press the underlined letter of the menu option to open it. For example, in Customer Maintenance you can press ALT, then F, then P to access the Print dialog box.

Depending on the Underline access keys when available Windows 10 setting you select, the underline might be displayed before you press the ALT key. If you enable the setting, then the underlined letter is displayed before you press the ALT key. If you do not enable the setting, then the underline is displayed after you press ALT.

If the menu item is followed by an ellipsis (...), then a dialog box is displayed when you select the menu item. You use the dialog box to specify additional information or parameters for processing. For example, if you select Print from the File menu, the system displays a dialog box where you specify the printing parameters.

If the menu item has keyboard keys listed, then you can use the keys to perform the function. For example, you can paste text by holding down the Shift key and pressing the Ins (Insert) key.

These menus are used in all windows:

- File Menu
- Edit Menu
- View Menu
- Options Menu
- Help Menu

Other menus with the same or similar options are used in several windows. These menus include:

- Info Menu
- Notes Menu
- Macros Menu
- User Reports Menu

File Menu

The File menu contains basic options like New, Save, Delete, Refresh, Print, and Exit.

If the Print option is available, then Print Setup is also available. Use Print Setup to select and set up Windows printers.

Standard reports are also available on the File menu. For example, if you are working in Customer Maintenance and want to print a Customer Report, the option to print the report is found in the File menu.

From an application's file menu, you can also access all applications associated with the application you are using. For example, if you are working in Customer Order Entry, which is found in the Sales menu, you can access all other executables available from the Sales menu directly from Customer Order Entry.

For certain applications, you can also set up the File menu to list the documents you most recently accessed.

Setting up the Recently Used Documents List

You can add a list of the most recently used documents to the File menu of these applications:

- Customer Maintenance
- Sales Order Entry
- Sales Order Management Window
- Purchase Order Entry
- Purchase Order Management Window
- Part Maintenance
- Vendor Maintenance

The recently used documents setting you specify in Application Global Maintenance is applied to all of the applications listed above. You cannot use the recently used documents feature in only some of the windows; if you specify a number in the Recently Used Documents field in Application Global Maintenance, then all of the applications listed above will display a list of recently used documents.

To specify the number of documents to display:

1. Select **Admin**, **Application Global Maintenance**.
2. Click the **Recent File List Limit** arrow and select the number of documents you would like to add to the File menu. You can choose to list up to 9 documents.
3. Click **Save**.

After you specify a number of documents, the documents you access are tracked, and the document IDs are displayed in the File menu.

To de-activate the feature, specify 0 in the Recent File List Limit field.

Edit Menu

The Edit menu contains standard Windows clipboard editing commands: Cut, Copy, Clear, and Paste.

In some windows, it also contains commands to edit additional data related to the current document. In Customer Order Entry, you can edit the customer delivery address using a command from the Edit menu.

The Edit menu may also contain object editing options that are not specific to the current document. For example, the Employee Maintenance Edit menu contains Earning Codes, which allows you to edit all earning codes in your database.

View Menu

Use the View menu to choose which components, such as toolbars, to display in the window.

Options Menu

The Options menu contains preferences that control how the application itself operates.

It also contains standard accessories, such as the Windows Calculator.

Help Menu

Within a particular application, such as Customer Order Entry, the Help menu consists of these options:

Help Topics... – Select this option to open the help file to a topic that describes the application you are viewing.

About Help... – Select this option to open a help topic that describes how the help system functions.

Contact Us... – Select this option to open a help topic that describes how to contact Customer Support.

About... – Select this option to view information about the application you are viewing. If you need to contact customer support about an issue, the information in the About dialog will help the customer support representative analyze the issue. In addition to copyright information, the dialog contains this information:

Program – The executable name and description are displayed.

System Version – The version of VISUAL you are using is displayed.

Program Version – The version of the application you are viewing is displayed.

Database and Patch Level – The database type you use is displayed. If a patch script has been applied to the database, then the current patch level is also displayed.

Engine Version – The version of the database engine you use is displayed.

Number of Logged In Users – The number of users currently signed into the database is displayed.

If you access the Help menu from the main VISUAL window, then these options are available:

Contents – Select this option to open the help system to the welcome topic and to display the help system's table of contents.

About Help – Select this option to open a help topic that describes how the help system functions.

Online Books– Select this option to access the user guide PDFs.

Video Library – Select this option to view a list of videos that demonstrate VISUAL features.

Contact Us – Select this option to open a help topic that describes how to contact Customer Support.

About – Select this option to view information about the main VISUAL window.

Info Menu

The Info menu usually contains commands for interactive report windows that display information on the current document.

Notes Menu

The Notes menu contains functions to control the display of Notations and Specifications.

Macros Menu

Use the Macros menu to run macros and edit existing macros. Use macros to automate a range of tasks in windows that support the scripting engine.

User Reports Menu

The User Reports menu allows you to run compiled reports and edit existing templates. The menu is only active in some applications, and Preferences Maintenance governs its appearance. You must have Crystal Reports installed on your computer to use user defined reports.

Toolbars

Toolbars contain buttons that you use to perform basic functions, such as **Save**, **Refresh**, and **Print**, with a single click. Other toolbars are specific to the window on which they are displayed. For example, the toolbar in the Manufacturing Window contains buttons to schedule the current work order or check material availability.

Typically, maintenance windows have fewer buttons because you most often use these windows to enter, maintain, and report basic enterprise information. Entry windows, such as Customer Order Entry, have two toolbars, one for basic functions and one for more advanced operations.

Any function that you can perform through a toolbar button can also be performed by using the window menus.

You can “dock” toolbars or “float” toolbars. You can dock toolbars at the top or the side of the window. A docked toolbar is part of the window. A floating toolbar is not part of the window. A floating toolbar is displayed as an independent box that you can move anywhere on your screen.

ToolTips in Toolbars

All buttons on toolbars feature ToolTips. ToolTips are mini pop-up windows that describe the function of the particular button to which you are pointing.

If you rest the cursor on a toolbar button without clicking it, the appropriate ToolTip automatically appears.

Toolbars

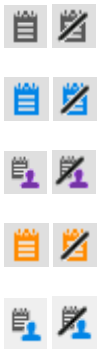
VISUAL uses basic and advanced toolbars.

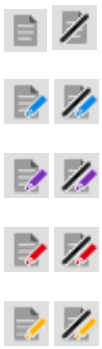
A typical basic toolbar consists of functions such as **Save**, **New**, **Delete**, **Refresh**, and **Print**. Some toolbar buttons are common to nearly every window. They are shortcuts for options found mostly under the File, Edit, and Notes menus. These common buttons allow you to perform such basic but important tasks as saving, deleting, clearing, printing, and refreshing.

Advanced toolbars also feature some common buttons, but tend to hold more specialized, application-specific buttons. An example of an advanced toolbar is the Table toolbar. Table toolbars contain functions that apply to tables only, such as Insert Line and Delete Line.

This table shows commonly used buttons:

Button	Name	Description
	Save	Click this button to save information in the window to the database.
	New	Click this button to clear the window to create a new document.

Button	Name	Description
	Delete	Click this button to delete the document from the database.
	Refresh	Click this button to refresh the information in the window. When you click this button, the system retrieves the most up-to-date information from the database.
	Send to	Click this button to email the information in the window.
	Print	Click this button to print the document or a report. Some windows have more than one print button. If you have tooltips enabled, you can place your mouse over the button to view the name of the document or report that the system prints when you click the button.
	Previous Document in Set/Next Document in Set	These buttons are sometimes only available when you have opened a browse table. Use these buttons to navigate through documents. When you use these buttons with a browse table, you can filter the table first, then use the buttons to scroll through the result set.
	Activities	Click this button to customize and review follow-up activities associated with the record. Use this button to add information about the record, specify next steps, and set reminders for activities.
	Documents	Click this button to view the documents attached to the record or to add more documents. If no document is attached, a diagonal line is displayed on the icon.
	Notations	Click this button to view existing notations or to add new notations. In some windows, you can add more than one type of notation. In these windows, the system displays Notation buttons differentiated by color or by a user image in addition to the notation toolbar icon. If no notation is attached, a diagonal line is displayed on the icon.

Button	Name	Description
	Specifications	Click a specification button to add a new specification or to view an existing record. In some windows, you can add more than one type of specification. In these windows, the system displays Specifications buttons differentiated by color or by a pencil image in addition to the specification toolbar icon. Also, you can sometimes add specifications to both the header information and to the individual lines in the line item table. If no specification is attached, a diagonal line is displayed on the icon.
	Insert	Click the Insert button to insert a line into the line item table.
	Delete	Click the Delete button to remove a line from the line item table.
	Line Documents	Click this button to view the documents attached to the line record or to add more documents. If no document is attached, a diagonal line is displayed on the icon.
	Repeat Row Information	Click this button to make a copy of a line. To use this button, select the line to copy, then click the Repeat Row Information button. The system inserts a duplicate line at the end of the line item table.
	Check Spelling	Click this button to check your spelling. You can check your spelling in multi-line text fields, such as the Specs tab in Customer Order Entry. You can also check your spelling in the Notations and Specifications dialog boxes.

This table shows the buttons used in browse tables:

Button	Name	Description
	Select	Click this button to select a record to view in the window. If you have selected the Keep browse visible option from the Options menu, the system does not close the browse dialog when you click Select.
	Select and Close	Click this button to select a record to view in the window and to close the browse dialog box.
	Quick Filter	Click this button to enable the quick filtering function.

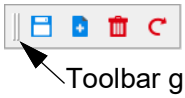
Button	Name	Description
	Reset Filter	Click this button to reset the filter and view the full list of IDs in the browse table.
	Search	Click this button to open the Query by Example dialog box. You can use this dialog box to search for information in the browse table.
	Send to Excel	Click this button to send the contents of a table to Microsoft Excel. This function is available in many browse dialogs.
	Import from Excel	Click this button to import information from a properly formatted Microsoft Excel into the table. The system administrator can restrict access to this feature.

Arranging Toolbars

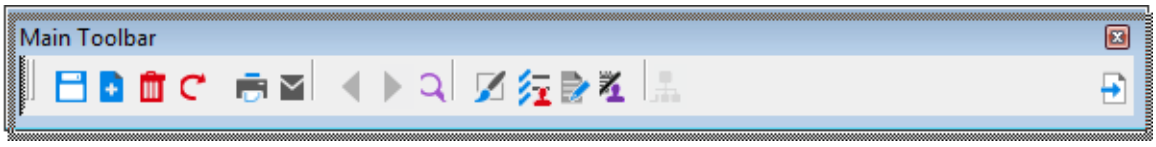
You can arrange toolbars so they reside on any of the four sides of a window or float independently on top of the window. By default, toolbars appear at the top of the window.

Toolbar Gripper

By placing your pointer over the toolbar grippers you can drag the toolbar anywhere on the window.



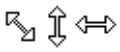
As you move the toolbar away from a dockable area, the border changes to a thick shadow indicating you can float the toolbar in that area.



When you move the toolbar to an area where it is possible to dock the toolbar, the toolbar outline changes to a thin dashed border indicating you can dock the toolbar to that location.

Notice the main toolbar docked on the left of the and one floating at the bottom of the window.

Resizing Toolbars



When used as floating toolbars, you can resize toolbars by stretching them when the pointer changes to one of the double-arrowed shapes. Placed near a corner of toolbar, the mouse pointer becomes a vertical, horizontal, or diagonal resizer, depending on where the pointer is in the window. Move the resizer as necessary to stretch the toolbar. If you resize a toolbar any larger than the default size, the toolbar reverts to its default size when you dock it again in the window.

Turning Toolbars On and Off

You can choose to view or hide toolbars.

From the View menu, click the toolbar name you do not want to appear.

For example, if you are working in the Customer Order Entry window and want to turn on the User Toolbar, from the View menu, select **User Toolbar**. A check mark is displayed next to the User Toolbar option and the toolbar is displayed.

If you have floated the toolbar, you can also click the **Close** button in the top right corner of toolbar.

To reactivate toolbars, from the options menu, select the name of the toolbar to display.

A check mark is displayed next to the option to indicate that it is in use.

User Toolbars

You can create your own toolbars to use in applications. See "Adding User Toolbars" on page 4–12 in this guide.

Right-click Menus

Use right-click menus to obtain key information related to your current task. VISUAL offers a variety of right-click menus customized to the currently active window.

To access the right-click menu, click your right mouse button—right-click—anywhere in the active window.

Right-click menu options depend on the active window and where you right-click in that window. For example, a different menu appears if you right-click the header part of a window than if you right-click the table part of the window.

If you cannot access a particular option due to your security settings, the option is unavailable.

When you use a right-click menu, the appropriate program is started and information from the originating window is inserted. You can then access more windows using the right-click menu within the new window.

For example, if you are working in the Purchase Order Entry Window:

1 Select a line for which you want to access further information.

2 Right-click any part of the table. A menu is displayed.

3 Select the option you want.

The appropriate program is opened, and information related to the line you selected in step 1 is displayed.

For example, if you have a Part ID specified on the line and you select Part Maintenance from the right-click menu, the Part Maintenance window populates with the Part ID. Likewise, if you select Vendor Maintenance, the Vendor Maintenance window opens and the appropriate vendor information appears.

If you now have the Part Maintenance window open, you can right-click in that window and access several other windows relevant to that part's information. For example, select the Vendor Maintenance option from the right-click menu in Part Maintenance, and Vendor Maintenance window is opened, populated with the appropriate vendor for the part you had selected in the original Purchase Order Entry window.

Supported Applications

These applications support accessing additional information from the right-click menu:

- Purchase Order Entry
- Purchase Requisition Entry
- Vendor RFQ Entry
- Customer Order Entry
- Order Management
- Customer Inquiry
- Material Planning
- Part Maintenance
- Project Window
- Project Maintenance
- RMA Entry
- Shipping Entry
- Receivables Invoice Entry
- Receivable Collections
- Payable Invoice Entry
- ECN
- Estimating
- Cost Simulation
- Project Summary Window
- Progress Billing
- Material Trace History

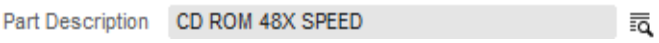
Using Fields

Use fields to enter alphanumeric text or dates. Some fields are free-form fields; you can enter any value you choose. Some fields take dates only. Other fields are constrained to information in the database.

These conventions are used to communicate information about fields:

When your cursor is in a field, the field border is blue.

When a field is unavailable for manual edits, the field becomes gray.



If a field can never be edited, such as a system-calculated field, the text is black.

In most fields, you can directly enter information. Some fields have buttons next to them that help you enter appropriate information for the field. The types of buttons are:

Browse button ( ) – When you click a browse button, the system displays a table populated with values from your database. Double-click on a row to select. Browse buttons frequently accompany fields that require you to enter a document ID, such as a Part ID or Customer ID, from the database. For more information on browse tables, refer to "Modifying Existing Records" on page 3–5 in this guide.

Arrow () – When you click an arrow, the system displays a list of valid selections. Arrows frequently accompany fields that require you to enter common information such as Language ID fields and State fields.

You can select multiple options from some arrows. This control is most commonly used for selection of multiple sites.

Calendar button ( ) – When you click a calendar button, the system displays a calendar from which you can select a date. To select a date, click it. Use the arrow on the right of the month to advance the calendar by one month. Use the arrow on the left of the month to go back one month.

Typically, the system inserts the current date in date fields by default. If the date field is blank, click in the field and press T to insert the current date.

You can advance the date by one day by clicking the upper right corner of the calendar button. When your mouse is in the correct position, the system displays a red bracket in the upper right corner. You can change the date to one day earlier by clicking the lower left corner of the calendar button. When your mouse is in the correct position, the system displays a red bracket in the lower left corner.

You can right-click the Calendar button and select these options:

- Today
- Advance One Day

- Back One Day
- Advance One Month
- Back One Month
- Advance One Year
- Back One Year

Edit URL button ( ) – When you click an Edit URL button, the system allows you to enter a URL for a website, file, or e-mail address. When you are finished entering the URL, click the View URL button ( ). After you click the View URL button, the system activates the URL link. Click the link to open the link.

When you enter a URL in edit mode, the system automatically attaches the proper prefix depending on the type of field. For example, if the field is labeled “Website,” then the system adds the http:// at the beginning of the web address. If the field is labeled “E-mail,” the system attaches the mailto:// prefix. If the field is labeled “File,” the system attaches the file:// prefix.

Required Fields

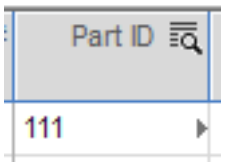
The system marks certain fields with red asterisks. The asterisk indicates that you must enter a value in the field before you can save the document.

The system marks only those fields that are always required. Some fields become required fields based on database settings or based on data that you enter in a window. The system will not mark required fields in these cases:

- **Fields that have a default value that cannot be cleared.** For example, in Purchase Order Entry, the Status field is required, but since it is always populated with a value the system does not mark the field.
- **Fields that become required based on the data you enter.** For example, in the Part Maintenance window, if you select the Inventoried Using Piece Tracking check box, you must enter a value in the Dimensions U/M field.
- **Fields that are required based on your settings.** For example, if you use a VAT-enabled database, you must enter values in VAT-related fields.

Using Drill-down Arrows

A drill-down arrow is displayed next to certain fields and in certain table columns throughout VISUAL.



When this arrow is displayed, you can click the arrow to open the window where the information was created. For example, if you are viewing an order in the Order Management Window, an arrow is displayed next to the Customer ID field. Click the arrow to open the record for the customer in Customer Maintenance. You can view and edit the customer's record without exiting the Order Management Window.

To use the drill-down arrow in tables, you must first click in the cell. After you click in the cell, the drill-down arrow is activated. Click the arrow to open the window where the information was created. For example, if you are viewing an order in the Order Management Window, you can click in a Part ID cell to activate the drill-down arrow. You can then click the arrow to open the part record in Part Maintenance.

Dynamic Field Validation

If a field must contain information that already exists in your database or information in a particular format, the information you specify in the field is validated when you press TAB or when you click into another field.

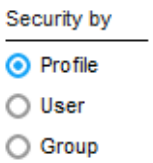
For example, in Invoice Entry you specify a Customer ID, which must be predefined in Customer Maintenance. If you specify an invalid Customer ID, an error message is displayed when you exit the field.

When you receive the error message, you must correct the mistake before proceeding. You can correct errors as they happen instead of correcting multiple errors when you save the record.

Using Option Buttons

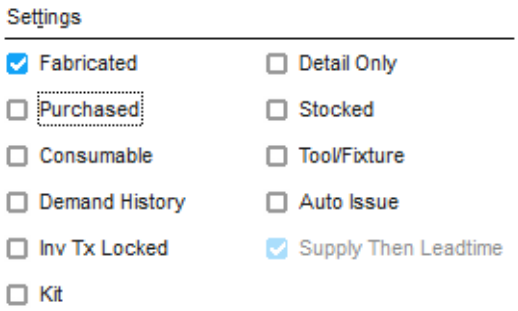
Option buttons are used when you can choose only one of the options presented to you. When you choose an option button, the system deselects the option previously selected.

The Security by section of the dialog box shown consists of option buttons.



Using Check Boxes

Check boxes are used when you can select multiple options. Unlike option buttons, you can select more than one of check box. Click the check box to toggle between selected and cleared.



Using Tables

Tables are an important user interface component. Although there may be slight differences depending upon the exact function, all tables operate in essentially the same way.

Window Table Buttons

When a table is displayed in the body of a window, a Table toolbar is also displayed. The buttons on Table toolbars have ToolTips that are displayed when you rest the cursor on the button. These toolbar buttons are typically displayed on the Table toolbar:

Insert – Click the Insert button to insert a line into the line item table.

Delete – Select a row, and then click the Delete button to remove a line from the line item table.

Repeat Row Information – Click this button to make a copy of a line. To use this button, select the line to copy, then click the Repeat Row Information button. The system inserts a duplicate line at the end of the line item table.

Table Components

This terminology is used when referring to tables:

Column – Vertical areas that represent one type of data for all rows.

Row – Horizontal areas that represent one record of data in the table.

Column Header – The box at the top of each column that contains the column title. When a browse button appears next to the column, you can double-click the button to open a browse table from which you can select the appropriate information.

Row Header – The box at the left of each row. Use the row header to select the row. Row headers can contain special symbols to indicate whether the row is new, being modified, or has been deleted.

In → tes the row is new and you have not saved it yet.

In ✓ tes you have changed something in the row and have not saved it yet.

In ✗ tes you have deleted the row but have not saved your changes.

Column Title – The name of the column appearing in the column header.

Field – The data entry area where a row and column meet. Fields may be editable or read-only.

Row Cursor – The “Row-Cursor” is the heavy line that appears around a row any time the cursor is in that row.

This allows you to move between rows using the cursor keys. When typing data into a field, you can use the UP or DOWN cursor keys to move to a new row, but keep the text cursor in the same column. Do not confuse this cursor with the selection of the line. When a line is selected, it is entirely highlighted—usually white text on a black background.

Selecting Table Rows

In many cases, you need to select one or more rows from a table to perform various functions.

Select rows in these ways:

Single Select – To select a single row, click the row header (dark box to the left of the row).

Multiple Contiguous Select – Some applications allow you to select multiple rows. To select multiple rows that are in a continuous (unbroken) sequence, place the pointer on the row header for the first row and hold down the left mouse button. Then, keeping the button down, drag the cursor to the row header for the last row. The table scrolls automatically if the last row is not currently visible in the window. The first, last, and all rows in between become selected. Release the mouse button when you are finished.

You can also select the first row, press the SHIFT key and select the last row you want; all rows between your selections appear highlighted.

Multiple Discontiguous Select – In some instances, you may need to select multiple rows that are not in an unbroken sequence. To do this, click the row header for the first row you want and, while holding down the CTRL key, make your remaining selections. Each row appears highlighted individually.

Deselecting one Row – To deselect a row, hold down the CTRL key and click the row header for the selected row. It becomes deselected.

You can use all of these actions in sequence. For example, you can use the multiple contiguous select method to select a large group of rows, and then the deselect function to remove unwanted rows.

Double-Clicking on a Row – Sometimes there is only one function you can perform on a row, or one function that is most common. In many cases, double-clicking on the row performs the function automatically; this is a very common Windows shortcut. For example, when viewing a browse table to select an item, double-clicking on the row is usually a shortcut for selecting the row and clicking **OK**.

Making Multiple Contiguous and Discontiguous Selections – To select a block of rows and also a few lines outside the block, you can use a combination of selections using the SHIFT and CTRL keys.

Inserting Table Rows

You can insert rows into a table in many applications. For example, you can enter line items into purchase orders, customer orders, and quotes using tables.

To insert rows into window tables, click the **Insert Row** button on the table toolbar.

In certain dialogs with simple tables, an Insert button is displayed below the table. Click this button to add a row.

In many cases, you can insert a new row by double-clicking the gray box in the upper left corner of the table. You can also press the TAB key when on the last column in the last row of the table.

A right-arrow symbol is displayed in the row header indicating the row is new and you have not saved it yet.

You can now enter data in the new row.

Modifying Information in Table Rows

When certain columns in a table are editable, the text in the editable columns is black. The text in unavailable columns is gray. When no text in a table is editable, all of the text is black.

To modify an existing row, place the cursor in the field you want to modify and enter or modify data accordingly.

A check mark symbol is displayed in the row header of the modified row indicating you have changed something in the row and have not saved it yet.

When you move the cursor over a field containing information you can modify, the pointer changes to an I-beam shape.

When you move the cursor over a field containing information you cannot modify, the cursor changes to a right-pointing arrow.

A few tables are not directly modified in this way. Sometimes, you must select the row and make the changes in other fields in the window. An example is the Shipping Addresses dialog box in Customer Maintenance.

Deleting Table Rows

To delete one or more rows, select the rows and click the appropriate delete button:

To delete rows into window tables, click the **Delete Row** button on the table toolbar.

In a dialog table, the system displays an **Delete** button below the table.

Prior to saving, an X symbol appears in the row header of each row you delete, indicating you have marked the row for deletion. The row is deleted the next time you save your work.

To clear a row for deletion, select the row and click the **Delete Row** button again or double-click the row header.

If you have created a new row but not saved your work and you delete the new row, the row is removed without warning.

Using the Keyboard with Tables

You can enter and modify data in tables without using the mouse. To move to the next field in a row, press the TAB key. To move to the previous field, press SHIFT+TAB. To move up one row in the same column, press the UP key, to move down press the DOWN key.

Sorting Tables

You can sort information in many tables in the system. If you can sort a table by a particular column, a triangle is displayed in the column header. Double-click the triangle in a column header to sort the table by that column. You can double-click the triangle again to switch between ascending and descending order.

Scrolling in Tables

If a vertical scroll bar appears to the right of the table, there are more rows in the table than can appear in the window. Use the scroll bar to scroll through the entries.

If a horizontal scroll bar appears below the table, all of the columns cannot be displayed in the window. Use the scroll bar to scroll through the columns. You may be able to resize columns so more can fit on the window.

Configuring Line Item Tables

Some applications have line item tables that you can configure as needed. This allows you to specify which columns to show or hide, column ordering, sizing, and naming. Generally, if the system displays the table in the main window (i.e., not in a tab), then the table is usually configurable.

Moving Columns

To move a table column, move the pointer to the bottom edge of the column header for the column, just below the column label. The pointer changes to a double-arrow icon indicating a column move. Simply hold down the left mouse button, and drag the column horizontally to the desired position between two other columns. The table automatically scrolls, if necessary. Release the mouse button to move the column.

Resizing Columns

To change the size of a table column, place the pointer on the separator between two column headings. The cursor changes to a double-arrow with a vertical line, indicating movement of the divider between the columns. Hold down the left mouse button, and drag horizontally, changing the size of the column to the left. Release the mouse button to finish the operation.

Showing/Hiding and Renaming Columns

To show or hide columns, or rename them, select **Configure Line Item Table** from the Options menu, or click the **Config** button for the table, if you are using Quick Quote.

The table contains a line for each column that can be shown in the table. The Column Name shown is the name of the column in the database and begins with the letters col. The name is usually close to the column's function and/or title.

To include a column in the table, click the **Visible** check box for the column. To hide a column, clear the **Visible** check box.

The Title column shows the text that appears in the column's header. To modify column titles, modify the text in the Title field for the column. You can use the @ sign in titles to indicate a line break, so you can specify a title to appear on multiple lines.

Click the **OK** button to complete the operation. Note that this also saves the current columns sizes and positions.

Be careful not to hide any columns that are required by the program. If you have hidden a required information column and try to save your information, you are prompted to enter the missing information.

Grids

Grids are used in several areas of VISUAL, such as in-context view panels.

Opening a Document from a Grid

When you place your cursor over certain information in a grid, such as an ID, the information is underlined. The underline indicates that you can click the item to open related information.

Sorting and Grouping Information in a Grid

To sort the grid by a column, click the column header. Click the header again to sort the column in descending order.

To sort by more than one column, press the SHIFT key and then click the column headers to use to sort the grid. For example, if your grid contains a Desired Ship Date column and an Order Amt column, you could sort the grid first by Desired Ship Date and then by Order Amt. To do so, press the SHIFT key and then click the Desired Ship Date header followed by the Order Amt header.

You can also group information together, and then sort the information within the groups. To create a group, right-click the column header to use as the group and select Group By.

You can also use the Group By Box to group the information in the grid. To use the Group By Box:

1. Right-click the column header and select **Group By Box**.
2. To group the grid by a column, click the column header and drag it to the Group By Box.
3. To sort the information in the group, use the arrows next to items in the Group Box to change the sort order of the group.

To remove a group, drag the group name from the Group Box to the grid header row.

Text Color in Grids

In certain grids, text is displayed in red. Red text indicates that some issue exists with the information. For example, red text could indicate that an amount is overdue.

Aligning Text in Grids

You can align text on a column-by-column basis. To align the text in the column, right-click the column header. Select **Alignment**, then select **Right**, **Center**, or **Left**.

Adjusting Column Sizes

To adjust the size of a column, place your cursor between two column headers until the cursor changes. Drag the cursor to change the size of the column.

To size the column to accommodate all the text in the column, right-click the column and select **Best Fit**.

Graphs

Several applications, such as the Througput Window reports and the Revenue Report, use graphs to display data. In many areas, you can choose the type of graph to use.

Types of Graphs

When you can choose the type of graph, a Graph Type field is provided on the graph dialog. Not all types of graphs are available in all graph dialogs, and some graph dialogs do not provide you the opportunity to select a graph.

These graph types are available:

- Area
- Area Step
- Bar
- Bar Horizontal
- Doughnut
- Line
- Line Step
- Pie
- Spline
- Spline Area

Working with Graphs

In certain graphs, you can place your cursor over on object, such as an individual bar, to show the exact value. Click the object to view the individual transactions or accounts that contribute to the amount shown in the bar.

Chapter 3: Entering Information

This chapter includes the following information:

Topic	Page
Creating Records	3–2
Refreshing Information from the Database	3–7
Browsing for Information	3–8
Using Picture/Object	3–19
Specifications and Notations	3–20

Creating Records

The focus of most applications is the creation and maintenance of a specific record. For example, each maintenance application maintains all of one type of record. Sometimes, an application also works with sub-records. For example, Product Codes are separate records that you maintain from the Part Maintenance window.

To create a new record, open the appropriate application (for example, Part Maintenance to create a part). When you first open an application, the window should be empty and ready for you to create a new record. If the window contains a previous record, click the **New** button to ready the window for entering a new record.

After you have entered information in all of the required fields, click the **Save** button or select **File**, **Save** to create the record.

For more information on how to use the various fields, check boxes, tables, and options in windows, see "Fields, Buttons, Menus, and Other Window Controls" on page 2–1 in this guide.

Understanding IDs

Every record has an ID. The ID is a unique name for the record and is the key to calling it up. In the majority of cases, the ID is labeled with a name similar to the window name. Part ID, Customer ID, Vendor ID, and Quote ID are examples of ID labels. For some records, transaction IDs are assigned, for example, Labor Tickets and Inventory Transactions. In a few records, such as work orders, the IDs are built from multiple components, which together define the unique ID.

For example, Customer Order Entry uses three unique IDs:

Our Order ID – The ID you assign to the specific customer order

Customer ID – The unique ID of the customer, which you have already established in Customer Maintenance

Customer PO – The Purchase Order ID that your customer wants you to reference on the order.

A browse button indicates that you can click it to search your database for possible selections.

It is important to understand that all IDs are text strings. For this reason, you cannot enter 23 to refer to Order ID 0023 because the leading zeros are part of the ID.

Understanding Master and Work Order IDs

Engineering Master, Quote Master, and Work Order IDs all consist of four components: Base ID, Sub ID, Lot ID, and Split ID.

Base ID – For engineering masters, the Base ID must be the same as the Part ID.

For quote masters, the Base ID always matches its Quote ID.

For work orders, the Base ID is sometimes called the Job ID.

Lot ID/Eng ID – For engineering masters, this field is the Engineering ID, allowing multiple revisions of the same master.

For quote masters, this field uniquely identifies the quote master from others attached to the same quote.

For work orders, the Lot ID identifies a specific lot within a larger work order specified by Base ID. This allows all of the lots to have the same Base ID.

Split ID – Split IDs uniquely identify child lots of split work orders allowing all splits to have the same Base ID/Lot ID as the parent order. This field allows a manual split. For engineering masters, this field should always be zero.

Sub ID – Sub IDs uniquely identify legs within the work order.

Masters and work orders can have several subassembly legs, each representing the independent production of a subassembly required by the parent operation. The primary leg is always Sub ID zero.

Master or Work Order identifiers usually use this format:

40002-1/2.3

Base ID – 40002

Sub ID – 1 and is separated from the Base ID by a **-**

Lot ID – 2 and separated from the Sub ID by a **/**

Split ID – 3 and is separated from the Lot ID by a **.**

If a Split ID or Sub ID is 0, it usually is not displayed.

Using Auto Numbering

Some records have an auto-number feature that automatically assigns sequential IDs without having to manually enter them. These programs use auto-numbering:

- Contact Maintenance
- ECNs
- Equipment Maintenance
- Estimating Window
- Inter-branch Transfer Entry
- Inter-branch Transfer Receipt Entry
- Inter-branch Transfer Shipping Entry
- Planned Maintenance - Sales Order ID
- Planned Maintenance - Schedule
- Planned Maintenance - Work Order ID
- Purchase Order Entry
- Purchase Receipt Entry
- Purchase Requisition Entry
- RMA Entry

- Sales Orders Entry
- Shipping Entry - Advanced Shipping Notices
- Shipping Entry - Bills of Lading
- Shipping Entry - Customs Doc IDs
- Shipping Entry - Packlists
- Unplanned Maintenance
- Unplanned Maintenance - Sales Order ID
- Unplanned Maintenance - Work Order ID
- Vendor RFQ Entry
- Work Orders

If you are licensed to use multiple sites, you can set up auto-numbering by site ID. It is highly recommended that you create a unique auto-numbering scheme for each site. This helps to ensure that transactions within a site are numbered sequentially.

To ensure that all IDs for a record type use the same auto-numbering ID format, you should set up auto-numbering schemes before you create records.

Auto numbers contain these components:

- An integer portion. Each new ID is generated in sequential order.
- An alphanumeric prefix affixed before the integer.
- An alphanumeric suffix affixed after the integer.
- A certain number of digits.

For example, a number of 1001 with a prefix of PO and a suffix of X produces this sequence of Purchase Order IDs: PO1001X, PO1002X, PO1003X.

Setting Up Auto Numbering

1. Open the application where you want to use auto numbering.
2. Select **Edit**, **Auto Numbering**.
3. If you are licensed to use multiple sites, click the **SIte ID** arrow and select the site for which you are setting up auto-numbering. If you are licensed to use a single site, this field is not available.
4. Specify this information:

   Next Sequential Number – Specify the number to use the next time you save a record.

   Alphanumeric Prefix – Specify a prefix that is attached to the beginning of each sequential number.

   Alphanumeric Suffix – Specify a suffix that is attached to the end of each sequential number.

   Number of Digits – Specify the total number of digits in the numeric portion of the ID in the Number of Decimal Digits field. If you select the Show Leading Zeroes check box, this number is used to determine the correct number of leading zeros.

   Show Leading Zeroes – To include leading zeroes in the ID, select this option. When you select this option, all of your IDs have the number of digits specified in the Number of Digits field.

5 Click **Save**.

Modifying Existing Records

To work with an existing record, start the appropriate application. Enter the ID for the record in the ID field, or click the browse button and select it from the browse table. When you use the TAB key to move from the field, or when you select the ID from a table, the current data are inserted into the window.

If you have the appropriate security permissions, you can now edit the record.

To save changes to an existing record, click the **Save** toolbar button or select **Save** from the File menu.

You cannot change the ID of a record. If you change the ID field, you are creating a new record, rather than changing the existing one. You can compare this to the **Save As** command in most word processors; if you save a record by a different name, you do not change the name of the existing one, but instead make a new copy.

Site-level Overrides for Certain Records

If you have a multi-site license, you can define certain information at both the site-level and the tenant-level in Part Maintenance, Shop Resource Maintenance, and Outside Service Maintenance. For example, you can specify a tenant-level value in the Trans Days field in Outside Service Maintenance, and then specify a different value for Trans Days at the site-level.

If the site-level information in a field differs from the tenant-level information, the text in the field is blue. This gives you a visual cue to highlight differences between tenant-level and site-level settings. To view the differences between tenant-level and site-level information, you must view the part, shop resource, or outside service view at the site level.

When a check box or option is specified differently at the tenant level and site level, then the field label is blue.

If you are licensed to use a single site, site-level overrides do not apply.

Copying Records

In some applications, a formal copy function is available from the Edit menu. For example, you can select Edit, Copy Customer Order to copy an order in Customer Order Entry.

In applications, that do not use a formal copy function, use this method to copy a record:

1 Using the appropriate application, open the record to copy.

2 Change the ID field to the ID you want the new record to have. If this is a record you can auto number, clear the ID field.

3 Click **Save**.

Entering a new ID creates a new record with all the data fields of the old one. Note that you CANNOT change the ID of a record; changing the ID creates a new record.

In general, only fields visible on the main screen are copied. For example, if you use this method to copy a part, the Vendor information is not copied because that information is stored in a separate database table.

Deleting Records

You can delete a record from the database. In most cases, you can only delete a record if it is not used in another record in the database. For example, if a part has inventory transactions associated with it, you cannot delete the part.

To delete a record:

1 Using the appropriate application, open the record to delete.

2 Click **Delete**. You are warned that you are about to delete the record from the database. If the record cannot be deleted, additional messages are displayed informing you that you cannot delete the record.

3 If the deletion is allowed, click Yes to complete the deletion.

When you delete a record, the window is not automatically cleared. This allows you to use the fields of the deleted record to create a new one, if appropriate.

Locking Records

Estimates, customer orders, purchase orders, and invoices (receivables) are all records you send to customers or vendors. After you send these records, altering them is generally inappropriate. For example, a customer order is a contract between the two parties involved, one selling a product and one buying it. It contains prices, quantities, delivery dates, and specifications. After you issue a customer order to the buying party, it is important that you can always remember and retrieve it.

Records are locked after you print them. For estimates, quotes, and A/R invoices, the record is locked after you print it. For customer orders and purchase orders, the record is locked after you print order acknowledgments.

The Print dialog box for each of these records includes a Draft Mode check box. Select this check box to print a the record without locking the record. When you print in draft mode, the word “DRAFT” is shown in the header of the record.

Refreshing Information from the Database

Records work together in a network of relationships. Work orders require parts, parts have preferred vendors, purchase orders reference vendors, receivers reference purchase orders, and so on. Sometimes, you or others may be editing multiple, related records at the same time. For example, you may be using Customer Order entry to modify an order when you realize that you need to change some of the customer's master information.

You then use Customer Maintenance to make the changes. When this type of situation occurs, click **Refresh** to read any new or changed information from the database.

Prior to saving, you can also use the **Refresh** command to revert back to the original state of a record that you have been editing. For example, if you call up a Part ID, make some edits, and then change your mind and want to start again, click **Refresh**. When you are prompted to save the current changes, click **No** to revert back to the original part definition.

Browsing for Information

The larger your database becomes the more important it is for you to understand how to search for specific information. Many of the fields have a search or browse button that you can click to open a list of information appropriate for the field. Because these lists can be extensive, you can refine the search to find the information you want. For example, if you click the Part ID button, you can refine the search to shorten the list that appears, decreasing the time it takes to find the actual Part ID you want.

Selecting data from a list helps to ensure accuracy, particularly if your database has many similar records.

Two types of browses are used: simple browses and advanced browses. Typically, simple browses are used with tables that have only a few columns. Advanced browses are used with tables that have many columns. In a simple browse, you can apply a filter to find a specific ID and sort the browse table in ascending or descending order by the primary ID. Advanced browses offer extended functionality. In addition to filters, you can create custom searches, sort the table by any column, and save your search settings to use again at a later time. In some cases, you can edit the browse table to update information in your database.

Using Simple Browses

These features are used in simple browses.

Search

To apply a search filter to the table, click Search. A row is added at the top of the browse table. Use this row to specify your search terms. You can specify a search term for a single column or for multiple columns. If you specify a search term in more than one column, all columns must be matched for an item to be returned in the search results.

You can use wildcards in your search terms. Use the % character to indicate zero or more of any character in the position it is placed. Use the _ (underscore) character to indicate exactly one of any character in the position it is placed. Any other characters you enter are matched exactly.

After you enter the search terms, click Search. The records that match your search terms are displayed in the table. The Searching check box is also selected.

To clear the search, exit and reopen the browse.

Sorting

In a simple browse, the browse table is sorted by the first ID in the table in ascending order. To sort the table by the first ID in descending order, select the Descending check box.

Send to Excel

If the contents of the browse table can be exported to Microsoft Excel, then the Send to Excel button is displayed. To export all of the contents of the browse table, click Send to Excel immediately after you open the simple browse table. To export a single row, select the row and then click Send to Excel.

Using Advanced Browsing

For certain fields in VISUAL, an advanced browse table is available. You can use the advanced browse table to search for specific information, to create result sets that you can scroll through in the main window, and to output information to Excel or to a printer. In certain cases you can edit information directly in the advanced browse table and save it to your database.

Opening an Advanced Browse Dialog

To open an advanced browse dialog manually, click the browse button. To open the advanced browse dialog automatically, activate the auto browse feature.

When the auto browse feature is activated, the field on the main form can be used as a browse filter. Enter your search term in the field, and then press TAB. The advanced browse dialog is opened showing the IDs that match your search term. If you activate automatic browsing, you can still use the browse button to open the advanced browse dialog manually.

If you open an advanced browse dialog for the primary key of a record, then you can leave the advanced browse dialog open. For example, if you are viewing Part Maintenance, you can leave the Part ID browse open. Leaving the primary key browse open can reduce the number of mouse clicks needed to open a record.

If you use Query by Example to find records in the advanced browse dialog, you can choose to display the Query by Example dialog when you open the browse. If you choose to display the Query by Example dialog when you open the browse, the Query by Example dialog is displayed only if you open the browse dialog manually. If you use auto browse, the Query by Example dialog is displayed only if you click the browse button to open the browse.

Using Automatic Browsing

When you use auto browse, the field on the main form can be used as a browse filter. Use automatic browsing when you want to find an item in the table, but you only know a few characters of the item name. With Auto Browse enabled, enter the characters you know in the appropriate field, then press the TAB key to move the cursor out of the field. The database is searched using the characters you entered, and the results are listed in a Browse table window. All items that match the characters you entered are shown. If only one matching item is found, the current window is completed with the information for that item.

For example, if you are searching for part RJ45 in Part Maintenance but you are unsure of the full part ID, you can enter R in the Part ID field, then press the TAB key to return a Browse table window with all Part IDs beginning with R.

You can use two wildcards with automatic browsing. For example, if you wanted to find all customer IDs that had B as the second letter, specify _B in the Customer ID field. If you wanted to find all customer IDs that have the letter B in the ID, specify %B in the Customer ID field. If you specify a wildcard at the end of your search term, the wildcard is ignored.

When you activate automatic browsing for a browse dialog, the feature is enabled only for that browse in the current application. For example, if you are using Part Maintenance and activate automatic browsing for the Part ID browse, automatic browsing is only activated for the Part ID browse in Part Maintenance. It is not activated for the Part ID browse in Customer Order Entry.

To activate automatic browsing:

1 For the field where you want to use automatic browsing, click the browse button.

2 Select **Options**, **Auto Browse Enabled**.

Keep Browse Visible

If you have opened an advanced browse dialog for a primary key, you can leave the browse dialog open after you select an ID to view. For example, if you are viewing Part Maintenance, you can leave the Part ID browse open. Leaving the primary key browse open can reduce the number of mouse clicks needed to open a record.

To leave the advanced browse dialog open:

1 Click the browse button for a primary key field.

2 Select **Options**, **Keep Browse Visible**. If you accessed the browse dialog from a field that is not a primary key, then this option is not available.

3 To select records with a single click instead of a double click, select **Options**, **Single Click**.

Searching on Initial Entry

To display the Query by Example dialog box when you manually access an advanced browse dialog:

1 For the field where you want to use automatic browsing, click the browse button.

2 Select **Options**, **Search on initial entry**.

3 If you use auto browsing, then the Query by Example is not displayed if you open the browse dialog by typing in a field and then pressing TAB. The Query by Example dialog is only displayed if you click the browse button to open the advanced browse dialog.

Searching Advanced Browse Tables

You can use three methods to search advanced browse tables. You can:

Apply a quick filter. You can filter information in one or more columns in the advanced browse table. When you use a filter, an "and" search is performed. If you specify information in more than one column, only rows that match both criteria are displayed.

Search using Query by Example. When you use Query by Example, the browse table columns are displayed in a dialog. You can create an "and" search or an "or" search.

Browse by SQL Statement. Use this function to search for information based on a SQL statement. If a statement is applied by default, the statement is shown. For example, the customer order ID browse is already filtered by customer ID.

In addition to these search methods, you can also sort the table by any column to make locating an ID easier.

If you frequently use certain search parameters, you can save your search as a profile.

Advanced Browse Wildcards and Operators

You can use wildcards and operators when you search for information in the advanced browse dialog. You can use wildcards with filters and with query by example searches. If you use auto browsing, you can use the % and _ wildcards when you specify text in the ID field in the main window. See "Using Automatic Browsing" on page 3–9 in this guide.

These wildcards and operators are available:

Percent sign (%) – Indicates zero or more of any character in the position it is placed.

Underscore (_) – Indicates exactly one of any character in the position it is placed. Any other characters must be matched exactly.

Greater Than (>) – Indicates values greater than the one you enter.

Less Than (<) – Indicates values less than the one you enter.

Greater Than or Equal to (>=) – Indicates values greater than or equal to the one you enter.

Less Than or Equal to (<=) – Indicates values less than or equal to the one you enter.

Not Equal to (!=) – Indicates values that are not equal to the one you enter.

In the advanced browse table, wildcards specified at the end of a search are typically ignored. For example, if you specify AB_, the advanced browse will return ABC. It will also return ABCD, ABCDE, and so on.

Applying Quick Filters

If you are using the Advanced Browse dialog and you want to narrow the search results those beginning in a specific alpha-numeric character, you can use the Quick Search option.

To use the Quick Search option:

1 Click **Quick Filter**. A new row is added to the top of the table.

2 Use the row to specify your search criteria. You can use wildcards to indicate missing characters and operators to search for ranges.

3 Use the row to specify your search criteria. You can use wildcards to indicate missing characters and operators to search for ranges. See "Advanced Browse Wildcards and Operators" on page 3–11 in this guide.

4 If you are using dynamic filtering, the rows that match your search criteria are displayed as you enter the criteria. If you are not using dynamic filtering, click **Quick Filter** to search the table.

Using Dynamic Filtering

Use the dynamic filtering option in conjunction with quick filters. When you activate the dynamic filtering option, the advanced browse table is updated with rows that match your search criteria as you type your search criteria in. For example, if you are viewing the Customer ID advanced browse table, if you type A then all customer IDs with A are displayed. If you then type in a B, then all customer IDs beginning with AB are displayed.

To activate dynamic filtering, select **Options**, **Dynamic Filtering Enabled** in the advanced browse dialog.

Removing a Filter

If you have applied a quick filter to an advanced browse, a filter icon is displayed in header row. To clear the filter and show all records, click **Reset**.

Using Query by Example

Query by example allows you to type in examples of the data you want to locate in the database. This usually entails a combination of data fields in a single query.

You can use wildcards and operators in your search terms. See "Advanced Browse Wildcards and Operators" on page 3–11 in this guide.

When you use Query by Example, you can conduct an "AND" search or an "OR" search. If you use an "AND" search, then the search results match all of your criteria. If you use an "OR" search, then the search results match at least one of your search criteria.

You can set up your advanced browse dialog to display the Query by Example dialog when you click the browse button on the main form. See "Searching on Initial Entry" on page 3–10 in this guide.

To search using query by example:

1 Open an advanced browse dialog.

2 If the Query by Example dialog is not displayed automatically, click **Search**. All columns displayed in the browse table are also displayed on the form.

3 If the results must match all criteria you specify, click **Entry must have ALL of these attributes (and)**. If the results must match at least one of the criteria you specify, click **Entry may have ANY of these attributes (or)**.

4 Click **Ok**.

Browsing by SQL Statement

You can browse the database by SQL statement.

1 In the Browse window, select **SQL** from the Data menu or right-click the table itself and select **SQL** from the menu.

2 Enter the SQL statement to use for your search in the Search Condition field.

If you reference more than one table in your SQL statement, you must include logic to link the tables. If you do not include joining logic in the statement, the result is a Cartesian product.

Cartesian Product – Without joining logic, all possible combinations of rows from each table appears in the result. The number of rows in the Cartesian product is equal to the number of rows in the first table times the number of rows in the second table, and so on. A Cartesian product is the first step in joining tables. Once the Cartesian product has been formed, the rows that do not satisfy the join conditions are eliminated.

Without joining logic, a join of two tables each containing 10 objects, yields a result set of 100. With joining logic introduced into the statement—two tables joined by a common column—the result set is 10.

3 To begin the search, click the **OK** toolbar button.

Click the **Save as Default** toolbar button to save the SQL statement as the default statement. This statement will appear in the Search Condition field the next time you choose to browse by SQL statement.

After you click the **OK** toolbar button, the results are returned to the Browse window.

Sorting by Visible Columns

You can click any visible column to initiate a sort of the data in the list by that column. You can sort the data by each column in either ascending or descending alphabetical order.

For example, in Part Maintenance you can sort parts alphabetically by Part ID, the part name, or even by the part's on-hand quantity. The information is sorted according to the column you have selected. In the example below, sorting parts in ascending order by on-hand quantities places parts with an on-hand quantity of 0 at the top of the list and parts with increasing on-hand quantities further down the list.

To sort by column:

1 Click the column header of the column to use for the sort.

2 From the File menu, select **Refresh Ascending** or **Refresh Descending**.

Stopping the Searching Process

If you have a large database, it may take a long time to compile your query results. Advanced browsing provides a **Stop** toolbar button for stopping queries.

While your query results are being compiled, a **Stop** button is shown along with a count of the number of matching items that have been found. To stop the process, click the **Stop** toolbar button.

The **Stop** button is available only if you are searching for query results.

Saving Search Profiles

If you frequently use a particular search or filter, you can save the search. You can save more than one search.

To save a search:

1 After completing a search, select **Profiile, Save As**.

2 In the Filter/View field, specify a name for the search.

3 To save this profile as the default profile, select the **Save As Default** check box. When you open a search profile, the default profile is the first one listed in the drop-down list.

4 Click **OK**.

Running a Saved Search

To use a saved search:

1 Select **Profile**, **Open**.

2 Click the **Filter/View** arrow and select the saved search to use.

3 Click the **OK** button. The dialog box closes and the Browse window is populated with your search criteria.

Using Sites in Browse Tables

If you are licensed to use multiple sites, certain browse tables use the site ID to present information.

When you specify a site ID in a window, browse tables are filtered by site ID if the data in the table are maintained by site ID. For example, purchase order IDs are maintained at the site level. if you browse for a purchase order ID in the Purchase Order Entry window, the purchase order IDs in the browse are filtered by the Site you selected.

In certain advanced browse tables, you can choose to view information from your viewable sites or your allowable sites.

To view information from your all of your viewable sites, click the **Viewable sites** button. Data available from all of your viewable sites are displayed in the browse table. If you overrode the system-wide settings for viewable sites in the window, your overrides are used in the browse dialog. Otherwise, your system- wide settings are used.

Note: To view the Site ID column in the browse dialog, you may need to edit the browse table columns. Select Data, Edit Columns... to select the columns to view.

To view information from all of your allowable sites, click the **Allowable sites** button. Data available from all of your allowable sites are displayed in the browse table.

To reset the browse information to show only data from the currently selected site, click the **Reset** button.

Simple browse tables are filtered by the selected site ID. You cannot view information from your viewable or allowable sites in simple browse tables.

Selecting a Search Item from the Advanced Browse Table

After your advanced browse search results have been returned, you can use your search results in these ways:

- **Open a single item from the list.** To open a single item, select the item and then click Select and Close. When you click Select and Close, your search result is discarded.
- **Open a single item from the list and use the search result as a browse set.** This option is available only if you are browsing on a window's primary key. To open an item and also retain your search results in the browse table, click Ok. In the main window, you can use the Next ID in Set and Previous ID in Set toolbar buttons to navigate from one ID in your search result to another ID. If you click the browse button again, your search result is displayed.
- **Use Drag and Drop.** This option is available only if you are adding items to a table. To drag items from the browse to a line item table, select the row to drag. You can select more than one row. Place your cursor in the row header, and then press the mouse button. When the cursor changes from a pointer to a square, you can drag the items to the table.

Editing Information in the Browse Table

If you open the advanced browse dialog for a primary key for a window, you can add, change, or delete data directly in the browse window. The same validations are used in the browse table as in the main window.

In addition to editing information directly in the browse window, you can also import information from Microsoft Excel. You can edit existing information and import new information.

Editing Information Directly in the Advanced Browse Table

Note: The system administrator controls access to this function.

To edit information directly in the advanced browse table:

1 Access the advanced browse dialog for the primary key in the window.

2 Select **File**, **Open for Edits**.

3 Edit the information as necessary.

4 Select **File**, **Save**.

Importing from Excel

Use the Import from Excel option to import data from an Excel spreadsheet into your database. You can use the Import from Excel feature to edit existing records or add new records to your database. You cannot use the Import from Excel to delete records from your database.

You can import information only if all of the following are true:

- You are not searching for data (the Filter icon is not displayed in the top left corner of the table).
- You have authority to edit the table. The system administrator controls access to the editing function.
- The browse table you are viewing is the primary data for the window (for example, if you are working in Part Maintenance, you must be viewing the Part ID browse).

Your Microsoft Excel spreadsheet must be set up in a specific way. The first row in the spreadsheet must contain either the column titles corresponding to the browse table you are viewing or the column names as they appear in the database. The system imports data from the spreadsheet until it encounters a blank row. When the system encounters a blank row, it stops importing data.

You may find it useful to first export information from the browse table to Excel. This will help you set up your Excel spreadsheet properly. See "Exporting to Excel" on page 3–18 in this guide

To import the information:

1 Access the appropriate advanced browse dialog.

2 Click **Import from Excel**. If you exported information to Excel during your current browse session and still have the spreadsheet open, the system imports data from your open spreadsheet. Otherwise, the system prompts you for a file name.

3 After the information is imported, the Open for Edits function is activated. Review the information you imported and make any necessary changes.

4 Click **File, Save**. The system begins validating and saving the data. If any invalid data is encountered, such as a status value that does not exist in the database, an error message is

displayed and processing is stopped. Correct the error, then click Save to continue committing the information to your database.

Customizing the Browse Table Column Layouts

You can set the position, width, title, and visibility of columns.

To edit Browse table column layouts:

1 From the Browse window's Data menu, select the **Edit Columns** option.

The Edit Columns dialog box appears.

The Edit Columns dialog box displays the list of columns available, the column titles, check boxes for including columns in the table, and the position of the columns in the table.

2 Make the appropriate edits to the columns.

To add a column to the table, click the **Include** check box, then enter a position in the Position column. This assigns the column's placement in the table, numbered from left to right.

To remove a column from the table, clear the **Include** check box.

To change the order of the columns, change the numbers in the Position column as appropriate.

A check mark is placed to the left of the Column Name, indicating that you have edited that column.

You can also change a column's title by clicking in the **Title** field and entering a new name.

Note: If you have set up User Defined Fields, you can also include them in the columns appearing in the browse dialog box. You can use User Defined information for search and query functionality.

3 Click the **OK** toolbar button to apply the changes to the Browse table.

To close the dialog box without making any changes, click the **Exit** toolbar button.

Resizing Browse Window Columns

In addition to adding and removing columns and assigning column position in the Browse window, you can also adjust column widths:

1 Place the pointer on the separator between two column headers.

The pointer changes to a double-arrow with a vertical line, indicating movement of the divider between the columns.

2 Click and drag the separator to resize the column.

Exporting to Excel

Use the Export to Excel option to export data from the browse table to your database.

To export data, click the Export to Excel button. The system exports data currently present in the browse table. If you have hidden columns, the system does not export the information.

If you make any changes to your Excel file after you export the information, the information is not saved in your database unless you use the Import from Excel function. See "Importing from Excel" on page 3–16 in this guide.

Printing the Browse Result Set

To print data in the result set:

1. From the File menu, select the **Print** option.
2. Enter the appropriate information then click the **OK** button.

   Although only five columns print, you can change the QRP files (VMBRWRP1.QRP and VFBRWRP1.QRP) to display more columns.

Using Picture/Object

Use the Picture/Object feature to embed a graphic into a record.

You can use Picture/Object with the following records and applications:

Record	Accessible from Application
Part	Part Maintenance
Engineering	Manufacturing Window
Quote Master	Manufacturing Window
Work Order	Manufacturing Window
Operation	Manufacturing Window
Material Requirement	Manufacturing Window

To use this feature:

1 From the Edit menu in the appropriate application, select **Picture/Object**.

For example, in Part Maintenance, you can add a picture or object to a part by selecting **Picture/Object** from the Edit menu.

2 Click the **Paste From** button.

3 Select the graphical file you want to paste and click **OK**.

You can select from a number of different formats.

The system displays the graphic in the Set Picture/Object window.

Because the graphic is copied from the file, changing the file does not change the pasted graphic.

After you embed a graphic with a record, you can view the graphic in other areas of the VISUAL. For example, if you embed a graphic with a Part ID, and you insert the Part ID on a line in Customer Order Entry, you can click the **Picture** toolbar button in Customer Order Entry to view the graphic.

Specifications and Notations

Use Specifications and Notations to attach free-form text to records.

Specifications allow you to enter a block of text to associate with an order, line item, or other item. These are generally meant to convey information about the order itself, to be used in production and communicated to the customer or vendor.

Notations allow you to keep internal notes about customers, vendors, orders, and other objects. They allow a running dialog or commentary where each separate entry is date and time stamped. Notations are purely an internal tool, and do not appear on any outgoing paperwork. In this way, they are different from specifications.

Accessing Notations and Specifications

You can add Specifications to the following records. Order specifications are attached to the whole order, while line specifications are unique to an order line item:

Record	Application
Quote	Estimating Window
Quote Line Item	Estimating Window
Customer Order	Customer Order Entry, Shipping Entry
Customer Order Line Item	Customer Order Entry, Shipping Entry
Packlist	Shipping Entry
Purchase Order	Purchase Order Entry, Purchase Receipt Entry
Shipper	IBT Shipping Entry
Receiver	IBT Receipt Entry
Purchase Order Line Item	Purchase Order Entry, Purchase Receipt Entry
Vendor RFQ	Vendor RFQ Entry
RFQ Line Item	Vendor RFQ Entry
Progress Bill	Progress Billing Entry
Progress Bill Line Item	Progress Billing Entry
RMA	RMA Entry

You can access these specifications through separate Specifications windows. Other objects, such as work order operations, also have specifications. These specifications appear in the editing windows and function exactly like other data fields.

You can associate Notations with the following objects:

Object	Applications Where Notations are Accessible
Customers	Estimating Window, Customer Order Entry, Progress Billing
Quotes	Estimating Window
Customer Orders	Customer Order Entry, Progress Billing
Packlists	Shipping Entry
Work Orders	Manufacturing Window
Vendors	Purchase Order Entry, Vendor RFQ Entry
Purchase Orders	Purchase Order Entry
Request (RFQ)	Vendor RFQ Entry
Parts	Manufacturing Window
RMA	RMA Entry

When you start notations and specifications, a small text window appears. These windows are non-modal, meaning that you can choose to leave the window showing all the time without closing it to continue editing in the main window. As you change orders, customers, packlists, or other objects, the associated notations and specifications automatically appear into the window. This makes the notations window act as a field of the main editing window.

You can access the text windows in the following ways:

Toolbar Buttons – Some applications that access notations or specifications have one or more buttons on the toolbar at the top of the window to access notations. For example, Customer Order Entry has Customer Notations, Order Notations, and Order Specifications buttons. Access line specifications through a Line Specifications button located on the table toolbar.

Notations Menu – Most applications that access notations have a Notes menu. This menu contains options to view the different types of notations and specifications available. This menu also contains options for controlling the appearance of notations and specifications.

One exception is the Manufacturing Window. In the Manufacturing Window, you can access **Work Order Notations** and **Part Notations** from the File menu.

Showing Multiple Notations & Specifications Windows

You can have multiple notations and specifications windows open at the same time. For example, in Purchase Order Entry, you can show Vendor Notations, Order Notations, and Order Specifications simultaneously. You have two options to manage how these windows appear:

Tiling – All open notations and specifications windows are stacked vertically on the right side of the screen, so that each window is fully uncovered.

Cascading – Starting at the top-left of the screen, all open notation and specification windows are stacked one on top of the other, each one shifted down and to the right. You can see the title bar of each window. To use a window, click its title bar to move it to the front. This option is useful when you do not have a large amount of screen space.

Sizing and Positioning Notations and Specifications Windows

You can resize Notations windows to any size. The text portion of the window grows or shrinks in both directions. Place your cursor over the edge of the window until the system displays the resizing directional arrows. Hold down the mouse button and drag the cursor to change the size of the window.

You can choose to save the size and position of notations and specifications windows. The new positions are saved each time you move them.

To control this option, select **Notation Preferences** from the Notes menu. To save the window positions and sizes select the check boxes. If the boxes are not selected, the sizes/positions are not saved.

Working With Specifications

Specifications appear in text windows. You can edit specifications and use the **Copy** and **Paste** buttons when necessary. Specifications are saved when you save the associated record.

Working With Notations

Although Notations windows look similar to specification windows, they are quite different. All notation entries are marked with a date and time stamp any time a change is made. The total number of entries is shown in the upper left corner.

Viewing Notations

When you open a Notation window, you are in view mode. Notations are listed from the most recent entry to the oldest, each preceded by its time stamp. You can scroll up and down using the scroll bar to view all of the notations.

Adding Notation Entries

To add a new notation:

1 Click the **New** button.

The notation window clears, and the current date and time appear. This is the time stamp for the new notation.

2 Type your text into the Notes window.

Use Windows cut, copy, and paste whenever necessary.

3 Click the **Save** button to save the new entry.

Modifying Notation Entries

To modify a notation, you must first navigate to the entry you want to change. To move to the latest entry, press the double-up-arrow button. To move to the oldest entry (entry number 1), press the double-down-arrow button. To move back an entry, press the single down-arrow button. To advance forward an entry, press the single up-arrow button.

When you reach the entry you want to modify, click the **Edit** button. The window becomes editable, and you can make any necessary changes. Click the **Save** button to save the changes.

Deleting Notation Entries

To delete an entry, navigate to it, then click the **Delete** button. The entry is marked for deletion. When you click save, the entry is permanently deleted.

To unmark a deletion before saving, select the entry and click the **Delete** button again.

Using Spell Check in Notations and Specifications

Use the spell check feature to verify that the text you enter in notations and/or specifications is spelled correctly.

Note: If you are using a work station with an icon-only install, make sure your local VISUAL directory includes the spell check .dll, SSCE5332.DLL.

To use this feature:

1 After you enter text in a specifications or notations field, click the **Spell Check** button.

Note: If the spell checker does not find any misspelled words, the Check Spelling dialog box will not appear.

2 If the spell check finds a misspelled word, it displays it in the Not in Dictionary field. The spell check also lists some suggested replacements in the Suggestions box. Select the correct word from the Suggestions box, or enter the correct spelling of the word in the Not In Dictionary field.

3 Click **Change**. The spell check replaces the incorrectly spelled word. If you would like to replace all instances of the misspelled word, click **Change All**.

For more information on the spell check feature, please click the **Help** button on the Check Spelling dialog box to view the spell checker's help file.

Loading Dictionaries into the Spell Check

Before you use the spell check feature for the first time, you might need to load the dictionary you would like the spell checker to use.

To load a dictionary:

1 From the Check Spelling dialog box, click the **Dictionaries...** button.

The Spelling Dictionaries dialog box appears.

2 Click the **Add File** button.

The Add Dictionary File dialog box appears.

Several dictionaries reside in your VISUAL executables folder. Navigate to the appropriate folder, select the dictionary you would like to use, and click **Open**. The spell check adds the dictionary.

3 Repeat the process to add more dictionaries.

Chapter 4: Customizing VISUAL

This chapter includes the following information:

Topic	Page
Choosing a Language	4–2
Choosing a Main Menu Interface	4–3
Setting Up Custom Menus and Toolbars	4–7
Setting Up User-defined Field Labels	4–20
Maintaining Preferences	4–21
Selecting Viewable Sites	4–24
Macros	4–26

Choosing a Language

If language packs have been created for your installation of VISUAL, you can select the language that you want to use. If you do not specify a language, the default English translation is used.

1 Select **Admin**, **Language Assignment**.

2 In the Language ID column, select the language that you want to use.

3 Click **Save**.

4 Close and reopen any open windows, including the main VISUAL window.

Removing a Language Assignment

To restore the interface to the default English translation:

1 Select **Admin**, **Language Assignment**.

2 In the Language ID column, erase the language ID.

3 Click **Save**.

4 Close and reopen any open windows, including the main VISUAL window.

Choosing a Main Menu Interface

You can choose between two menu interfaces: a graphical menu and a standard menu. With the graphical menu, you access executables by clicking a button. With the standard menu, you access executables through a series of menus.

The standard menu is shown by default. To display the graphical menu, select **File**, **Graphical Menu**. The system places a check mark next to Graphical Menu and switches the display.

Note: If you use the graphical menu, you cannot use the URL Links function.

Modifying the Graphical Menu

You can add or remove any group or program to best meet the needs of individual users or groups of users.

Changing the Background Color

You can change the background color to another color of your choosing.

To change the background color:

1. Select **Maintain, Set Background Color**.
2. In the Windows color picker, select the color to use.
3. Click **Ok**.

Adding Headings

To add new headings or change the names of your headings:

1. From the Maintain menu, select **Maintain Menu**.
2. In the Menu Headings section, click the **Insert** button. Specify the following information:

   Menu Name – Enter a name for the menu. This text identifies the menu for the system; it is not displayed in the graphical menu.

   Seq No – Enter the position where you want to display the new heading. The headings are ordered from left to right in rows from top to bottom, zero being the top left heading.

   Menu Text – Enter the name to display on the graphical menu.

   Bkgd Color – Choose a color for the buttons used under the heading. When you click in this field, the system displays the Color Picker dialog box. You can choose a pre-defined color or pick your own color.

Text Color – Choose a color for the text used on the buttons. When you click in this field, the system displays the Color Picker dialog box. You can choose a pre-defined color or pick your own color. Make sure you choose a color that contrasts well with the color you choose for the background color. Otherwise, the text on the button may be difficult to see.

3 Click the **Save** button.

4 If you have finished adding headings, click the **Close** button.

Adding Programs to Headings

After you add headings, you can add programs. You are not limited to VISUAL programs; you can add any valid executable program.

To add programs to your headings:

1 With the Maintain menu window open, click the row header for the heading to which you are adding programs.

2 In the Menu Entries section, click the **Insert** button.

If you are adding programs to a sub-menu, select the sub-menu name in the Menu Entries section and add your programs in the Sub Menu section.

3 Click the Program Name browse button and select the program to use.

The Menu Text automatically appears when you move to another field. To change the name that appears on the Graphical menu, change the Menu text.

4 Click in the Seq No column and enter the position you want the new program to appear.

5 Click the Execute Command browse button and select the actual program to start when the user clicks the menu.

Using the correct command line syntax, you can also have programs open records of your choice. For example, you can start Internet Explorer and open a web site or open a particular record using Notepad.

6 To display a ToolTip when the cursor rests on the program name, click in the ToolTip column and add the text to display.

7 To display a button next to the program name, click in the ToolTip column and enter the name and location of the button to display.

8 Click the **Save** button.

Removing Programs from Headings

To remove a program from a heading:

1 Open the Maintain Menu window and select the Heading and Name to remove.

2 In the section where you want to remove the program, click the **Delete** button.

3 Click the **Save** button.

Changing Program Settings

To change program setting in your Graphical Menu, click the Heading, Menu, or Sub-menu to change, make the appropriate changes and click the **Save** button.

Adding Sub-Menus

If you have programs that belong in a group under a specific topic heading, you can set them up in a sub-menu.

1 Using the Maintain Menu window, in the Menu Entries table, click the Heading that contains the Menu Entry to which you want to add a sub-menu.

2 In the heading column of the appropriate Menu Entry, select the **Heading** check box.

Because you have selected the **Heading** check box, only a heading name appears in the group with no other functionality other than opening the sub-menu you assign.

You can now add programs to your sub-menu. See "Adding Programs to Headings" on page 4–4 of this guide.

3 Click the **Save** button.

To access sub-menus on the Graphical Menu, right-click the heading and click the program to use.

Changing Sub-menus

To change a program setting in a Sub-menu:

1 Open the Maintain Menu window and select the heading that contains the Sub-menu to change.

2 In the Menu Entries section, select the Sub-menu name.

3 In the Sub-menu section, make the changes to the Sub-menu programs.

4 Click the **Save** button.

5 After making your changes, click the **Close** button.

Resetting the Graphical Menu

If you have modified the Graphical Menu so much that it would be too time consuming to manually return it to its original settings, you can reset your Graphical menu to its original settings by selecting **Template Reset** from the file menu.

Viewing the Standard Menu Interface as a Ribbon

When you use the Standard menu interface, the system displays a screen with version and copyright information. You can hide this screen and view the menu only. Select File, Ribbon. The system hides the version screen.

Setting Up Custom Menus and Toolbars

You can create your own personal menu and user toolbar.

You can use the personal menu to group certain executables together. You can open these executables with a single click. For example, if you are in charge of taking and shipping customer orders, you can design a personal menu that contains Customer Maintenance, Customer Order Entry, Shipping Entry, and Return Material Authorization. You can add non-VISUAL executables to the menu as well. You can position the personal menu anywhere on your desktop.

You can use User toolbars to start any valid application or Macro; you are not limited to VISUAL applications. For example, if you are setting up a toolbar to use in Customer Order Entry, you may want to include Windows Notepad or Microsoft Word to record information about the customer order.

Setting Up the Personal Menu

To set up the personal menu for your system, select **File**, **Personal Menu** in the main window. You can customize the appearance and the content of the menu.

Customizing the Appearance of the Personal Menu

Use the right-click menu to customize the appearance of the personal menu. An option is considered to be selected when a check mark is displayed next to the right-click menu item.

To customize the appearance of the personal menu:

1. Select **File**, **Personal Menu.**
2. To always display the personal menu on top of any other window, right-click and select **Always on top** until a check mark is displayed next to the option.
3. To change the background color of the personal menu, right-click and select **Background**. Select the color to use from the color menu.
4. To change the text color of the personal menu, right-click and select **Text Color**. Select the color to use from the color menu.
5. Select a navigation view. To use the tree view, right-click and select **Tree View** until a check mark is displayed next to the option. In the tree view, the menu groups are displayed in a Windows Explorer-style pane. Click a name to view the options underneath it. To display an accordion view, right-click and select **Tree View** until the check mark is cleared. In the accordion view, each group is shown is a bar. Click a bar to display the options underneath it.
6. Select additional appearance options. If you use the accordion view, these right-click menu options are available.

   Show Icons – To display icons next to the menu items, select this option. To hide the icons, clear this option.

Small icons – If you selected the Show Icons option, select this option to use small icons. Clear this option to use large icons.

If you use the tree view, these right-click menu options are available:

+/- Buttons – To display icons to the left of the group names in the personal menu, select **+/- Buttons**.

Lines – To display lines between the buttons and names, select **Lines**.

Single expand – To show only one expanded menu and automatically close the previous menu, select this option. Clear this option to expand multiple menus at the same time.

Track select – To highlight and underline group and command names as you move the cursor, select this option.

Show Icons – To display icons next to the menu items, select this option. To hide the icons, clear this option. You can display only small icons in the tree view.

7 To close the personal menu, right-click and select **Visible** to clear the check mark.

Customizing the Content of the Personal Menu

You can add commands and groups of commands to your personal menu customizing it to meet your exact needs. The personal menu supports almost all executable commands and provides you with all of the VISUAL programs you may want to use.

1 With the personal menu open, right-click anywhere in the personal menu.

2 From the right-click menu, select **Customize**.

3 Begin to customize the personal menu.

Adding Commands to Existing Groups

To add commands to a group, you must select the group to which you want to add commands.

The right half of the dialog box contains a drop-down list of common groups of commands available to you for use in your personal menu. When you select a group, a list of available applications appears. For example, if you select the Sales group, a list of common Sales applications appears.

To add commands to groups:

1 From the drop-down list, select the group that contains the item to add to the displaying menu bar.

To use a custom button, click the arrow on the left and select the button to use.

2 In the right pane, select the command to use and click the **Add Selection** button.

3 After adding new commands, click the **OK** button.

The Customize dialog box closes and the new command is added to the bottom of the group you selected in your personal menu.

Adding Non-VISUAL Commands to Groups

To add non-VISUAL commands:

1 Click the **Browse and Add** button.

A search dialog box appears.

2 Locate the program to add and double-click it.

The Edit Command Item dialog box appears.

3 Complete the following fields:

Icon – The button for the new menu item. Select an appropriate button from the button list box.

Caption – The label for the button. This is optional.

Command – The command line to execute the program you are adding. This appears by default after you select a program using the search dialog box.

Arguments – Values as part of a command you want to include. This is optional.

4 Click the **OK** button.

The Edit Command Item dialog box closes.

5 After adding new commands, click the **OK** button.

The Customize dialog box closes and the new command is added to the bottom of the group you selected in your personal menu.

Adding New Groups

You can add new groups to your personal menu. You can use this feature to combine in one group the applications you use most.

1 With the customize dialog box open, click the **Add New Group** button.

2 In the Group Caption field, enter a caption for the group.

3 To select a different button to appear next to the group name, click the **Button** arrow and select the icon to use.

4 Click the **OK** button.

5 On the Customize window, click the **Apply** button.

6 Add commands to your new group by selecting the commands in the right pane and clicking the **Add Selection** button.

7 After setting up your new group, click the **OK** button.

The new group bar is added to your personal menu.

Editing Group Captions

To edit the name of groups:

1. In the personal menu, select the name of the group to change.
2. Right-click anywhere in the personal menu and select **Customize** from the right-click menu.

   The Customize dialog box appears.
3. Click the **Edit Current Group** button.

   The Edit Group dialog box appears.
4. Modify the Group Caption name and button as necessary.
5. To close the Edit Group dialog box, click the **OK** button.
6. To close the Customize dialog box, click the **OK** button.

Editing Commands

To edit the commands within your groups:

1. In the personal menu, select the group that contains the command to edit.
2. Right-click the command to edit and select **Customize** from the right-click menu.

   The Customize dialog box appears.
3. Click the **Edit Current Item** button.

   The Edit Command Item dialog box appears populated with the current arguments.
4. Modify the command's arguments as necessary.
5. After modifying the command arguments, click the **OK** button.

   The Edit Command Item dialog box closes.
6. Click the **OK** button.

   The Customize dialog box closes and your changes appear in the personal menu.

Removing Commands from Groups

To remove an item from a group:

1. In the personal menu, click the group containing the command to remove.
2. Right-click the command to remove and select **Customize** from the right-click menu.
3. Click the **Remove Current Item** button.

   The command is removed from the personal menu.
4. Click the **OK** button.

The customize dialog box closes.

Removing Groups

To remove groups from your personal menu:

1. In the personal menu, right-click the group to remove and select **Customize** from the right-click menu.
2. Click the **Remove Group** button.

   The group is removed from the personal menu.
3. Click the **OK** button.

   The customize dialog box closes.

Using the Personal Menu

To start the personal menu, from the View menu within an application, select **Personal Menu**.

A check mark is placed next to the menu item and the personal menu is displayed.

Click a group name to view the items in the group.

Click an item to open it.

Customizing the Personal Menu within an Application

When you view the personal menu within an application, such as Customer Order Entry, you can make minor modifications to the menu's appearance. Any modifications you make apply to the personal menu throughout the system. For example, if you make changes in the personal menu in Customer Order Entry, the same changes are made in Purchase Order Entry.

To customize the appearance, right-click the personal menu. The options available on the right-click menu depend upon whether you use the tree view or the accordion view.

If you use the accordion view, these right-click menu options are available.

Show Icons – To display icons next to the menu items, select this option. To hide the icons, clear this option.

Small icons – If you selected the Show Icons option, select this option to use small icons. Clear this option to use large icons.

Background – To change the background color of the personal menu, select this option, and then select the color to use from the color menu.

Text Color – To change the text color of the personal menu, select this option, and then select the color to use from the color menu.

If you use the tree view, these right-click menu options are available:

+/- Buttons – To display icons to the left of the group names in the personal menu, select **+/- Buttons**.

Lines – To display lines between the buttons and names, select **Lines**.

Single expand – To show only one expanded menu and automatically close the previous menu, select this option. Clear this option to expand multiple menus at the same time.

Track select – To highlight and underline group and command names as you move the cursor, select this option.

Show Icons – To display icons next to the menu items, select this option. To hide the icons, clear this option. You can display only small icons in the tree view.

Background – To change the background color of the personal menu, select this option, and then select the color to use from the color menu.

Text Color – To change the text color of the personal menu, select this option, and then select the color to use from the color menu.

Adding User Toolbars

You can use User toolbars for these tasks:

- Opening any valid application, including VISUAL applications, third-party applications, and custom applications
- Running a macro
- Opening a URL
- Running a query that has been defined in the Query Tool

You can create a toolbar for each VISUAL application. Each toolbar can contain different buttons and functions.

Activating the User Toolbar Function

Before you can display user toolbars in VISUAL applications, you must set up your preferences. To set up your preferences to display user toolbars:

1 Select **Admin**, **Preferences**.

2 Click Insert.

3 Specify this information:

Section – Specify **Visual Mfg**.

Entry – Specify **UserToolbar**.

Value – Specify **Y**.

4 Click **Save**.

Using Toolbar Buttons to Pass Information to Custom Applications

Note: Any information you enter into an external application launched from your User Toolbar is not in any way attached to or saved with the record you are viewing.

You can pass primary key information from these windows to a third-party external program:

- Customer Maintenance
- Customer Order Entry
- Manufacturing Window
- Order Management Window
- Part Maintenance
- Purchase Order Entry
- Purchase Management Window
- Requisition Entry
- Shop Resource Maintenance
- Vendor Maintenance

For example, if you are working in Customer Maintenance, you can set up a button on the user toolbar that opens your custom program and sends it the Customer ID from the current customer record. The information is sent by attaching comma-delimited keys to the command line that launches your application. In this example, this is attached to the command line:

VM800,SYSADM,@@@@@,FLEET,,,,,,,,

VM800 in the database name, SYSADM is the user name, the @@@@@ is the user's encrypted password, and FLEET is the customer ID.

The entire command line is enclosed in single quotes.

You can set up your custom application to parse the information in the command line and extract additional information from the database.

Setting Up User Toolbars

You can customize the buttons appearing in the toolbar to open any application.

The toolbar is not displayed until you add at least one button to the command list.

You can drag personal toolbars so they float over the window or dock them to any side of a window.

To set up a user toolbar:

1 Select **Admin**, **Toolbar Maintenance**.

2 Click the **Insert** button.

3 Specify this information about the appearance of the toolbar button:

Program Name – Double-click the browse button and select the program where you want to use the toolbar. To use the same toolbar buttons in multiple programs, you must set up a separate toolbar for each program.

Toolbar ID – Specify a unique identifier for this toolbar.

Position – Specify the position number from 1–20 where you want to place the button. You can add up to 20 buttons on each toolbar.

Bitmap – Double-click the browse button and select the bitmap to display for this button. Toolbar buttons have three modes: the active mode, the inactive mode, and the hover mode. To display properly, your bitmap must have all three modes. See "Setting Up Toolbar Bitmaps" on page 4–16 of this guide.

ToolTip – Specify a short tip that is displayed when you hover your cursor over the button.

4 Specify the action to take when the toolbar button is clicked:

- To open a URL in the default browser, specify this information:

  Toolbar Type – Select **URL**.

  Execute Command – Specify the URL to open.

- To run a macro stored on the workstation, specify this information:

  Toolbar Type – Select **VMMacro**.

  Execute Command – Double-click the browse button and select the macro to run. Ensure that the macro that you select can be run in the program specified in the Program Name field. Otherwise, the macro will not be run See "Setting Up VISUAL to Store Macros on Workstations" on page 4–30 in this guide.

- To run a macro stored in the database, specify this information:

  Toolbar Type – Select **VMMacro**.

  Execute Macro in DB – Double-click the browse button and select the macro to associate with the toolbar. Only macros that can be run in the program specified in the Program Name field are displayed. Select a macro that you run manually. If you select a macro that is automatically run based on an event, such as OnAfterSave, this message is displayed when you save the toolbar: Standard macros are not allowed. This column is displayed only if the Store Macros in Database check box is selected in Application Global Maintenance. See "Setting Up VISUAL to Store Macros in the Database" on page 4–32 in this guide.

- To run a VISUAL executable, specify this information:

  Toolbar Type – Select **VMExecutable**.

  Execute Command – Double-click the browse button and select the VISUAL executable to run.

- To run a query created in the Query Tool, specify this information:

  Toolbar Type – Specify **VMQuery**.

  Execute Command – Double-click the browse button and select the name of the query to run.

- To open a third-party executable, specify this information:

  Toolbar Type – Specify **Other**.

  Execute Command – Double-click the browse button and select the executable to run.

Use Key in Cmd Line – To pass information to an external, custom program, select the **Use Key in Cmd Line** check box. You can use the command line information to populate your external program with information from the current window. See "Using Toolbar Buttons to Pass Information to Custom Applications" on page 4–13 in this guide.

This table shows the applications that can pass information to an external program and the information that is passed.

Executable	Information passed in command line
Customer Order Entry	• Customer Order ID • Line Number of currently selected line
Order Management Window	• Customer Order ID • Line Number of currently selected line
Part Maintenance	• Part ID
Customer Maintenance	• Customer ID
Purchase Order Entry	• Purchase Order ID • Line Number of the currently selected line
Purchase Management Window	• Purchase Order ID • Line Number of the currently selected line
Manufacturing Window - Header Card	• Type • Base ID • Lot ID • Split ID • 0
Manufacturing Window - Leg Card	• Type • Base ID • Lot ID • Split ID • Sub ID • Seq No • Piece No • Part ID/Space • ‘L’ (indicates information is from the Leg Card)
Manufacturing Window - Operation Card	• Type • Base ID • Lot ID • Split ID • Sub ID • Seq No

Executable	Information passed in command line
Manufacturing Window - Material Card	• Type • Base ID • Lot ID • Split ID • Sub ID • Seq No • Piece No • Part ID • 'M' (indicates information is from the Material Card).
Vendor Maintenance	• Vendor ID
Shop Resource Maintenance	• Shop Resource ID

In addition to the information displayed in the table, the user ID, password, and database name is passed to the external executable.

5 The Add Entry to Toolbar check box is available for the SYSADM user only. To display this toolbar button on the toolbars for all VISUAL users, select the **Add Entry to Toolbar** check box.

6 Click the **Save** button.

7 After setting up your toolbars, click the **Close** button.

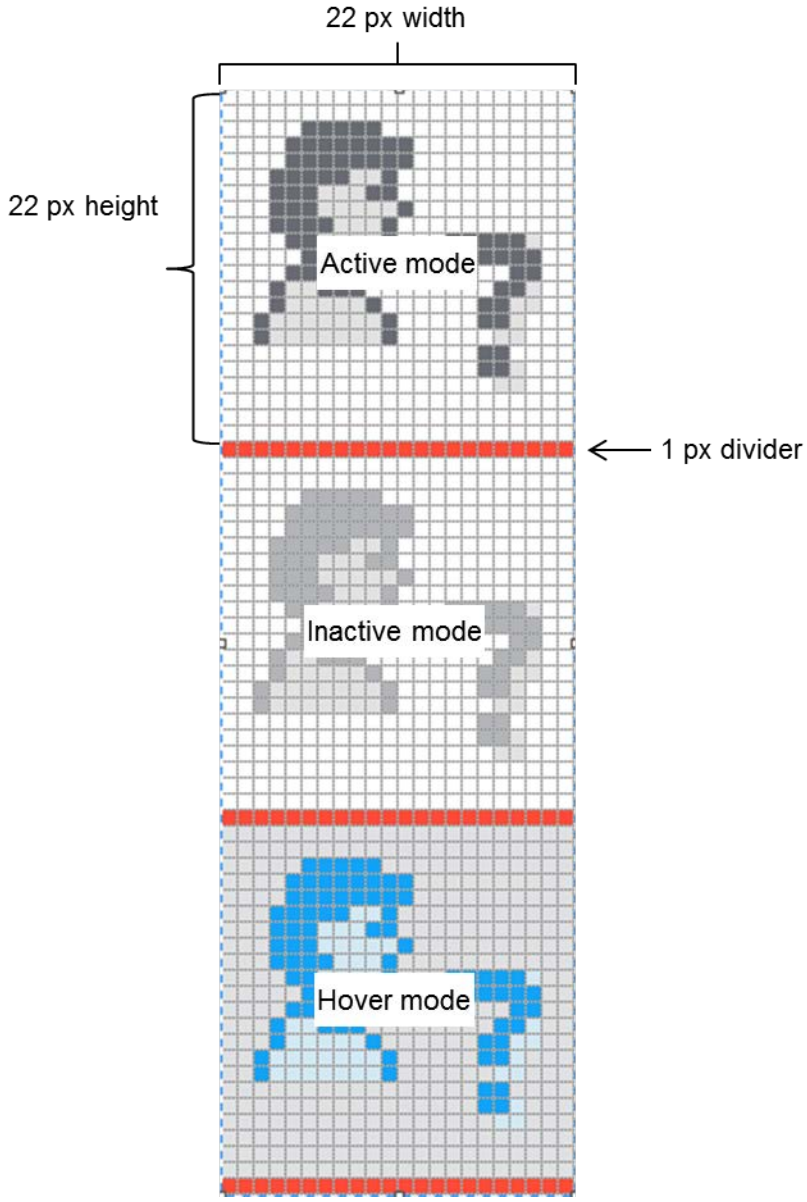
8 Restart VISUAL.

Setting Up Toolbar Bitmaps

Toolbar buttons have three modes: the active mode, the inactive mode, and the hover mode. To display properly, your bitmap must meet these conditions:

- Overall, the image must have a width of 22 pixels and a height of 69 pixels.
- The image must be divided into three 22-by-22 pixel images. Each image must be followed by a 1-pixel line to separate the image. This 1-pixel line is not displayed in the interface. The 1-pixel line can be any color of your choosing.
- The first 22-by-22 pixel image must be used for the active mode.
- The second 22-by-22 pixel image must be used for the inactive mode.
- The third 22-by-22 pixel image must be used for the hover mode.

This example shows the three modes separated by the divider line. Note that the example is magnified to show detail. It is not shown at its actual size.



You can use an existing VISUAL toolbar bitmap as a guide, such as TBUSRINF.BMP. These images are stored in the same directory as your VISUAL executables. Make sure you make a copy of the bitmap. Do not overwrite the bitmap.

VISUAL tool bar buttons use these colors as the background colors:

Active Mode – Hex code: #EFEFEF; RGB: 239, 239, 239

Inactive Mode – Hex code: #EFEFEF; RGB: 239, 239, 239

Hover Mode – Hex code: #DFDFDF; RBG: 223, 223, 223

URL Links Toolbar

You can replace the VISUAL splash screen with a URL. You can display an external web site, a custom HTML page you create, a SharePoint site, a browse-based application, and so on. You can define up to three URLs to use, and you can switch between the websites using toolbar buttons that you specify.

Set up URL links in Preferences Maintenance.

Note: To be displayed properly in VISUAL, web sites must be compatible with Internet Explorer 7 or earlier.

Adding URL Links

You do not need to specify information for all three links. To add URL links:

1 Select **Admin**, **Preferences Maintenance**.

2 Select **Maintain**, **Links Preferences**.

3 For each link, specify this information:

URL Name – Specify the URL for the link. To enter information into the field, click Edit URL, and then specify the link without the http:// prefix. After you specify the link, click Show URL. The http:// prefix is added. To test the link, click it.

Bitmap – Select the icon to display on the toolbar for this link. The toolbar buttons for the URL links must follow the same rules as the toolbar buttons for personal toolbars. See "Setting Up Toolbar Bitmaps" on page 4–16 of this guide.

Tool Tip – Specify the text to display when you place your cursor over the toolbar button.

4 Click **Save**.

Previewing Toolbar Buttons

To ensure that your toolbar buttons are displayed correctly, you can preview them in the Links Preferences dialog box. If you select a new toolbar button image, you can also preview the new image before exiting the Links Preferences dialog box.

To preview your existing toolbar buttons, use the images in the Link sections. For example, to preview the toolbar button currently selected for Link 1, use the image displayed in the Link1 section. Place your pointer over the image to view the “hover” toolbar state. Click the toolbar image to view the “selected” toolbar state. Note that clicking the toolbar image does not open the selected link.

If you select a new toolbar button, you can preview its behavior in the Links Preview section. To use the Links Preview section:

In the Link1, Link2, or Link3 section, select a new toolbar button image. Do NOT click Save.

After you select the image, a preview of the image is displayed in the Links Preview section. Place your pointer over the image to view the “hover” toolbar state. Click the toolbar image to view the “selected” toolbar state. Note that clicking the toolbar image does not open the selected link.

If the new image functions as you expect, then click Save. The toolbar image in the Link section is updated with your new selection. If the new image does not function as you expect, then click Close to retain the previous selection.

Activating the Links Toolbar

To activate the links and the Links toolbar:

1. In the Links Preferences dialog box, select the **Links Enabled** check box.
2. Exit VISUAL, and then relaunch VISUAL.
3. On the main menu, select **File**, **Links**. The Links toolbar is displayed. The URL specified for the first button displayed in the toolbar is shown in place of the VISUAL splash screen.

Deactivating the Links Toolbar

You can deactivate the links toolbar for the current session, or you can deactivate the Links toolbar for future sessions.

To deactivate the Links toolbar for the current session, select File, Links from the main menu. The Links toolbar is no longer displayed, and the VISUAL splash screen is shown. When you next start VISUAL, the Links toolbar is displayed again.

To deactivate the Links toolbar for future sessions, deactivate the Links toolbar menu selection. To deactivate the Links toolbar menu selection:

1. Select **Admin**, **Preferences Maintenance**.
2. Select **Maintain**, **Links Preferences**.
3. Clear the **Links Enabled** check box.
4. Click **Save**.
5. Close VISUAL, and then relaunch VISUAL. The Links toolbar is no longer displayed, and the Links item in the File menu is no longer available.

Setting Up User-defined Field Labels

Use User Defined Field Labels to define Label Set IDs for use in all applications that support user-defined labels.

To define user defined field labels:

1 From a window that supports user-defined labels, select **Maintain**, **User-defined Field Labels**.

2 In the Label Set ID field, specify a unique name for this User Defined Field Label set. To set up the default label set, select **Default**.

3 Specify the appropriate labels in the fields next to the User Defined Fields titles.

4 Click **Save**.

Note: After the Label Set ID is saved, you can access the label from any of the applications that support user defined field labels.

Setting Up Site-specific Default User-defined Field Labels

In Part Maintenance and Shop Resource Maintenance, you can set up default user-defined field labels at the site level. You can set up site-specific labels for the default label set only. All other user-defined field label sets are set up at the tenant level and can be used for any site.

To set up default user-defined labels by site:

1 Select **Maintain**, **User-defined Field Labels**.

2 Click the **Site ID** arrow and select the site for which you are setting up default user defined fields. To set up default user-defined fields at the tenant level, select ****Tenant****.

3 In the Label Set ID field, select ****Default****.

4 Specify the appropriate labels in the fields next to the User Defined Fields titles.

5 Click **Save**.

To use site-specific default user-defined labels:

1 Select the appropriate site in the Site ID field in Part Maintenance or Shop Resource Maintenance.

2 In Part Maintenance, click the **User Def** tab. In Shop Resource Maintenance, click the **User Defined** tab.

3 In the User Defined Layout ID field, select ****Default****.

The labels you specified as default for the site are inserted.

If you did not set up a site-specific default user-defined label set, then the default labels for the tenant are used.

Maintaining Preferences

You have many options to customize applications to streamline your data entry process. For example, you can choose a default status for a new Purchase Order or Customer Order, which can save you the step of setting the status yourself. You can also choose how applications behave; for example, you can choose to let the system automatically copy part specifications when you create a Customer Order or you can choose to let the system prompt you to copy part specifications.

You can maintain many preferences in the individual applications. You can also maintain all of your preferences in Preference Maintenance.

If you used a 6.5.x or earlier version of VISUAL, these preferences were stored in the VISUAL.ini file and individual application .ini files.

Certain settings that VISUAL needs to launch, such as log in information, remain in the VISUAL.ini file. You should not edit the settings that remain in the VISUAL.ini file.

Accessing Preference Maintenance

From the Admin menu, select **Preference Maintenance**.

You can use the Preference Maintenance window to:

- Load any existing preference values from the VISUAL.ini file
- Set your own preferences
- Print a list of your preferences

The system administrator can perform additional procedures in Preference Maintenance. For more information, refer to "Setting Up Application Preferences" on page 5–2 of the System Administrator guide.

Loading Values from the VISUAL.ini file

If you used a version of VISUAL prior to 7.0.0, you may find it useful to load the values already set in the VISUAL.ini file into the Preference Maintenance table. If version 7.0.0 or later is the first version of VISUAL you have used, you do not have to perform this procedure.

To load values:

1 From the Maintain menu, select **Load Preferences**.

2 In the Load Preferences dialog box, click **Begin**.

The system loads the current settings from the VISUAL.ini file into the Preference Maintenance table.

If you run the Load Preferences utility multiple times, the system loads only the values from the VISUAL.ini file that have been added to the file since the last time you ran the Load Preferences utility.

Adding Preferences

Use the following procedure to set up preferences:

1 Select **Admin**, **Preference Maintenance**.

2 To add a preference entry to section that you already use in Preferences Maintenance, place your cursor in the section and then click the **Insert** button. To add an entry to a section that you do not already use, place your cursor anywhere and then click the **Insert** button. In the new row, erase the name of the section.

3 Double-click the **Entry** browse button to select an entry. The system does one of the following:

- If you specified a Section name, the system displays a list of valid entries for the section.
- If you did not specify a section name, the system lists all available sections and entries.

In both cases, the entry browse lists acceptable values for each entry and a description of the entry and its values. Make note of the value so you can enter it in the Preference Maintenance table. After you select an entry, click **Ok**.

4 Type in the value you would like to use in the Value column. Be careful to enter an acceptable value. The system does not check to see if your entry is valid. If you do not enter an acceptable value, the system may not behave in the manner you expect.

5 To activate this preference, select the **Active** check box. If this preference is not active, then clear the **Active** check box. If you clear the Active check box, the system's default behavior is used.

6 When you are finished entering values, click the **Save** button.

7 Log out of VISUAL, then log back in for your new preferences to take effect.

Default Preferences

The system administrator can set up default preferences that are applied to all VISUAL users.

When the system administrator sets up default preferences, the system administrator can specify that a preference is global. A global preference is a required preference. You cannot override a global preference setting. Required global preferences are displayed in red. The Global check box is also selected.

If the system administrator sets up a default preference is not a global preference, then you can specify a different value for the preference setting. If you specify a different value than the default value, the value is displayed in blue.

Editing Existing Preferences

To edit a preference, click in the Value column and specify a new value. When you are finished entering values, click **Ok**. You must log out and log back in for your changes to take effect.

If a preference value is displayed in red, then you cannot edit the preference. A value displayed is a required global value.

Deleting Preferences

To delete a preference, select the line that contains the preference to delete, then click the Delete Row button. When you are finished deleting preferences, click **Ok**. You must log out and log back in for your changes to take effect.

Printing a Preference Report

To print a list of your preference settings:

1. From the File menu, select **Print Preferences**.

   The system inserts your user ID in the Starting User ID and Ending User ID. You cannot edit these fields.

2. Click the drop-down menu to select the output method for the report.
3. Click **Ok**. The system prints a list of your preferences.

Selecting Viewable Sites

These procedures apply to licensed multi-site users only.

After the system administrator determines which sites you are allowed to use, you can choose which sites to use in the system. The sites you choose to use are referred to as viewable sites. When you click a Site ID arrow, only the sites you have specified as viewable are presented.

You can override your system-wide setting in individual windows.

Setting System-wide Viewable Sites

Use the Set Viewable Sites dialog box to choose the sites to use in the system. These sites are presented to you when you click a Site ID arrow in a window that uses site information.

You can also choose a default site. If you choose a default site, the site is inserted in the Site ID field automatically when you open a window. If you do not select a default site, the site listed first among your viewable sites in inserted in the Site ID field.

To set viewable sites:

1. Select **Sites**, **Set Viewable Sites**.
2. To specify viewable sites, select the **Viewable Sites** check box. These are the sites that will be available when you click the **Site ID** arrow. You should specify at least one viewable site.
3. To specify a default site, select the **Default Site** check box. You can select only one default site. The site you specify as the default site is inserted into the Site ID field automatically when you access a window that uses site information.
4. Click the **Save** button.

Overriding System-wide Viewable Sites

You can override the system-wide viewable sites settings in individual windows. When you override viewable site settings in a particular window, your overrides remain in place until you exit the window. When you access the window again, the settings are restored to the system-wide settings.

To override your system-wide settings:

1. Open the window where you want to override the system-wide settings. For example, open Purchase Order Entry.
2. Select **View**, **User Viewable Sites**.
3. To specify viewable sites, select the **Viewable** check box. To hide a site from view, clear the **Viewable** check box.

   You can choose to view or hide any of your allowable sites, except for the site currently selected in the window. The Lock icon designates the currently selected site.

   Note: You cannot designate your default site in this dialog. Use the Sites, Set Viewable Sites

dialog to designate your default site.

You can sort the Set User Viewable Sites dialog box by Site ID or by Entity ID.

4 Click **Ok**.

When you click the Site ID arrow, the sites you specified as viewable are listed.

Your override settings are retained until you close the window. When you reopen the window, your override settings are reset and the system-wide settings are used.

Macros

A macro is a small, script-based program usually developed by the application user in response to a specific need. For example, if you are a part planner that works with parts that have a particular product code, you can create a macro in Part Maintenance that inserts your name as the Planner ID, the product code you work with in the Product Code field, and other standard information. You can also use macros to check for particular conditions, such as the weight of a shipment, and trigger certain actions as a result of the condition. Use macros to automate and control business processes.

Macros are available in these applications:

- Accounting Window
- Bank Account Maintenance
- Bar Code Labor Ticket Entry
- Cash Application
- Cash Book
- Consignment Receiving
- Contact Maintenance
- Customer Maintenance
- Customer Order Entry
- Document Maintenance
- ECN Entry
- Employee Maintenance
- Equipment Maintenance
- Estimating Window
- G/L Entry
- Interbranch Transfer Entry
- Interbranch Transfer Receipt Entry
- Interbranch Transfer Shipping Entry
- Inventory Transaction Entry
- Labor Ticket Entry
- Manufacturing Window, at both the header and operation/material level
- Material Planning Window
- Order Management Window
- Outside Service Dispatch Entry
- Outside Service Maintenance
- Outside Service Planning Window
- Outside Service Receipt Entry
- Part Maintenance
- Payables Invoice Entry
- Payment Entry
- Project Maintenance

- Purchase Management Window
- Purchase Order Entry
- Purchase Receipt Entry
- Purchase Requisition Entry
- Receivables Invoice Entry
- Return Material Authorization Entry
- Revaluation
- Shipping Entry
- Shop Resource Maintenance
- Unplanned Maintenance
- Vendor Maintenance
- Vendor RFQ Entry
- Warehouse Maintenance

When you write a macro, you can interact with the database fields used in the windows. Not all database fields are available. Use the Available Fields field in the Edit Macro dialog to view a list of the fields you can work with.

Double-byte characters in Macros

If you intend to use double-byte characters in your macros, such as in a message, you must store your macros in the database. If you store macros with double-byte characters on a workstation, the double-byte characters will not be displayed correctly. See "Storing Macros" on page 4–28 in this guide.

Language Choices

The VISUAL macro engine uses Microsoft Active Scripting and COM to process macro scripts. VISUAL supports the use of VBScript and JScript as available scripting languages, both of which are provided by Microsoft and are natively supported in Windows. The scripting language used to process VISUAL macros is set globally in Application Global Maintenance and can be overridden on a per application basis in Program Macro Maintenance.

VBScript, or Visual Basic Scripting Edition® is a Microsoft product provided as an integral part of the Internet Explorer™ and is available without cost to both the developer and the user. JScript is Microsoft's proprietary implementation of the ECMAScript standard, essentially their version of JavaScript.

VBScript and JScript are provided by Microsoft as script engines using the IActiveScript COM object interface. IActiveScript is not an automation interface; however, it relies on automation to function properly.

VBScript and JScript support limited debugging. If an error occurs in the script, and the machine in question has the debugging software installed, the user can choose to debug the macro. The contents of the script and the context of all data values are placed in a debugger similar to Visual Basic's debugger.

What to Expect Using Macros

Macros act on the data visible to the user in the context of the program. Consider Order Entry. It has about 60 or 70 data fields on the main window, not including the line item table. The line item table has about 40 columns of data. The Macro feature runs on the window as a whole, seeing both the header level variables and line level information at the same time.

Header level variables are visible to the script by name. For instance, if the program possesses a field named "dfnORDER_QTY" it will be exposed to the script as simply "ORDER_QTY." Each field on the header is similarly exposed to the script.

Line data requires that the program provide a mechanism to expose rows and columns of data. The collection of rows is visible to the script as simply "LINES". Each line is one of the variables within the collection of LINES. The line is a collection of variables, one for each column.

Macros for the form are presented to the user on a menu entitled **Macros**. The program dynamically loads this menu with the list of macros that can be used in the program.

Use the Edit option in the Macros menu to edit existing macros and create new macros. A list of variables available for macros in the current window is displayed. You can select a variable from the list or manually type the variable.

You can use a standard editor to create macros. Macros created outside of VISUAL are available in VISUAL provided that you name and store the file correctly. When you save your macro, use this naming convention:

[VISUAL Executable name]_[Macro Name].vms.

For example, if you created a macro called MARKUP that you run in Part Maintenance, you would name the macro file VMPRTMNT_MARKUP.vms.

After you create the macro outside of VISUAL, store the macro file in your VISUAL executable directory. If you store macros on workstations, no further steps are needed. Your macro is displayed in the Macros menu. If you store macros in your database, you must import the macro into the database before you can use it. See "Storing Macros" on page 4–28 in this guide.

Storing Macros

Macros can be read from the workstation or from the database. Use the Store Macros in Database check box on the Defaults tab in Application Global Maintenance to determine from where macros are read and where any new macros are stored. If the check box is selected, then all macros are read from the database, and any macros added after the check box is selected are stored in the database.

If the check box is cleared, then all macros are read from the workstation, and any macros added after the check box is selected are stored on the workstation. You cannot read certain macros from the database and other macros from the workstation.

Macros function in the same way regardless of where they are stored. The decision to store macros in the database or on individual workstations depends on how your company uses macros. If your macros are specific to users, then it may be beneficial to store the macros in the database. When the macros are stored in the database, users can access their macros regardless of the workstation they use to sign into VISUAL. If your macros are specific to particular functions, and only certain workstations are used to perform those functions, then it may be beneficial to store the macros on the workstation. When macros are stored on the workstation, any user who signs into the workstation can use the macros.

A primary benefit of storing macros in the database is tighter control over the macros a user can run. For macros stored in the database, users can run only those macros they have created themselves and any macros that the SYSADM user has created and assigned to them.

This table shows some of the key differences between storing macros on work stations and storing macros in the database:

	Macros Stored on Work Station	Macros Stored in Database
Who can access macros?	Any user who can sign into VISUAL on a work station can access the macros saved on the work station.	Users can access macros they created themselves or macros the SYSADM user has assigned to their profiles in Security Maintenance.
Are the macros portable?	Yes. You can copy and paste macros from one work station to another work station.	Yes. Since the macros are in the database, users can access their macros from any work station.
Can I use a User Toolbar button to launch a macro?	Yes	Yes
Can I share macros with other users?	Yes. You can send users your .vms files.	Yes. If the SYSADM user created the macros, the macros can be assigned to multiple users through profiles.

If you decide to store macros on the workstation, then see these topics:

- "Working with Macros Stored on the Workstation" on page 4–30 in this guide
- "Setting Up VISUAL to Store Macros on Workstations" on page 4–30 in this guide
- "Copying Macros from the Database to a Workstation" on page 4–30 in this guide
- "Creating a User Toolbar Button for a Workstation Macro" on page 4–31 in this guide

If you decide to store macros in the database, then see these topics:

- "Working with Macros Stored in the Database" on page 4–32 in this guide
- "Setting Up VISUAL to Store Macros in the Database" on page 4–32 in this guide
- "Assigning Shared Macros to Profiles" on page 4–34 in this guide

- "Creating a User Toolbar Button for a Database Macro" on page 4–34 in this guide

Working with Macros Stored on the Workstation

When macros are stored on the workstation, they are saved as vms files in the same directory as your VISUAL executables. The file name uses this pattern:

[VM Executable]_[Macro Name].vms.

For example, if you created a macro named SELLPRICE in Part Maintenance, then the macro file name is:

VMPRTMNT_SELLPRICE.vms.

Macros stored on a workstation are available only at that workstation. You can share the files with other users. When other users copy macros to their workstations, they are available for selection in the associated VISUAL executable.

Setting Up VISUAL to Store Macros on Workstations

To set up VISUAL to store macros on workstations:

1. Select **Admin**, **Application Global Maintenance**.
2. Click the **Defaults** tab.
3. In the Macros section, clear the **Store Macros in Database** check box. When you clear this check box, any macros you create are stored on the workstation where you created them. When you run macros from a VISUAL executable, the macros stored on the workstation are run. Any macros stored in the database are ignored.
4. Click **Save**.

Copying Macros from the Database to a Workstation

If you previously stored macros in the database, but you now store macros on workstations, you can copy the macros from the database to the workstation. When you copy macros from the database to a workstation, the macros are not deleted from the database. While the macros are still stored in the database, the database macros are no longer used.

Before you begin this procedure, make sure that the Store Macros in Database check box on the Defaults tab in Application Global Maintenance is cleared. See "Setting Up VISUAL to Store Macros on Workstations" on page 4–30 in this guide.

When macros are saved to the database, they are saved by user ID. When you copy macros from the database to the workstation, only the macros created by the currently signed in user are copied. Therefore, to copy all macros from the database to a workstation, each user who created macros should perform this procedure.

To copy macros from the database to a workstation:

1 On the workstation, sign into VISUAL.

2 Select **Admin**, **Load Macros**. In the title bar of the dialog, Copy Macros to File System is displayed. All macros currently on the workstation and currently stored in the database are displayed. An arrow is displayed in the row header of the macros that are going to be copied to the workstation. For each macro that is to be copied, this information is displayed:

File Name – The file path and file name of the new vms file is displayed.

Program – The executable file name of the VISUAL program where the macro was created is displayed.

Name – The name of the macro is displayed.

Macro – The macro code is displayed.

3 Click **Save**. The macro files are generated and saved to the workstation. The macros are not removed from the database.

If other users created macros in the database that should be stored on the workstation, these users must sign into the workstation and perform this procedure.

Creating a User Toolbar Button for a Workstation Macro

If you use User Toolbars, you can add a button that launches a macro stored on your workstation. To add a user toolbar button for a workstation macro:

1 Select **Admin**, **Toolbar Maintenance**.

2 Click **Insert**.

3 Specify this information:

Program Name – Specify the name of the program where the macro is used.

Toolbar ID – Specify the ID of the toolbar where you are adding the macro button.

Position – Specify where on the toolbar to place the macro button. You can specify a value from 1 to 20.

Bitmap – Specify the bitmap to use as the toolbar button.

Tool Tip – Specify the text that is displayed when you place your mouse over the toolbar button.

Execute Command – Double-click the browse button to select the macro file. To filter the files for macro files only, specify Macro Files in the Files of type field. When you select a macro, make sure you select a macro that can be run in the program you specified in the Program Name field. For example, if you specified Part Maintenance in the Program Name field, make sure you select a macro that begins with VMPRTMNT.

Use Key in Cmd Line – Clear this check box.

Add Entry to Toolbar – This check box is displayed for the SYSADM user only. To share this toolbar button with all users, select this check box. To retain this toolbar button for the SYSADM's use only, clear this check box.

4 Click **Save**.

Troubleshooting Macro Toolbar Buttons

If the macro attached to a toolbar button cannot be found, this message is displayed: Macro name is not valid. The reasons you may receive this message include, but are not limited to:

- The macro file has been renamed
- The macro file has been deleted from the workstation
- The macro button refers to a macro stored in the database, but you now store macros on the workstation.

If you no longer use the macro, you can remove the toolbar button. If you still use the macro, update the toolbar button with the correct macro file name, or rename the macro to its original name.

Working with Macros Stored in the Database

When macros are stored in the database, they are saved to the MACRO table by the user who created them. Except for macros created by the SYSADM user, one user cannot access a macro created by another user.

Macros created by the SYSADM user can be shared with other users. Macros created by the SYSADM user can be assigned to other users through profiles in Security Maintenance. The SYSADM user can assign macros to a profile and can then assign the profile to users. After a profile is assigned to a user, the user can execute any macros associated with the profile.

Setting Up VISUAL to Store Macros in the Database

To set up VISUAL to store macros in the database:

1 Select **Admin**, **Application Global Maintenance**.

2 Click the **Defaults** tab.

3 In the Macros section, select the **Store Macros in Database** check box. When you select this check box, any macros you create are stored in the database. When you run macros from a VISUAL executable, the macros stored in the database are run. Any macros stored on the workstation are ignored.

4 Click **Save**.

Copying Macros from a Workstation to the Database

If you previously stored macros on a workstation, but you now store macros in the database, you can copy the macros from the workstation to the database. When you copy macros from the workstation to the database, the macro files are not deleted from the workstation. While the macro files are still stored on the workstation, the workstation macros are no longer used.

Before you begin this procedure, make sure that the Store Macros in Database check box on the Defaults tab in Application Global Maintenance is selected. See "Setting Up VISUAL to Store Macros in the Database" on page 4–32 in this guide.

When you copy macros from a workstation, the macros are associated with the user who is signed in. For example, if you sign in as user JSMITH and then copy macros into the database, then all the macros are associated with JSMITH. Only JSMITH can run the macros. If you sign in as user SYSADM and then copy macros into the database, then the macros are associated with SYSADM, but the SYSADM user can share the macros with others in Security Maintenance.

Before you copy macros into your database, we recommend that you evaluate who should use the macros. If the macros currently stored on the workstation should be available to all users, then the SYSADM user should copy the macros into the database. If the macros currently stored on the workstation are private macros intended for use by a particular user, then that user should copy the macros into the database. If some of the macros should be shared and others are private, then we recommend using this process to load macros into the database:

1. Remove any private macros from the VISUAL executable directory and store them in another location. Leave the shared macros in the VISUAL executable directory.
2. Sign in as the SYSADM user and load the shared macros into the database.
3. Remove the shared macros from the VISUAL executable directory and store them in another location. Restore the private macros to the VISUAL executable directory.
4. Sign is as the user who owns the private macros and load them into the database.

To copy macros from a workstation to the database:

1. On the workstation, sign into VISUAL as the user who owns the macros.
2. Select **Admin**, **Load Macros**. In the title bar of the dialog, Copy Macros to Database is displayed. All macros currently on the workstation and currently stored in the database are displayed. An arrow is displayed in the row header of the macros that are going to be copied to the database. For each macro that is to be copied, this information is displayed:

   File Name – The name of the current vms file is displayed.

   Program – The executable file name of the VISUAL program where the macro was created is displayed.

   Name – The name of the macro is displayed.

   Macro – The macro code is displayed.
3. Click **Save**. The macro files are generated and saved to the workstation.

Assigning Shared Macros to Profiles

Only a user with system administrator privileges can perform this procedure.

Any macro created by the SYSADM user can be shared with other users. This includes any macros the SYSADM user creates after the Store Macros in Database check box is selected in Application Global Maintenance. This also includes any macros that the SYSADM user copied from the workstation to the database using the Load Macros dialog. To share SYSADM macros with other users, the macros must be assigned to Profiles in Security Maintenance.

The SYSADM user can share macros that must be manually run and macros that are automatically run based on an event. If the SYSADM user assigns an automatic macro to a user through a profile, then the macro is run when the user triggers the event. For example, if the SYSADM user shares a Part Maintenance OnAfterSave macro with user JSMITH, the macro is run anytime JSMITH saves a part. JSMITH cannot stop the macro from running.

If the SYSADM user shares a macro with a user, and the user already has macro with the name, then the user's macro is used. For example, if the SYSADM user shared a macro named NEWPART, and the user already has a macro named NEWPART, then the user's macro is used when NEWPART is run.

Note: The SYSADM user can have only one macro of a particular name per application. For example, the SYSADM can have only one OnSave macro for Part Maintenance. If you want to assign different OnSave macros in Part Maintenance to different users, load the macros as private macros per user. See "Copying Macros from a Workstation to the Database" on page 4–33 of this guide.

To assign SYSADM macros to user profiles:

1. Sign into VISUAL as a user with system administrator privileges.
2. Select **Security**, **Profile/User/Group Security**.
3. In the Security By section, click **Profile**.
4. In the Profile ID field, specify the profile to which you are assigning macros.
5. Click the **Macros** tab.
6. Click **Insert**.
7. Double-click the Macro Name browse button and select the macro to assign to the profile.
8. Click **Save**. Users assigned to the profile can run the macros. See "Assigning Profiles to Users" on page 3–30 of the System Administrator guide.

Creating a User Toolbar Button for a Database Macro

If you use User Toolbars, you can add a button that launches a macro stored in your database. You can add toolbar buttons only for macros you manually run. You cannot add a toolbar button for macros that are run automatically based on an event. See "Types of Macros" on page 4–36 in this guide.

To add a user toolbar button for a database macro:

1. Select **Admin**, **Toolbar Maintenance**.

2 Click **Insert**.

3 Specify this information:

Program Name – Specify the name of the program where the macro is used.

Toolbar ID – Specify the ID of the toolbar where you are adding the macro button.

Position – Specify where on the toolbar to place the macro button. You can specify a value from 1 to 20.

Bitmap – Specify the bitmap to use as the toolbar button.

Tool Tip – Specify the text that is displayed when you place your mouse over the toolbar button.

Execute Command – Leave this field blank.

Execute Macro in DB – Double-click the browse button and select the macro to associate with the toolbar. Only macros that can be run in the program specified in the Program Name field are displayed. Select a manual macro. If you select a macro that is automatically run based on an event, this message is displayed when you save the toolbar: Standard macros are not allowed.

Use Key in Cmd Line – Clear this check box.

Add Entry to Toolbar – This check box is displayed for the SYSADM user only. To share this toolbar button with all users, select this check box. To retain this toolbar button for the SYSADM's use only, clear this check box. If you specified a shared macro in the Execute Macro in DB field, then you may also want to share the toolbar button for the macro.

4 Click **Save**.

Troubleshooting Macro Toolbar Buttons

If the macro attached to a toolbar button cannot be found, this message is displayed: Macro name is not valid. The reasons you may receive this message include, but are not limited to:

- A system administrator has removed the macro from your profile
- The SYSADM user has deleted the macro
- The macro button refers to a macro stored on the workstation, but you now store macros in the database.

If you no longer use the macro, you can remove the toolbar button. If you still use the macro, contact your system administrator to restore your access to the macro.

Selecting a Macro Language

VISUAL supports macros written in either the **VBScript** or **JScript** scripting languages. To execute a macro correctly, VISUAL must know which scripting language the macro was written in.

When a macro runs, VISUAL uses the configured macro language for that program. By default, this is the system-wide default macro language unless a program-specific override has been configured.

Selecting the Default Macro Language

Use the **Default Macro Language** setting on the **Defaults** tab in **Application Global Maintenance** to specify the default scripting language used to execute macros in VISUAL applications that support macro functionality.

The selected default macro language determines the scripting language VISUAL expects when running macros.

The default macro language configured in Application Global Maintenance is used for all programs unless a different macro language has been specified for an individual Program ID using the **Program Macro Maintenance** dialog.

Selecting a Program Macro Language

Use the **Program Macro Maintenance** dialog to override the default macro language configured in **Application Global Maintenance** for individual VISUAL programs.

Note: You must be signed in as the **SYSADM** user to access Program Macro Maintenance.

To open the Program Macro Maintenance dialog:

1 From the **Admin** menu, select **Program Macro Maintenance**.

The Program Macro Maintenance dialog displays all licensed VISUAL programs that support macro functionality.

Use the **Macro Language** column to select the scripting language for a specific Program ID. The selected language is used when VISUAL executes macros for that program.

If a macro language is specified for a Program ID, it overrides the default macro language configured in Application Global Maintenance.

If no macro language is selected for a Program ID, the program uses the default macro language defined in Application Global Maintenance.

After configuring macro languages, click **Save** to apply your changes.

Types of Macros

You can create two types of macros: macros that run automatically based on an event and macros that you run manually.

Macros can be automatically run based on these events:

OnSave – The OnSave macro is run before the ability to save information has been validated.

OnAfterSave – The OnAfterSave macro is run after the user saves the record.

OnLoad – The OnLoad macro is run when the user opens an existing record.

OnNew – The OnNew macro is run when the user clears a record (clears the window ready for a new record) by clicking the New toolbar button.

OnDelete – The OnDelete macro is run when the ability to delete information has been validated, but before the deletion actually occurs. You cannot use this macro in the Manufacturing Window.

OnAfterDelete – The OnAfterDelete macro is run after information has been deleted from the database, but before the window has been cleared. You cannot use this macro in the Manufacturing Window.

SaveProcess – The SaveProcess macro is used in conjunction with Performance Leadtime. The macro is run when you save a record. See “Creating SaveProcess Macros” on page 14-7 in the Sales guide.

To create a macro based on an event, use the event name as the macro name. For example, to create an OnNew macro, specify OnNew in the Macro Name field. When the event occurs, the macro is run.

To create a macro that you run manually, specify any name as the macro name. To run the macro, select it from the Macros menu.

Creating Macros

To create a macro:

1 From an application that supports macros, select **Macros**, **Edit**. In the Manufacturing Window, click the **Macro** button in the header card Edit dialog box.

2 In the Macro Name field, specify the name of the macro. If you are creating a macro that must be manually run, you can specify any name of your choosing. If you are creating a macro that is automatically run based on an event, you must specify one of these names:

OnSave – The OnSave macro is run before the ability to save information has been validated. For example, if the OnSave macro populates certain fields, the fields would be populated when the user clicks Save.

OnAfterSave – The OnAfterSave macro is run after the user saves the record. For example, if the OnAfterSave macro shows a count of records currently in the database after that record is saved, every time the user saves a record, the macro is run and a count of the current records is shown.

OnLoad – The OnLoad macro is run when the user opens an existing record. For example, if external information is available for records, an OnLoad macro might show that information when the user opens the record.

OnNew – The OnNew macro is run when the user clears a record (clears the window ready for a new record) by clicking the New toolbar button. For example, if the OnNew macro launches another application to record additional information, when the user clicks the New toolbar button, the OnNew macro would launch that application.

OnDelete – The OnDelete macro is run when the ability to delete information has been validated, but before the deletion actually occurs. For example, you can use an OnDelete macro to summarize the information that is about to be deleted.

OnAfterDelete – The OnAfterDelete macro is run after information has been deleted from the database, but before the window has been cleared. For example, you can use an OnAfterDelete macro to send an email about the deleted record.

SaveProcess – The SaveProcess macro is used in conjunction with Performance Leadtime. The macro is run when you save a record. See “Creating SaveProcess Macros” on page 14-7 in the Sales guide.

3 To add a database column to the script entry field, click the **Available Fields** arrow and select the column. Then, click a database column to include in the macro. This list contains all columns for both the header and line item portions of the window.

4 After you select the column, click the **Insert** button.

5 Repeat this procedure for each field you want to add.

6 Specify the scripting syntax to complete the macro.

7 Click the **Save** button. The macro is added as a menu option in the Macros menu. In addition, these actions are taken:

- If macros are stored in the database, then the macro is associated with your user name. If you are not the SYSADM user, then only you can use the macro. If you are the SYSADM user, then you can share the macro with others. See "Assigning Shared Macros to Profiles" on page 4–34 in this guide.
- If macros are stored on the workstation, then a vms file is created and stored in your VISUAL executable directory. The file name is built using the file name of the executable and the name of your macro.

Automatic Macros and the Manufacturing Window

These conditions apply when you use automatic macros in the Manufacturing Window:

- You cannot use the OnDelete or OnAfterDelete macros. Because of the way items are deleted in the Manufacturing Window, these macros do not function on operation cards, material cards, and header cards.
- To use the On Save, OnAfterSave, OnLoad, and OnNew macros, you must specify the type of card where the macro is used. Use a suffix on the macro name to indicate where the macro is used. For automatic macros used in the header card, use these names:
  - OnSaveWO
  - OnAfterSaveWO
  - OnLoadWO
  - OnNewWO

  For automatic macros used on leg header cards, use these names:

  - OnSaveLEG
  - OnAfterSaveLEG
  - OnLoadLEG
  - OnNewLEG

For automatic macros used on operation cards, use these names:

- OnSaveOP
- OnAfterSaveOP
- OnLoadOP
- OnNewOP

For automatic macros used on material cards, use these names:

- OnSaveMAT
- OnAfterSaveMAT
- OnLoadMAT
- OnNewMAT

Using Customizable User Defined Fields in Macros

You can use any customizable user defined fields that you set up for a program in a macro. You can use customizable user defined fields and columns in the same manner as other fields and columns.

To use customizable UDFs in macros, use the macro editor dialog in the application and add them the same way as other fields and columns. In the Available Fields combo box you will find these references:

- Fields
  - udfString1 through udfString10
  - udfNumber1 through udfNumber10
  - udfBoolean1 through udfBoolean5
  - udfDate1 through udfDate5
  - udfStrCombo1 through udfStrCombo10
  - udfURL1 through udfURL5
- Columns
  - udfStringCol1 through udfStringCol10
  - udfNumberCol1 through udfNumberCol10
  - udfBoolCol1 through udfBoolCol5
  - udfDateCol1 through udfDateCol5
  - udfStrCombo1 through udfStrCombo10
  - udfURL1 through udfURL5

Running Macros

To run a macro manually, select it from the Macros menu.

If you created an event-based automatic macro, then the macro runs when the event occurs. For example, if you created an OnNew macro, the macro is run when a new record is created. To run an event-based macro manually, select it from the Macros menu.

Deleting Macros

If you store macros on workstations, any user can delete a macro at any time. Use caution when deleting a macro from a workstation. If you delete a macro from a workstation, it is deleted for all users of that workstation.

If you store macros in the database, you can delete macros that you created. You cannot delete macros created by the SYSADM user that have been assigned to your profile.

To delete a macro:

1. From an application that supports macros, select **Macros**, **Edit**.
2. In the Macro Name field, specify the macro to delete.
3. Click **Delete**.

Controlling Access to the Macro Edit Menu

A system administrator can prevent users from accessing the macro Edit menu. If users cannot access the Edit menu, they cannot add, edit, or delete macros.

1. Sign in to VISUAL as a system administrator.
2. Select **Security**, **Profile/User/Group Security**.
3. Open the profile, user, or group ID for which you are setting edit permissions.
4. Click the **Status** tab.
5. To allow users to access the macro Edit menu, select the **Edit Macros** check box. To prevent users from accessing the Edit menu, clear the check box.
6. Click **Save**.

Chapter 5: Activities and Tasks

This chapter includes this information:

Topic	Page
About Activities and Tasks	5–2
Activities	5–3
Tasks	5–19

About Activities and Tasks

VISUAL offers two methods to help you keep track of follow-up steps and other “to do” items: Activities and Tasks.

Use Activities to manually create reminders about follow-up items or to record information about interactions you have with customers and vendors. For example, you can create an activity to follow up with a customer if the customer is late paying an invoice. You can assign the activity to yourself or to another user. To track activities, use Activity Maintenance. You can review a list of your assigned activities and record your progress. You can also review the activities you created and assigned to others.

Use Tasks to create more formal items that must be completed as part of a workflow, part of the purchase requisition process, or as part of the engineering change notice (ECN) process. Tasks are triggered by actions taken in the system. You cannot manually create a task. To track tasks, use Task Maintenance.

Activities

Activities are free-form notes, tasks, and reminders that you can add to records in the sales, accounts receivable, purchasing, and accounts payable applications. You can also add activities to part records. You can use activities to remind you to complete any type of task, from discussing credit terms with a customer to reviewing part specifications with a vendor. You can also assign activities to other VISUAL users.

You can create activities in these applications:

- Accounts Payable Invoice Entry
- Payment Entry
- Accounts Receivable Invoice Entry
- Cash Receipt
- Customer Maintenance
- Customer Order Entry
- Order Management Window
- Equipment Maintenance
- Estimating Window
- Part Maintenance
- Shipping Entry
- Purchase Order Entry
- Purchase Management Window
- Purchase Receipt Entry
- Return Material Authorization
- Outside Service Maintenance
- Outside Service Dispatch Entry
- Vendor Maintenance

After you create activities, you can monitor them in Activity Maintenance.

If you use Infor VISUAL CRM ®, you can view tasks you create in VISUAL CRM in VISUAL Activity Maintenance.

Setting Up Activities

Before you enter activities, set up activity categories and activity types. Use activity categories to describe the topic of the activity. For example, activity categories could include customer credit, sales planning, or vendor contracts. Use activity types to describe how the activity is conducted. For example, activity types could include phone call, e-mail, or meeting.

If you use VISUAL CRM, then the categories and types you define in VISUAL can also be used in VISUAL CRM. Likewise, the categories and types you define in VISUAL CRM can be used in VISUAL.

Creating Activity Categories

To create activity categories:

1 In an application that supports activities, select **Edit**, **Activity Entry**.

2 In Activity Entry, select **Maintain**, **Activity Categories**.

3 Click **Insert**.

4 Specify this information:

Category ID – Specify an ID for this category.

Description – Specify a description for the ID.

5 Click **Save**.

Deleting Activity Categories

To delete activity categories.

1 In an application that supports activities, select **Edit**, **Activity Entry**.

2 In Activity Entry, select **Maintain**, **Activity Categories**.

3 Select the line to delete.

4 Click **Delete**.

5 To complete the deletion, click **Save**. To cancel the deletion, click **Delete** again.

Creating Activity Types

To create activity types:

1 In an application that supports activities, select **Edit**, **Activity Entry**.

2 In Activity Entry, select **Maintain**, **Activity Types**.

3 Click **Insert**.

4 Specify this information:

Activity Type ID – Specify an ID for this activity type.

Description – Specify a description for the ID.

5 Click **Save**.

Deleting Activity Types

To delete activity types.

1 In an application that supports activities, select **Edit**, **Activity Entry**.

2 In Activity Entry, select **Maintain**, **Activity Types**.

3 Select the line to delete.

4 Click **Delete**.

Creating Activities

To create an activity:

1 In an application that supports activities, select **Edit**, **Activity Entry**. This read-only information is displayed:

Relates To Type – The type of record you were viewing when you accessed Activity Entry is displayed. For example, if you were viewing a customer order, then Customer Order is displayed.

Customer ID/Vendor ID – If you accessed Activity Entry from a sales application, an accounts receivable application, or Equipment Maintenance, then the ID of the customer specified on the record is displayed. If you accessed Activity Entry from a purchasing or accounts payable application, then the ID of the vendor specified on the record is displayed.

[Record] ID – The ID of the record that you were viewing when you accessed Activity Entry is displayed. The field label shows the type of record. For example, if you accessed Activity Entry from a customer order, then the field label is Customer Order ID and the ID of the order is inserted in the field.

Creator – The ID of the user who created the record is displayed.

Created – The date that the activity was created is displayed.

Modified – The date that the activity was last modified is displayed.

2 Specify this information:

Subject – Specify a general description of the activity.

Due Date – Specify the date that the activity is due.

Start Date – If you have already started the activity, specify the date that you began. Typically, this information is specified by the person who is assigned to complete the task.

Completed – If you have already completed the activity, specify the date that you completed the activity. Typically, this information is specified by the person who is assigned to complete the task.

% Complete – If you have completed a portion of this activity, specify the percentage you have completed. Click the arrow to select a value. Typically, this information is specified by the person who is assigned to complete the task.

When you select a % Complete, the Status field is updated automatically. If you select 0, then the Status field is updated to Not Started. If you select 100, then the Status field is updated to Complete, and the date you completed the activity is inserted in the Completed field. If you select any other percentage, then the Status field is updated to In Process.

Activity Type – Specify the type for this activity. Use activity types to categorize the type of action to take to complete the activity. Examples of activity types are Call and E-mail. See "Creating Activity Types" on page 5–4 of this guide.

Category ID – Specify the category for this activity. Use activity categories to generically describe the topic of the activity. Examples of activity categories are Customer Credit, Vendor Contracts, or Part Specification Review. See "Creating Activity Categories" on page 5–4 of this guide.

Status – Specify the activity's current status. Depending on the status you select, the % Complete field and Completed fields are updated. Select one of these statuses:

Not Started – Work on this activity has not yet started. If you specify this status, then the % Complete field is updated to 0.

In Progress – Work on this activity has started, but is not yet complete.

Completed – Work on this activity is complete. If you specify this status, then the % Complete field is updated to 100, and the current date is inserted in the Completed field.

Waiting – Other dependencies must be completed before work on this activity can start or resume.

Deferred – Work on this activity has been postponed to a later date.

Priority – Specify a priority level for this activity. Select from Low, Normal, and High.

Reminder – To set up a reminder for this activity, select this check box. Then, specify this information:

Reminder Date – Specify the date to trigger the reminder event.

Reminder Time – Specify the time to trigger the reminder event. You can manually type in a value or select a value from the drop-down menu.

If the user assigned to this activity has activated activity reminder features, then the reminder is triggered on the date and time you specify. See "Activity Reminders" on page 5–7 in this guide.

Assign To (Owner) – Specify the ID of the user who is responsible for completing this activity.

Est Hours – Specify in hours how long it is anticipated to take to complete this task.

Act Hours – Specify in hours how long it took to complete this task. Typically, this information is specified by the person who is assigned to the task.

Comments – Specify a more detailed description of this task or any other information pertinent to the task.

3 Click **Save**.

Adding User-defined Information

To specify the user-defined field values, select **Edit**, **User-defined Fields**. Select the label set to use, and then specify the values as required by your company.

Activity Reminders

After activities have been assigned to you, you can activate reminder features to help you complete activities on time. You can be reminded of activities in two ways: an activity tray icon and a Reminder dialog.

After you activate the activity tray icon, the icon is displayed in your Microsoft taskbar when open activities are detected. An open activity is any activity that does not have a status of Closed. If you have open activities, the icon is displayed when you sign into VISUAL. If you had no open activities when you signed in to VISUAL, but one is created for you after you signed in, then the icon is displayed when the new activity is created for you.

When you activate the Reminder dialog, a dialog is displayed when an active reminder is detected. You can review basic details of the activity, “snooze” to be reminded of the activity later, and dismiss the reminder. You can use the drill-down button to open the activity in Activity Entry.

Activate the activity tray icon and the Reminder dialog in the Preferences dialog available in Activity Maintenance.

In addition to activating the activity reminder features in the Preferences dialog, the main VISUAL executable (VM.exe) must be running for the activity tray icon and the Reminder dialog to be displayed. The activity tray icon and reminder dialog are displayed for open activities only. These additional conditions must be met to display the Reminder dialog:

- The Reminder Days check box must be selected in Activity Entry, and a reminder day and time must be specified.
- The reminder date and time must be equal to or less than the current date and time.
- The activity must have a status other than Completed.

After you launch VISUAL, activities are monitored periodically for new activities and reminders. You can specify how frequently to check for new activities and reminders in the Preferences dialog in Activity Maintenance.

Activating Reminder Features

To activate the task tray icon and reminder features:

1 Access Activity Maintenance. For example, select **Admin**, **Activity Maintenance**. See "Starting Activity Maintenance" on page 5–10 of this guide.

2 Select **Options**, **Preferences**.

3 Specify this information:

Activity Tray Icon – To display an icon in the notification area of the Microsoft taskbar when an open task is detected, select this check box.

Reminder Pop Up – To display a dialog when a reminder is detected, select this check box.

Reminder interval (minutes) – Specify how frequently to search for new open activities and new reminders. For example, if you specify a 10 in this field, then activities are examined every 10 minutes. If a new open activity is found, then the Activity tray icon is displayed. If a new reminder is found, then the Reminder dialog is displayed or refreshed with the new reminder.

4 Click **Ok**.

Adding Reminders to Activities Assigned to You

To add reminders to activities assigned to you:

1 Access Activity Maintenance. For example, select **Admin**, **Activity Maintenance**.

2 Click in the activity ID cell, and then click the drill-down arrow. The activity is opened in Activity Entry.

3 Select the **Reminder Days** check box.

4 Specify this information:

Reminder Date – Specify the date to trigger the reminder event.

Reminder Time – Specify the time to trigger the reminder event. You can manually type in a value or select a value from the drop-down menu.

5 Click **Save**. If the user ID in the Assigned To field has activated a reminder feature, then the user receives a reminder when the reminder event is triggered.

Creating a Reminder for Another User

If you create an activity and assign it to another user, you can specify reminder information on the activity for the user. The reminder is displayed only if that user has activated reminder features. If the user has not activated the reminder features, then no reminder is displayed for that user. If you want to be able to set up reminders for others, make sure all users activate reminder features.

Using the Reminder Dialog

Use the Reminder dialog to review deadline information about your activities. You can access Activity Entry directly from the Reminder dialog.

The table lists all active reminders. A reminder is active if the current date and time is on or after the reminder date and time, and the activity has any status other than Closed.

The table shows this information:

Activity ID – The ID of the activity is displayed. Use the drill-down arrow to open the activity in Activity Entry.

Subject – The subject of the activity is displayed.

Due In – The number of days left until the due date is displayed.

Select a row to view this information in the header:

Type – The type of record related to this activity is displayed. For example, if the activity is linked to a customer record, then Customer is displayed.

Relates to Type – The ID of the record associated with this activity is displayed. For example, if the activity is linked to a customer order ID, the ID of the order is displayed.

Subject – The subject of the activity is displayed.

Priority – The priority of the activity is displayed.

Category – The category of the activity is displayed.

Dismissing Activity Reminders

When you dismiss an activity in the Reminder dialog, the Reminder Days check box on the Activity record is cleared. You will no longer receive a pop-up reminder to complete the activity. The activity tray icon will still be displayed when you sign into VISUAL. You can re-select the Reminder Days check box on the Activity record to create a new reminder.

To dismiss a single activity, select the row and then click **Dismiss**.

To dismiss all activities listed in the table, click **Dismiss All**.

Postponing Activity Reminders

Use the Snooze buttons to redisplay activity reminders at a later time.

To postpone a reminder for a single activity:

1. Select the line.
2. Specify when to redisplay the reminder. Select a value from the drop-down menu.
3. Click **Snooze**. The activity is removed from the table. The amount you specified in the snooze time field is added to the reminder time on the activity.

To postpone all reminders, specify when to redisplay the reminders and then click Snooze All. All activities are removed from the table.

After the snooze interval has elapsed, a reminder is redisplayed.

Using the Activity Tray Icon

You can access Activity Maintenance directly from the Activity tray icon. You can also hide the icon.

To access Activity Maintenance, perform one of these procedures:

- Click the icon.
- Right-click and select **Activity Maintenance**.

To hide the icon, right-click and select **Exit**. The icon is redisplayed if a new activity is detected.

Activity Maintenance

Use Activity Maintenance to:

- Review your activities
- Edit basic activity information
- Open activities for editing in Activity Entry

Starting Activity Maintenance

You can access Activity Maintenance in these ways:

- Select **Admin**, **Activity Maintenance**..
- Click the Activity tray icon in the Microsoft taskbar.
- Select **View**, **Activities** from an application that supports activities.
- Click the **Activities** icon in the graphical Lifecycle Document Viewer. See "Using the Graphical View" on page 8–9 in this guide.

When you access Activity Maintenance, only your activities are displayed. Your activities are any activity you created and any activity assigned to you. To view all activities, clear the **My Activities Only** check box.

Depending on how you access Activity Maintenance, a filtered subset of activities is displayed. This table shows how tasks are filtered based on how you access Activity Maintenance.

If you want to	Then use this method to access Activity Maintenance
View all activities	• Select **Admin**, **Activity Maintenance** • Click the Activity tray icon in the Microsoft taskbar.
View all activities related to the sales cycle	Select **View**, **Activities** from a blank sales application window. Activities created in these applications are displayed: • Accounts Receivable Invoice Entry • Cash Receipt • Customer Maintenance • Customer Order Entry • Order Management Window • Estimating Window • Return Material Authorization • Shipping Entry

If you want to	Then use this method to access Activity Maintenance
View all activities related to the purchasing cycle	Select **View**, **Activities** from a blank purchasing application window. Activities created in these applications are displayed: • Accounts Payable Invoice Entry • Payment Entry • Purchase Order Entry • Purchase Management Window • Purchase Receipt Entry • Outside Service Maintenance • Outside Service Dispatch Entry • Vendor Maintenance
View all activities related to parts	Select **View**, **Activities** from a blank Part Maintenance window.
View all activities related to outside services	Select **View**, **Activities** from a blank Outside Service Maintenance window.
View all activities related to equipment	Select **View**, **Activities** from a blank Equipment Maintenance window.
View all activities related to a particular part, outside service, equipment ID, purchasing transaction, or sales transaction	• In the application window, select the record ID. Then, select View, **Activities**. • In the graphical Document Lifecycle Viewer, click the Activity icon next to the record.
View all activities related to the sales cycle for a particular customer	In Customer Maintenance, select the customer. Then, select **View**, **Activities**. Activities created when the customer is specified in these applications are displayed: • Accounts Receivable Invoice Entry • Cash Receipt • Customer Maintenance • Customer Order Entry • Order Management Window • Estimating Window • Return Material Authorization • Shipping Entry

If you want to	Then use this method to access Activity Maintenance
View all activities related to the purchasing cycle for a particular vendor.	In Vendor Maintenance, select the vendor. Then, select **View**, **Activities**. Activities created when the vendor is specified in these applications are displayed: • Accounts Payable Invoice Entry • Payment Entry • Purchase Order Entry • Purchase Management Window • Purchase Receipt Entry • Outside Service Maintenance • Outside Service Dispatch Entry • Vendor Maintenance

Reviewing Activities

Use Activity Maintenance to review activities that are assigned to you and activities that you created.

To review activities:

1 Access Activity Maintenance.

2 To view only the activities assigned to you and the activities you created, select the **My Activities Only** check box. To view all activities, clear the **My Activities Only** check box.

3 To filter the activities displayed in the table by status, use the check boxes in the Status section. Activities with the statuses you select are displayed.

4 Review this information:

Activity ID – The ID of the activity is displayed. If the row shows a task that was created in CRM, then the CRM Task ID is displayed. Click the drill-down button to open the activity or task in the application in which it was created. Activity IDs are opened in Activity Entry and CRM Task IDs are opened in CRM Task Maintenance.

Note: If you are using a CRM database, then this column is labeled Activity ID/CRM Task ID.

Reminder – If a reminder has been set up for this activity, then the check box is selected. The assigned to user will receive a reminder provided that the user activates the reminder feature in Activity Maintenance Preferences. See "Activating Reminder Features" on page 5–7 of this guide.

Category ID – The ID of the category for this activity is displayed.

Relates To Type – The type of database record associated with the activity is displayed. For example, if the activity was created in Customer Maintenance, then Customer is displayed.

Related ID – The ID of the record where the activity was created. For example, if the activity was created in Purchase Order Entry, then the ID of the purchase order is displayed.

Activity Status – The current status of the activity is displayed.

Subject – The subject of the activity is displayed.

Activity Type – The type of activity is displayed.

Create Date – The date that the activity was created is displayed.

Start Date – The date that work began on the activity is displayed.

Due Date – The date that the activity is due is displayed.

Completed Date – The date that the activity was completed is displayed.

Complete % – The percentage of work that has been completed on the activity is displayed.

Customer ID – If the activity was created in a sales application, then the ID of the customer on the sales application record is displayed.

Vendor ID – If the activity was created in a purchasing application, then the ID of the vendor on the purchasing application record is displayed.

Part ID – If you are viewing an activity linked to a part record, then the ID of the part is displayed.

Service ID – If you are viewing an activity linked to an outside service record, then the ID of the service is displayed.

Site ID – The site ID associated with the activity is displayed. For purchasing and sales transactions, the site ID specified for the transaction is used for the site ID on the activity. For activities created in Part Maintenance, Customer Maintenance, and Vendor Maintenance, these conditions apply:

- To create a site-specific activity in Part Maintenance, specify the site ID in the Part Maintenance window before accessing Activity Entry.
- To create a tenant-level activity in Part Maintenance, specify **Tenant** in the Site ID field in the Part Maintenance window before accessing Activity Entry.
- To specify the site for an activity created in Customer Maintenance, specify the Site ID on the Order Mgt tab before accessing Activity Maintenance.
- For activities created in Vendor Maintenance, the site ID field is always blank. You can add activities in Vendor Maintenance at the tenant level only.

CRM Event ID – If you use CRM and this activity is linked to an event, then the ID of the event is displayed. If you do not use CRM, then this field is not displayed.

Owner – The ID of the user assigned to the activity is displayed.

Priority Type – The priority of the activity is displayed.

Reminder Interval – This field is reserved for future use.

Reminder Date/Time – If you set up a reminder for this activity, the date and time the reminder is generated is displayed.

Snooze Interval – This field is reserved for future use.

Exporting Activity Maintenance Information

You can export the information in the Activity Maintenance table to Microsoft Excel or to an XML file. To export the information to Microsoft Excel:

1 In the table, select the rows to export.

2 Right-click the table and select **Send to Microsoft Excel**. Microsoft Excel is opened, and the rows you selected are inserted in the spreadsheet.

To export the information to XML:

1 In the table, select the rows to export.

2 Right-click the table and select **Send to XML**.

3 Specify this information:

File Name – Specify the name to use for the XML file.

XML to Write – Specify the content to include in the file. Click one of these options:

Schema – Click this option to export the schema only. The XML structure is exported, but no information from the Activity Maintenance table is exported.

Document – Click this option to export the rows you selected in the Activity Maintenance table in XML format.

Both – Click this option to export both a schema file and a document file.

Tags – Specify the information to use for the XML tags. Click one of these options:

Use column name – Click this option to use the database column names for the tags.

Use item name – Click this option to use the column names as displayed in Activity Maintenance for the tags.

4 Click **Export**.

Editing Activities

As you work on activities, edit them to reflect your progress. If you created an activity but assigned it to another user, you can edit the activity to update information that the user assigned to the activity needs to complete the activity.

You can edit certain information directly in Activity Maintenance. To edit all information, you can use the drill-down button to open the activity or task in the application in which it was created. If you click the drill-down button next to an Activity ID, then the activity is opened in Activity Entry. If you click the drill-down button next to a CRM Task ID, then the task is opened in CRM.

Editing Activities in Activity Maintenance

To edit activities in Activity Maintenance:

1 Access Activity Maintenance. See "Starting Activity Maintenance" on page 5–10 of this guide.

2 You can edit information in these fields:

- Reminder. If you select this check box to activate a reminder, access Activity Entry to specify when to display the reminder.
- Category ID
- Activity Status. To designate that a task or activity is In Progress, you must first update the Complete Percentage to a value other than 0 or 100. If you specify Complete, then the Completed Percentage is updated to 100, and the current date is inserted in the Completed Date field. If you specify Not Started, then the Completed Percentage is updated to 0.
- Subject
- Activity Type
- Start Date
- Due Date
- Completed Date
- Complete Percentage
- Comments

3 Click **Save**.

Editing Activities in Activity Entry

To edit an activity in Activity Entry, you must access Activity Entry through the Activity Maintenance window or through the Reminder dialog. When you select **Edit**, **Activity Entry...** in an application, you can only add a new activity. You cannot edit an existing activity.

You can use Activity Entry to edit activities created in VISUAL only. You cannot use Activity Entry to edit activities created in CRM. If you click the drill-down button next to a CRM task in either Activity Maintenance or the Reminder dialog, then CRM is opened instead. See "Editing CRM Tasks in Activity Maintenance" on page 5–18 of this guide.

To access Activity Entry from Activity Maintenance, click the drill-down button next to the activity ID.

To access Activity Entry from the Reminder dialog, click the drill-down button next to the activity ID.

You can edit this information:

- Subject
- Due Date
- Start Date
- Completed
- % Complete
- Activity Type
- Category ID
- Status
- Priority

- Reminder Days
- Reminder Date and Time
- Assign To (Owner)
- Est Hours
- Act Hours
- Comments
- User-defined Fields

Drilling to Related IDs

You can open the record related to the task directly from Activity Maintenance. The application that is opened depends upon the related type. This table shows each related ID type, which application is opened when drilling to an ID, and which window is opened when drilling to an ID.

Related ID Type	Related ID drill-down opens this application	Related ID drill-down opens this application window
A/P Cash Disbursement	VISUAL	Payment Entry
A/P Invoice	VISUAL	A/P Invoice Entry
A/R Cash Recpt	VISUAL	Cash Application
A/R Invoice	VISUAL	A/R Invoice Entry
Account	CRM	Account
Address	CRM	Address
Attendee	CRM	Attendee
Call	CRM	Call
Catalog Item	CRM	Catalog
Competitor	CRM	Competitor
Contract	CRM	Contract
Contract Item	CRM	Contract
Contract Type	CRM	Contract Type
CRM Custom App (related ID type is equal to the name of your customer app)	CRM	App Builder
Customer	VISUAL	Customer Maintenance
Customer Order	VISUAL	Customer Order Entry

Related ID Type	Related ID drill-down opens this application	Related ID drill-down opens this application window
Employee	CRM	Employee
Equipment	VISUAL	Equipment Maintenance
Estimate	VISUAL	Estimating Window
Event	CRM	Event
History Entry	CRM	History
Opportunity	CRM	Opportunity
Packlist	VISUAL	Shipping Entry
Part	VISUAL	Part Maintenance
Purchase Order	VISUAL	Purchase Order Entry
Purchase Receipt	VISUAL	Purchase Receipt Entry
Quote	CRM	Quotes
Service	VISUAL	Outside Service Entry
Service Dispatch	VISUAL	Outside Service Dispatch
Service Order	CRM	Service Order
Vendor	VISUAL	Vendor Maintenance

Deleting Records with Attached Activities

If you delete a record that has activities attached to it, the activities are also deleted. For example, if you attach an activity to a customer order, and then you delete the customer order, the activity is also deleted.

Activities and CRM

If you use VISUAL CRM 8.0, you can view CRM tasks in VISUAL and VISUAL activities in CRM. Earlier versions of VISUAL CRM are not compatible with VISUAL 8.0.0. If you specify CRM connection settings in Activity Maintenance, you can open CRM directly from Activity Maintenance.

CRM tasks and VISUAL activities are stored in the same database table. If you use VISUAL CRM, you can view any CRM task in Activity Maintenance. You can also edit information for tasks you create and tasks assigned to you directly in Activity Maintenance. If you set up CRM connection settings, you can click the drill-down button next to a CRM Task ID to open the task in CRM Task Maintenance.

In CRM, you can use CRM Task Maintenance to edit information for VISUAL activities you create or are assigned to you.

CRM and VISUAL also share the Activity Category and Activity Type tables. Any category or type you create in one application is available in the other application.

Specifying CRM Connection Settings

To drill back from Activity Maintenance to CRM, you must specify the location of the CRM executable and the name of the database server.

To specify this information:

1 Access Activity Maintenance. For example, select **Admin**, **Activity Maintenance.**

2 Select **Options**, **Preferences**.

3 In the CRM Drillback section, specify this information:

CRM Exe Directory – Specify the directory where the main CRM executable (VFO.exe) is located.

DB Server Name – Specify the name of the server where your VISUAL database resides. The CRM database tables are located in the VISUAL database. When you drill back to CRM, this information is used to sign in.

4 Click **Ok**.

Editing CRM Tasks in Activity Maintenance

You can edit certain information on your CRM tasks directly in the VISUAL Activity Maintenance window. To edit a CRM task in Activity Maintenance, edit information as necessary directly in the table. See "Editing Activities in Activity Maintenance" on page 5–14 of this guide.

Opening CRM from Activity Maintenance

You can open records related to CRM Tasks directly from Activity Maintenance. Use the drill-down button in the Related ID column to open the CRM record. See "Drilling to Related IDs" on page 5–16 of this guide.

You can also open CRM Tasks in CRM Task Maintenance directly from Activity Maintenance. Use the drill-down button in the Activity ID/CRM Task ID column to open a task in CRM Task Maintenance.

To use these features, you must specify CRM connection settings in Preferences. See "Specifying CRM Connection Settings" on page 5–18 of this guide.

In addition, you must also be a CRM user to open CRM. See the CRM User Guide.

Tasks

Tasks are generated by Purchase Requisition Entry, ECN Entry, and workflow.

In Purchase Requisition Entry, tasks are generated for requisition approvers. A requisition approver is either a single user or a group of users who must sign off on a requisition before it can be converted into a purchase order. When a user is assigned to a requisition, a task is generated for the user when the requisition is saved with a status of In Process.

In ECN Entry, tasks are generated for members of the Authorization, Implementation, Approval, and Distribution teams. Tasks are generated when the status of an ECN is changed to In Process. Depending on your settings in Site Maintenance, tasks are either generated for members of all teams simultaneously, or they are generated only for the first team with members. When the first team completes their tasks, tasks are generated for the second team. For example, Implementation team members will not receive tasks until Authorization team members have signed off on their tasks.

In workflows, you can assign a task in a workflow rule. When the rule is triggered, the task is generated.

Creating Task Groups

Only a user with system administrator privileges can perform this procedure.

When you assign a task in Purchase Requisition Entry, ECN Maintenance, or Workflow, you can assign the task to an individual user or to a group of users. To create a user group, use Security Maintenance.

If you have more than one site, approval groups are defined by site. When you select a site from the Site ID drop-down menu, the User ID browse table is filtered by the site you select.

To create a group:

1. Select **Security**, **Profile/User/Group Security**.
2. In the Security section, select **Group**. The Group tab becomes available.
3. In the Group ID field, specify a group ID. In the field to the right of the Group ID field, specify a description of the group.
4. Click the **Language ID** drop-down button and select the language that the group uses.
5. If you are licensed to use multiple sites, click the **Site ID** drop-down arrow and select the site where this group is used. If you are licensed to use a single site, this field is unavailable.
6. Optionally, specify whether this group is a default group for purchase requisitions, ECNs, or workflows. Specify this information:

   Requisition – In the Requisition section, select the appropriate **Approval** check box to specify that this group is a default requisition approval group. You can set up the names for the requisition approval groups in Accounting Entity Maintenance. When you create a requisition, the groups you specify as defaults are inserted automatically. You can override the default and select a different team in Purchase Requisition Entry. You can select more than one Approval check box for the group.

ECN Default Team – To use the group as a default ECN team, select the appropriate check box. If you select one of these boxes, then the system inserts the team when you create an ECN. You can override the default and select a different team in ECN Maintenance. You can select more than one check box for the group.

Workflow Default Group – To use the group as the default Workflow task team, select the **WorkFlow Default Group** check box. When you create a task in a workflow, this team is inserted by default. You can override the default in the Workflow Designer.

7 Use the **Group Signoff** check box to specify whether all members of a group must complete a task or if only one member of the group must complete the task for the task to be considered complete.

8 When tasks are generated for the group, each member of the group receives the task. If you select the check box, only one member of the group has to complete the task assigned to the group. For example, say ECN123 is assigned to the ECN Implementation Team, which is made up of User1, User2, User3, and User4. When you select the Group Signoff check box, only one of the users in the group needs to complete the task related to ECN123. When one user in the group marks the task Complete, the task is marked complete for the other users.

Clear the check box if each member of the group has to complete assigned tasks, or if only certain members of the group can complete tasks on behalf of the other members of the group. When you clear the check box, the User Signoff check box is made available.

9 Add members to the group. Click the **Insert Row** button, then double-click the User ID browse button. Select a user from the browse table, then click **Ok**.

If you are licensed to use multiple sites, only users assigned to the site in the Site ID field are shown in the browse table.

10 Specify this information for the users:

Leader – If the user is the group's leader, select the Leader check box. Each group can have only one leader. The leader can view the team members' tasks in Tasks Maintenance.

User Signoff – If you have cleared the Group Signoff check box, the system activates the User Signoff check box. When you select the User Signoff check box for more than one user, one of the selected users can complete the assigned task on behalf of the other selected users. For example, say ECN123 is assigned to the ECN Implementation Team, which is made up of User1, User2, User3, and User4. You have selected User Signoff for User 1, User2, and User3. If User2 completes the task, the system marks User1's and User3's task complete. User4's task, however, remains open until User4 marks the task complete. The group does not complete the task until User4 and one of User1, User2, and User3 marks the task as complete.

11 Click **Save**.

Assigning Tasks

To assign tasks:

- In Purchase Requisition Entry, specify a user in the Assigned To field or assign a user or group to one of the four approval fields on the Approvals tab.

- In ECN Entry, specify a user in the Assigned To field or assign a user or group to one of the teams on the ECN header.
- In Workflow, create a rule that consists of a task. Assign users or groups to the task.

Completing Tasks

To complete assigned tasks, use Task Maintenance. All tasks generated by Purchase Requisition Entry, ECN Entry, and workflows are displayed on the Tasks tab. You can filter the list of tasks based on status,

When you change the status of a task in Task Maintenance, the parent record of the task is updated.

Viewing Tasks

To view your assigned tasks:

1 Select **Eng/Mfg**, **Task Maintenance** or **Purchasing**, **Task Maintenance**.

2 Specify which tasks to view. You can filter the tasks in the list by status. To view tasks with a particular status, select the appropriate check box. For example, to view pending tasks, select the Pending check box. To hide tasks with a particular status, clear the appropriate check box. For example, to hide completed tasks, clear the completed check box.

If you are a group leader, you can view the tasks assigned to other members of your group. To view all group tasks, select the View Team Tasks check box. To view only the tasks assigned to you, clear the View Team Tasks check box.

View this information in the table:

Task Type/#.Seq – The type of task and the sequence number is displayed. The task type indicates which program generated the task. These task types are used:

REQ – The task was generated by a purchase requisition.

ECN – The task was generated by an ECN.

WFL – The task was generated by a workflow.

The number indicates the order in which the task was generated within the particular type. The sequence indicates the order in which the task was generated within a particular transaction. For example, for ECNs the sequence number for the assigned to task is 1. The sequence number for the authorization task is 2, and so on.

Reference ID – The ID of the record that generated the task is displayed, such as the ID of the purchase requisition or the ID of the ECN entry. For workflows, the ID of the program where the workflow is used is listed first, followed by the ID of the record. For example, if a workflow is applied to the Estimating Window, then the first part if the reference is vmestwin. The second part of the reference is the quote ID.

User ID – This column is displayed only if you select the View Team Tasks check box. The ID of the user assigned to the task is displayed.

Status – The current status of the task is displayed. The available statuses are Cancelled, Completed, Pending, and Rejected.

Sub Type – The sub type of the task is displayed. For purchase requisitions, the names of the approval groups are used as the subtype. For ECNs, the names of the ECN teams are used as the subtype. Assigned To is displayed in this field if the user ID is specified in the Assigned To field on an ECN or purchase requisition.

An ECN and a purchase requisition task can also have a subtype of On Hold. If the previous task in the sequence has been rejected, then On Hold is displayed. For example, if you are on the implementation team for an ECN and the authorization team has rejected the task, then On Hold is displayed. For purchase requisitions and ECNs, if your ID is specified in the Assigned To field on the requisition, then Assigned To is displayed. No other sub types are used for purchase requisitions. For ECNs, the name of the team is displayed. For example, if you are a member of the Implementation team, then Implementation is displayed in the Sub Type column.

For workflows, the label used for the rule that generated the task is displayed.

Date Completed – The date that the task status was changed to Completed is displayed.

Specifications – The specifications for the task are displayed. For workflow tasks, the text specified in the Task Specification field is displayed. For ECNs and purchase requisitions, you can manually add task specifications. When you change the status of a task, information about the status change is written to the specifications field automatically. If you reject a task, the text you specify during the rejection is added to the specifications for the subsequent task. Specifications added to the purchase requisition header, purchase requisition line, or ECN line are not displayed in this column.

Reject Code – If the previous task is rejected, the code specified during the rejection is displayed. Rejection codes indicate the reason a task is rejected. Maintain rejection codes either on the ECN tab in Site Maintenance or the Defaults tab in Accounting Entity Maintenance. While rejection codes are added in Site Maintenance or Accounting Entity Maintenance, the codes are saved at the tenant level. Codes you add to one site or entity are available for all sites and entities. The same table is used to store rejection codes for both ECNs and purchase requisitions.

Create Date – The date that the task was created is displayed.

Site – The ID of the site where the task was created is displayed.

Approving Tasks

To approve a task, change the status to Approved.

For ECNs and purchase requisitions, the actions that happen next depend on whether you are the last person in the group required to approve a task, whether you generate all tasks simultaneously or generate tasks in sequence, and whether your tasks is the last task in the sequence:

- If you are not the last member of the group that needs to approve a task, then the completion meter for the task on the ECN or purchase requisition is updated.
- If you are the last member of the group that needs to approve a task, then the completion meter for the task on the ECN or purchase requisition is updated to 100%. If you cleared the Generate All Tasks Simultaneously check box, then the next task in the sequence is generated. For

example, if you approve an Authorization task for an ECN, then the Implementation task is generated. If you selected the Generate All Tasks Simultaneously check box, then the next task becomes available for status changes. For ECNs, specify whether tasks are generated simultaneously in Site Maintenance. For purchase requisitions, specify whether tasks are generated simultaneously in Accounting Entity Maintenance.

- If you are the last member of the group that needs to approve a task, and the task is the last task that must be completed, then these actions occur:
  - For purchase requisitions, the status of the requisition is changed to Approved.
  - For ECNs, the status of the ECN is changed to Completed, provided that the site is not integrated to IQM. If the site is integrated to IQM, then you must select the External Tasks Complete check box to complete the ECN.

For workflow tasks, the actions that happen next depend on whether you are the last person required to approve the task.

- If you are not the last person required to approve the task, then the Workflow Tracker is updated to indicate that you have completed the task.
- If you are the last person required to approve the task, then the Workflow Tracker is updated to indicate that you have completed the task, and the next step of the workflow begins.

Rejecting Tasks

If you cannot complete a task due to missing information, incorrect information, or other problem, you can reject the task. When you reject a task, an On Hold task is generated for the user who rejected the task. You can use the On Hold task to fix the problems that caused the task to be rejected.

You can reject a purchase requisition or ECN task only. You cannot reject a workflow task.

To reject a task:

1. Change the task status to **Rejected**.
2. In the Code field, specify the rejection code. In the text field, specify the reasons you rejected the task or steps to take to fix any issues. The text you specify here is used as the Specification for the On Hold task that is generated.
3. Click **Ok**.

After you complete the On Hold task, the status of the rejected task is changed to Pending. You can then process the previously rejected task. For example, if you reject an Authorization task, an On Hold task is generated. After you close the On Hold task, the Authorization task's status is changed from Rejected to Pending. You can then complete, cancel, or reject the Authorization task.

Processing On Hold Tasks

An On Hold task is generated when you reject a task. When the On Hold task is generated, the On Hold task's status is set to Pending. You can change the status to Complete. You cannot use any of the other statuses with On Hold tasks.

Canceling Tasks

For purchase requisition and ECN tasks, you cannot manually change a task's status to Cancelled. To cancel a purchase requisition or ECN task, you must change the status of the purchase requisition record or ECN record to Cancelled. Cancelling a purchase requisition or ECN cancels all of the related tasks.

Chapter 6: Notifications and Email

This chapter includes this information:

Topic	Page
Notifications and Email	6–2
Notifications	6–7
Manually Emailing Reports	6–21

Notifications and Email

You can email information about transactions directly to customer contacts, vendor contacts, and internal contacts. You can send emails in two ways: through notifications or manually.

When you set up notifications, notification emails can be sent automatically or delayed to be sent on demand using a Manual Override option when certain business events occur, such as the creation of a customer order. Emails are sent to the contact specified on the customer order or purchase order and to the internal contacts that you associate with the customer or vendor in Customer Maintenance and Vendor Maintenance.

To manually send emails, select the Email option when you generate reports. To specify who receives the email, use the Email Documents dialog in Customer Maintenance and Vendor Maintenance. When you manually send emails, the report that you generate is included in the email as an attachment. Depending on the report you are sending, you can also send documents

This table shows the key differences between sending email notifications and sending an email manually:

	Notifications	Manual email
When is the email generated?	After you set up notifications, the email can be sent automatically or manually in response to override prompt when one of these business events occurs: • A customer order is created • A customer order is edited • A shipment is sent • A payment for an invoice is created (sent to internal contacts only) • A purchase order is created • A purchase order is edited • A purchase is received • A payment for an invoice is created (sent to internal contacts only) In addition, a notification email is generated on demand when you click Send Notification icon for relevant document.	The email is generated when you run a report with the Email output option.

	Notifications	Manual email
What is sent?	An email acknowledging that a business event, such as the creation of a customer order, has occurred. Use Notification Maintenance to specify the content of the email. You can use placeholder tokens to include information from the database, such as the amount of the order.	An email with a copy of the report attached.
Who receives the email?	For sales transactions, the customer contact specified on the order and the internal contacts set up for the customer in Customer Maintenance. Internal recipients are copied on the email sent to the customer contact. The email is not directly addressed to the internal recipient. For purchasing transactions, the vendor contact specified on the order and the internal contacts set up for the vendor in Vendor Maintenance. Internal recipients are copied on the email sent to the vendor contact. The email is not directly addressed to the internal recipient.	For sales documents, the contacts that you specify in the Email Documents dialog in Customer Maintenance. In Customer Order Entry, the contact specified on the order can also receive the email. For purchasing documents, the contacts that you specify in the Email Documents dialog in Vendor Maintenance. In Purchase Order Entry, the contact specified on the order can also receive the email.
How do I create the subject, header, body, and footer of the email?	Specify the content of the email in Notification Maintenance. You can use placeholder tokens to include information, such as the amount of the order, in the email.	For Accounts Receivable Invoices, you can specify the content of the email in Notification Maintenance. In all other instances, you must specify the content of the email manually. In report dialogs, select the **Preview** check box to edit the email before you send it. If you do not select the **Preview** check box, the report is attached to a blank email and sent.

	Notifications	Manual email
Are documents that I have attached to a transaction also sent? For example, if I attach a document to a customer order, is that document attached to the email?	No. Documents attached to sales or purchasing transactions are not sent.	Not automatically. If you preview the email before you send it, you can attach additional documents.
Where can I see a record of the emails that have been sent.	In Customer Order Entry and Purchase Order Entry, use the Notification History dialog to review a list of notifications that have been sent for a transaction.	A record of the emails is not kept in VISUAL, but the email attachments are stored in the directory that you specify in Document Maintenance. You can set up a different directory for each site. If you do not set up directories, then the email attachments are stored in the same directory as your VISUAL executables.
Where can I see a record of the delayed notification emails that are pending.	In Customer Order Entry, Shipments, Cash Application, Purchase Order Entry, Purchase Receipt Entry and Payment Entry, use the Notification Pending dialog to review a list of notifications that are relevant but have not yet been sent at least once for a transaction.	Pending Email is not applicable.

Setting Up Your System to Send Email

If your computer has a default e-mail client, then no preparation is required to send e-mail from VISUAL. Your computer's e-mail client is used when you e-mail reports. However, if your system's default e-mail client is configured incorrectly, or if no default e-mail client is configured, then to send e-mail from VISUAL you must either:

- Set your installed e-mail client as the default.

  OR

- Use SMTP (Simple Mail Transfer Protocol) settings in VISUAL to connect to an e-mail server such as Gmail or Thunderbird. With this method you send VISUAL reports from the VISUAL e-mail dialog. It is assumed that you have a valid account sign in credentials with the SMTP provider. Use the eMail section of the Preferences Maintenance window to set up SMTP..

Setting Your Installed E-mail Client as the Default

If your e-mail client is not configured as the default, you will see an Email Settings dialog when you send a report via e-mail.

To configure your installed e-mail client as the default:

1 In the Windows Control Panel, click **Default Programs**.

2 Click **Set your default programs**.

3 From the list of available software, select the installed e-mail client to be the default, for example Microsoft Outlook.

4 Click **Choose defaults for this program**.

5 In the Set associations for a program window, select the **MAILTO** check box in the Protocols section.

6 Click **Save**.

7 Select a report to generate.

8 Select **E-Mail** for the output format and then click **Ok**.

Configuring SMTP E-mail Settings

If an e-mail client is not installed on your computer, you can configure VISUAL to send e-mail using SMTP relay. When VISUAL is configured to use SMTP relay for outgoing e-mail, a simple e-mail dialog is provided to allow you to add e-mail recipients and attach reports.

To configure VISUAL to use SMTP when no default e-mail client exists:

1 Select **Admin**, **Preferences Maintenance**.

2 Select **eMail** from the **Section Filter** drop-down list.

3 Click the **Insert** toolbar button and add an entry for each of these preferences:

Server Address - The host name of the outgoing SMTP server address that your e-mail uses, for instance smtp.example.com.

Server Port - The port name used by the outgoing SMTP mail server. Port numbers 25, 465, or 587 are frequently used, but check with your e-mail service.

User Name - The user name for your default e-mail account. This may be your full e-mail address.

User Password - The password that you use to sign in to your default e-mail account.

Use SSL - Some SMTP providers require the use of Secure Socket Layer (SSL) security. To enable SSL Security, specify “Y”. If your SMTP provider does not require SSL, specify “N”.

4 Click **Save**.

Using SMTP to E-mail Reports

After you set up SMTP relay settings, a VISUAL e-mail dialog is opened when you e-mail a report.

To e-mail a report using SMTP:

1 Select your report and then select E-Mail as your output format and click **Ok**.

The VISUAL e-mail dialog displays with the report attached and the User Name you specified when you specified SMTP settings as the From e-mail address. You can:

- Specify recipient e-mail addresses as To: or Cc:
- Specify a subject
- Write a message
- Add more attachments
- Run the spell check
- Print the e-mail.

2 Click **Send**.

Notifications

To set up notifications, create email templates in Notification Maintenance. Then, specify who receives notifications for sales transactions and purchasing transactions.

When you create email templates, you can use predefined tokens in your templates to tailor them for customers and vendors. For example, you use the %CustomerID token as a placeholder for the Customer ID. When the email is generated, the token is replaced with the Customer ID specified on the customer order.

Setting Notification Maintenance window Preferences

To set the Notification Maintenance window preferences:

1 Select **Options**> **Preferences** in the **Notification Maintenance** window. The **Preferences** window is displayed.

2 Select the appropriate options from these fields:

Defaults Tab - Select one of the options from the list. Possible values:

- Customer Order
- Shipment
- Cash Receipt
- Purchase Order
- PO Receipt
- Cash Disburse
- Email AR Invoices

Manual Override for Notifications - Select the check boxes for the documents to override the automatic notification email. Possible values:

- Manually Send Customer Order Notification
- Manually Send Shipment Notification
- Manually Send Cash Application Notification
- Manually Send Purchase Order Notification
- Manually Send Receiver Notification
- Manually Send Cash Disbursement Notification

Add Prompt for Manual Override for Notification - Select the check boxes for the documents that you want a reminder prompt to send the notification when you are saving that document. Possible values:

- Prompt on Customer Order Save for Manual Notification
- Prompt on Packlist Save for Manual Notification
- Prompt on Cash Receipt Save for Manual Notification
- Prompt on Purchase Order Save for Manual Notification
- Prompt on Receiver Save for Manual Notification

- Prompt on Cash Disbursement Print for Manual Notification

3 Click **Ok** to commit the selected preferences.

Selecting Tokens

By default, common database columns are included in the available token list. Use the Edit Token List function to add tokens. You can add tokens for columns from the database tables that are primarily associated with a transaction. For example, you can add tokens for columns from the CUSTOMER, CUST_ORDER_LINE and CUSTOMER_ORDER tables to the list of available tokens for the Customer Order template.

Note: You cannot edit the tokens that are available for the Email AR Invoices template.

To specify available tokens:

1 Select **Admin**, **Notification Maintenance**.

2 Select **Edit**, **Edit Token List**.

3 Optionally, apply these filters:

Included Notification Tokens – Select the template for which you are selecting tokens. You can select more than one template.

Included Token Type – Select the section of the email template whose tokens you want to manage. Email templates are divided into four sections. The sections where a particular token can be used are predefined.

4 The table lists the available tokens based on your filter selections. This information is displayed in the table and is read-only:

Program ID – The ID of the program that sends a notification email. This table shows the program ID and the template used for the email:

Program ID	Template	Notes
VMORDENT	Customer Order	Customer Order notifications can also be sent from VMORDWIN.
VMSHPENT	Shipment	
VFARCENT	Cash Receipt (AR Inv Paid)	
VMPURENT	Purchase Order	Purchase Order notifications can also be sent from VMPURWIN.
VMRCVENT	PO Receipt	
VFAPCENT	Cash Disbursement (AP Inv Paid)	

Token Type – The section of the email notification where you can add the token. The sections are Subject Line, Header, Detail Lines, and Footer.

Token Name – The name of the token associated with the database table and column.

Table/Column Name – The database table and column where the data is stored. The information in the database column replaces the token in your email.

Data Format Type – The type of data that is stored in the table column. These types are used:

String – Shows alphanumeric values.

Numeric – Shows number values that are not currency values.

Date – Shows date values.

Currency – Shows currency values.

Literal – Shows literal values. Literal values are one-character values that represent information such as statuses and types. In your email, the information that the literal value represents is used instead of the literal value. For example, if you include the %OrderStatus token, and the customer order has a status of Released, Released is used in the email instead of R.

Calculated Value – Indicates that the data is calculated and not stored in the database. For example, customer order totals are calculated values and are not stored in the database.

Minimum Decimal Pos – Shows the minimum number of digits that is displayed after a decimal point. For example, a percentage of 10.25 would be displayed as 10.250. Non-zero digits that occur after the minimum number are always displayed. For example, a percentage of 10.2501 would be displayed as 10.2501.

5 To make a token available for selection in your email template, select the **Selected Token** check box.

6 Click **Save**.

ShiptoID Tokens

If you add a shiptoID token to a template, the shipto ID is replaced with the corresponding address.

This table shows the shiptoID tokens that are available and where they can be used:

Token	Template
%OrderShipToID	Customer Order
%OrderLineShipToID	Customer Order
%PacklistShipToAddrNo	Shipment
%OrderLineShipToID	Purchase Order

Specifying Send From Alternate Email Addresses

Use the Send From Email Address for Notifications dialog box to specify the email addresses to use as the sender for notifications. You can specify a different address for each notification type. You can also specify a different address for emails sent to internal recipients and external recipients.

For example, you could specify orders@yourcompany.com as the sender of customer order notifications. The alternate email addresses must exist as an account and have full access in your email system. The email addresses must also have a password for your email system.

If you do not specify an alternate address, then the email address of the user who triggers the notification is used as the sender.

To specify an alternate sender:

1 Select **Admin**, **Notification Maintenance**.

2 Select **Edit**, **Edit Sender Email**. All notification types are listed in the dialog. A separate line for internal emails and external emails is displayed.

3 For the type of notification that is sent by an alternate sender, specify this information:

Email Address – Specify the email address to use. The email address must exist as an account in your email system. The address is not validated.

Password – Specify the password that is associated with the email account. The characters in the password are encrypted as you type.

Repeat Password – Retype the password you specified in the Password field.

4 Click **Save**.

Creating Email Templates

Use email templates to create the content of your emails.

To create email templates:

1 Select **Admin**, **Notification Maintenance**.

2 Click the tab for the email template that you want to create. For example, to create an email template to send when a customer order is created or updated, click the Customer Order tab. On each tab, specify information in these sections:

Notification Message - Subject Line – Specify the subject of the email.

Notification Message - Header – Specify header information, such as a salutation. You can also include the first paragraph of the email.

Notification Message - Lines – Specify the body of the email.

Notification Message - Footer – Specify the footer to use on the email. You can include closing text such as a signature.

3 A list of available tokens for each section is displayed. To add a token to an email section, drag-and-drop the name of the token onto the section. When the email is sent, the token is replaced with information from the transaction.

4 Click **Save**.

Restoring Default Template Settings

To restore the templates and available tokens to the default settings:

1 Select **Admin**, **Notification Maintenance**.

2 Select **Options**, **Reset Defaults**.

3 Select the templates that you want to reset.

4 To reset the list of available tokens that are associated with the templates that you selected, select the **Reset Associated Default Tokens** check box.

5 Click **Ok**.

Setting Up Notifications for Sales Transactions

In Customer Order Entry, you can specify which events trigger notifications for the contact on the order and for internal employee contacts.

This table shows the sales events that trigger notifications:

Business event	Notification recipients	Customer Order Entry Setting
Create a sales order	Sales order customer contact Internal recipients specified on the sales order	Email on New Order check box in Send Notification to Order Contact section
	Internal recipients specified for the transaction on the sales order.	Email on New Order check box in Send Internal Notifications section
Edit a sales order	Sales order customer contact	Email on Changed Order check box in Send Notification to Order Contact section
	Internal recipients specified for the transaction on the sales order	Email on Changed Order check box in Send Internal Notifications section

Business event	Notification recipients	Customer Order Entry Setting
Ship a sales order	Sales order customer contact	Email on Shipment check box in Send Notification to Order Contact section
	Internal recipients specified for the transaction on the sales order	Email on Shipment check box in Send Internal Notifications section
Edit a packlist	Sales order customer contact	Email on Shipment check box in Send Notification to Order Contact section
	Internal recipients specified for the transaction on the sales order	Email on Shipment check box in Send Internal Notifications section
Receive a payment	Notifications are not sent to customers for this event	n/a
	Internal recipients specified for the transaction on the sales order	Email on Invoice Paid check box in Send Internal Notifications section

You can use Customer Maintenance to set up default notification settings for each customer. You can specify default settings for the events that trigger notifications. You can also build a list of employees who should receive notifications when events occur for the customer's orders.

Setting up Default Notification Settings for Customers

Use the Notifications dialog in Customer Maintenance to select the events that trigger an email notification to customers. You also use the Notifications dialog to specify the employees that receive copies of the notifications.

You can override the defaults in Customer Order Entry.

To set up this information:

1 Select **Sales**, **Customer Maintenance**.

2 In the Customer ID field, select the customer for whom you are setting up notification settings.

3 Select **Maintain**, **Notifications**.

4 In the Send Notifications to Customer section, use the check boxes to specify default notification settings. These check boxes are available:

Email on New Order – Select this check box to email the customer when a customer order is saved for the first time.

Email on Changed Order – Select this check box to email the customer when changes to a customer order are saved.

Email on Shipment – Select this check box to email the customer when a shipment has been made for the order. If multiple shipments are sent to fulfill an order, then emails are sent for each shipment. If a packlist for the order is edited, an update notification is sent.

5 In the Send Internal Notifications section, use the check boxes to specify when employees receive notifications. In addition to the Email on New Order, Email on Changed Order, and Email on Shipment check boxes, you can select the Email on Invoice Payment to send a notification to an employee when payment for the shipment is received.

6 To select the employees that receive notifications, click the **Internal Employee** browse button. One tab for each notification event is displayed. The tab is active only if you selected the corresponding check box in the Send Internal Notifications section.

7 Click the tab for the business event that you are setting up. A list of available employees is displayed. To be displayed in the list, the employee's record in Employee Maintenance must meet these requirements:

- An email address must be specified for the employee
- The employee must be active

8 Select the employees to notify, then click the **Add to Selected List** button.

9 Click **Ok**.

You can override the automatic sending of emails in Customer Order Entry. To set these preferences, see Setting Notification Maintenance window Preferences.

Setting Up Notifications on Customer Orders

In Customer Order Entry, you specify the customer contact who receives notifications. You can also override the default settings that you set up for the customer in Customer Maintenance.

1 Select **Sales**, **Customer Order Entry**.

2 Select an existing order, or create a new order.

3 To specify the customer contact that receives notifications, click the **Contact** tab. If a primary contact has been specified for the customer, the contact's information is displayed. You can select a different contact or enter a free form contact. Make sure that you specify an email address for the contact. If an email address has not been specified, then an email dialog is opened each time a triggering event occurs.

4 Click the **Notifications** tab. If you set up default settings for the customer, the default settings are displayed.

5 To send notifications, select the **Email Notification** check box.

6 The Notify Me check box is available if these conditions are met:

- The user ID that you signed into VISUAL is specified in the User ID field for an employee in Employee Maintenance.

- The employee record associated with the user ID includes an email address.

Select the check box to receive internal notifications. The email address specified for your employee ID in Employee Maintenance is displayed.

7 In the Send Notification to Order Contact section, select the notifications to send to the customer:

Email on New Order – Select this check box to email the customer when a customer order is saved for the first time.

Email on Changed Order – Select this check box to email the customer when changes to a customer order are saved.

Email on Shipment – Select this check box to email the customer when a shipment has been made for the order. If multiple shipments are sent to fulfill an order, then emails are sent for each shipment. If a packlist for the order is edited, an update notification is sent.

8 In the Send Internal Notifications section, use the check boxes to specify when employees receive notifications. In addition to the Email on New Order, Email on Changed Order, and Email on Shipment check boxes, you can select the Email on Invoice Payment to send a notification to an employee when payment for the shipment is received.

9 To edit the list of internal recipients that receive notifications for this order, select **Edit**, **Order Notifications**. The selections that you made on the Notifications tab are displayed.

10 To select the employees that receive notifications, click the **Internal Employee** browse button. One tab for each notification event is displayed. The tab is active only if you selected the corresponding check box in the Send Internal Notifications section.

11 Click the tab for the business event that you are setting up. A list of available employees is displayed. To be displayed in the list, the employee's record in Employee Maintenance must meet these requirements:

- An email address must be specified for the employee
- The employee must be active

12 Select the employees to notify, then click the **Add to Selected List** button.

13 Click **Ok**.

14 Complete the order and then click the **Save** button.

Sending Notification

When the option to manually send notification on a given document is selected, you can manually send an email for an existing customer order, packlist, cash receipt, purchase order, receiver or AP payment.

To send email notifications use the **Send Notification** option from the **File** menu of the respective window. You can also use the **Send Notification** icon from the toolbar menu. The **Send Notification** menu option and icon are only enabled if the window has manual notifications selected. The **Send Notification** option is available in these windows:

- Customer Order Entry

- Order Management
- Shipping Entry
- AR Cash Application
- Purchase Order Entry
- Purchasing
- Purchase Receipt Entry
- AP Payment Entry

Reviewing Notification History for Sales Transactions

You can view a list of notifications that have been sent for an order. To view the list:

1 Select **Sales**, **Customer Order Entry**.

2 Select the sales order.

3 Select **Info**, **Notification History**. For each notification, this information is displayed:

Sent By - User ID – The ID of the user who sent the notification.

Program ID – The ID of the program that generated the notification. These IDs are used:

VMORDENT – Customer Order Entry. If the notification is for a new order, then NEW is appended to VMORDENT. If the notification is for a changed order, then CHG is appended.

VMSHPENT – Shipping Entry.

VFARCENT – Cash Application

Cust/Vend ID – The ID of the customer on the sales order or the vendor on the purchase order.

Document ID – The ID of the transaction for which the notification was sent.

Date – The Date that the notification was sent.

Sent By - Employee ID – The ID of the employee who sent the email.

Sent To - Email Addr(s) – The email addresses of the recipients of the email.

Action – The action that generated the notification. These actions are used:

SALES ORDER NEW – A sales order was created.

SALES ORDER CHG – A sales order was updated.

SHIPMENT – A shipment was made for the sales order.

AR INV PAID – A cash receipt has been made for an invoice for the order. The invoice contains lines for the order that you selected in Customer Order Entry and other orders.

Reviewing Notification Pending for Sales Transactions

You can view a list of notifications for an order that are eligible for email but have not yet been sent. To view the list:

1 Select **Sales**, **Customer Order Entry**.

2 Select the sales order.

3 Select **Info**, **Notification Pending**. For each notification, this information is displayed:

Program ID – The ID of the program that generated the notification.

- VMORDENT – Customer Order Entry
- VMSHPENT – Shipping Entry
- VFARCENT – Cash Application

Doc User ID – The ID of the program that generated the notification.

Customer ID – The ID of the customer on the sales order.

Customer Name – The name of the customer on the sales order.

Document ID – The ID of the transaction that requires a notification to be sent.

Site ID – The Site ID of the transaction that requires a notification to be sent.

Doc Create Date – The Create Date of the transaction that requires a notification to be sent.

Order Contact Name – The Contact Name on the sales order associated with the Document ID.

Setting Up Notifications for Purchasing Transactions

In Purchase Order Entry, you can specify which events trigger notifications for the contact on the order and for internal employee contacts.

This table shows the sales events that trigger notifications:

Business event	Notification recipients	Purchase Order Entry Setting
Create a purchase order	Purchase order vendor contact	Email on New Order check box in Send Notification to Order Contact section
	Internal recipients specified for the transaction on the purchase order	Email on New Order check box in Send Internal Notifications section

Business event	Notification recipients	Purchase Order Entry Setting
Edit a purchase order	Purchase order vendor contact	Email on Changed Order check box in Send Notification to Order Contact section
	Internal recipients specified transaction on the purchase order	Email on Changed Order check box in Send Internal Notifications section
Receive a purchase order	Purchase order vendor contact	Email on PO Receipt check box in Send Notification to Order Contact section
	Internal recipients specified for transaction on the purchase order	Email on PO Receipt check box in Send Internal Notifications section
Send a payment	Notifications are not sent to vendors for this event	n/a
	Internal recipients specified for the transaction on the purchase order	Email on Invoice Paid check box in Send Internal Notifications section

You can use Vendor Maintenance to set up default notification settings for each vendor. You can specify default settings for the events that trigger notifications. You can also build a list of employees who should receive notifications when events occur for purchase orders for the vendor.

Setting up Default Notification Settings for Vendors

Use the Notifications dialog in Vendor Maintenance to select the events that trigger an email notification to vendors. You also use the Notifications dialog to specify the employees that receive copies of the notifications.

You can override the defaults in Purchase Order Entry.

To set up this information:

1 Select **Purchasing**, **Vendor Maintenance**.

2 In the Vendor ID field, select the customer for whom you are setting up notification settings.

3 Select **Maintain**, **Notifications**.

4 In the Send Notifications to Vendor section, use the check boxes to specify default notification settings. These check boxes are available:

Email on New Order – Select this check box to email the vendor when a purchase order is saved for the first time.

Email on Changed Order – Select this check box to email the vendor when changes to a purchase order are saved.

Email on PO Receipt – Select this check box to email the vendor when a shipment has been received. If multiple purchase receipts are used to fulfill an order, then emails are sent for each receipt.

5 In the Send Internal Notifications section, use the check boxes to specify when employees receive notifications. In addition to the Email on New Order, Email on Changed Order, and Email on PO Receipt check boxes, you can select the Email on Invoice Payment to send a notification to an employee when a payment record for the purchase receipt invoice is created.

6 To select the employees that receive notifications, click the **Internal Employee** browse button. One tab for each notification event is displayed. The tab is active only if you selected the corresponding check box in the Send Internal Notifications section.

7 Click the tab for the business event that you are setting up. A list of available employees is displayed. To be displayed in the list, the employee's record in Employee Maintenance must meet these requirements:

- An email address must be specified for the employee
- The employee must be active

8 Select the employees to notify, then click the **Add to Selected List** button.

9 Click **Ok**.

You can override the automatic sending of emails in Purchase Order Entry. To set these preferences, see Setting Notification Maintenance window Preferences.

Setting Up Notifications on Purchase Orders

In Purchase Order Entry, you specify the vendor contact who receives notifications. You can also override the default settings that you set up for the vendor in Vendor Maintenance.

1 Select **Purchasing**, **Purchase Order Entry**.

2 To specify the vendor contact that receives notifications, click the **Contact** tab. If a primary contact has been specified for the vendor, the contact's information is displayed. You can select a different contact or enter a free form contact. Make sure that you specify an email address for the contact. If an email address has not been specified, then an email dialog is opened each time a triggering event occurs.

3 Click the **Notifications** tab. If you set up default settings for the vendor, the default settings are displayed.

4 To send notifications, select the **Email Notification** check box.

5 The Notify Me check box is available if these conditions are met:

- The user ID that you signed into VISUAL is specified in the User ID field for an employee in Employee Maintenance.
- The employee record associated with the user ID includes an email address.

Select the check box to receive internal notifications. The email address specified for your employee ID in Employee Maintenance is displayed.

6 In the Send Notification to Order Contact section, select the notifications to send to the vendor:

Email on New Order – Select this check box to email the vendor when a purchase order is saved for the first time.

Email on Changed Order – Select this check box to email the vendor when changes to a purchase order are saved.

Email on PO Receipt – Select this check box to email the vendor when a shipment has been received. If multiple purchase receipts are used to fulfill an order, then emails are sent for each receipt.

7 In the Send Internal Notifications section, use the check boxes to specify when employees receive notifications. In addition to the Email on New Order, Email on Changed Order, and Email on Po Receipt check boxes, you can select the Email on Invoice Payment to send a notification to an employee when payment for the purchase receipt is sent.

8 To edit the list of internal recipients that receive notifications for this order, select **Edit**, **Notifications**. The selections that you made on the Notifications tab are displayed.

9 To select the employees that receive notifications, click the **Internal Employee** browse button. One tab for each notification event is displayed. The tab is active only if you selected the corresponding check box in the Send Internal Notifications section.

10 Click the tab for the business event that you are setting up. A list of available employees is displayed. To be displayed in the list, the employee's record in Employee Maintenance must meet these requirements:

- An email address must be specified for the employee
- The employee must be active

11 Select the employees to notify, then click the **Add to Selected List** button.

12 Click **Ok**.

13 Complete the order and then click the **Save** button.

Reviewing Notification History for Purchasing Transactions

You can view a list of notifications that have been sent for an order. To view the list:

1 Select **Purchasing**, **Purchase Order Entry**.

2 Select the purchase order.

3 Select **Info**, **Notification History**. For each notification, this information is displayed:

Sent By - User ID – The ID of the user who sent the notification.

Program ID – The ID of the program that generated the notification. These IDs are used:

VMPURENT – Purchase Order Entry. If the notification is for a new order, then NEW is appended to VMPURENT. If the notification is for a changed order, then CHG is appended.

VMRCVENT – Purchase Receipt Entry.

VFAPCENT – Payment Entry

Cust/Vend ID – The ID of the customer on the sales order or the vendor on the purchase order.

Document ID – The ID of the transaction for which the notification was sent.

Date – The Date that the notification was sent.

Sent By - Employee ID – The ID of the employee who sent the email.

Sent To - Email Addr(s) – The email addresses of the recipients of the email.

Action – The action that generated the notification. These actions are used:

PURCH ORDER NEW – A purchase order was created.

PURCH ORDER CHG – A sales order was updated.

RECEIPT – A purchase receipt was made for order.

AP INV PAID – A payment has been made for an invoice for the order. The invoice contains lines for the order that you selected in Purchase Order Entry and other orders.

Reviewing Notification Pending for Purchasing Transactions

You can view a list of notifications for an order that are eligible for email but have not yet been sent. To view the list:

1 Select **Purchasing**, **Purchase Order Entry**.

2 Select the purchase order.

3 Select Info, Notification Pending. For each notification, this information is displayed:

Program ID – The ID of the program that generated the notification.

- VMPURENT – Purchase Order Entry
- VMRCVENT – Purchase Receipt Entry
- VFAPCENT – Payment Entry

Doc User ID – The ID of the user who created the transaction that requires a notification to be sent.

Vendor ID – The ID of the vendor on the purchase order.

Vendor Name – The name of the vendor on the purchase order.

Document ID – The ID of the transaction that requires a notification to be sent.

Site ID – The Site ID of the transaction that requires a notification to be sent.

Doc Create Date – The Create Date of the transaction that requires a notification to be sent.

Order Contact Name – The Contact Name on the purchase order associated with the Document ID.

Manually Emailing Reports

When you generate certain customer-related and vendor-related reports, you have the option to send a copy of the report to customer or vendor contacts. To specify who should be emailed reports, use Customer Maintenance and Vendor Maintenance. You can specify the recipients of the report by report type and by site.

When you attach reports to emails, copies of the reports are stored in the same directory as your VISUAL executables.

Reports That Can Be Emailed to Customers

This table shows the reports that you can email to customers and the program where you generate the report:

Report	Program where report is generated	Notes
Customer	Customer Maintenance	
Customer Order Report	Customer Order Entry Order Management Window	
Customer Order Acknowledgment	Customer Order Entry Order Management Window	
Bill of Lading	Shipping Entry	
AR Invoice	Invoice Forms Progress Billing Entry Project Billing Entry AR Invoice Entry	You can customize the content of the email message in Notifications Maintenance.
Customer Statement	AR Invoice Entry	
Packlist	Shipping Entry	
IBT Packlist	IBT Shipping Entry	This report is sent to customers or vendors only if the transaction is for consigned inventory.
IBT Receipt Acknowledgment	IBT Shipping Entry	This report is sent to customers or vendors only if the transaction is for consigned inventory.
Consigned Inventory Usage	Consignment Usage Report	
Consignment Receiver	Consignment Receiving	
Quote	Estimating Window	

Report	Program where report is generated	Notes
RMA	RMA Entry	
RMA Acknowledgment	RMA Entry	

Reports That Can Be Emailed to Vendors

This table shows the reports that you can email to vendors and the program where you generate the report:

Report	Program where report is generated	Notes
Purchase Order Acknowledgment	Purchase Order Entry Purchase Management Window	
PO Receiver	Purchase Receipt Entry	
Request for Quote	Vendor RFQ Entry	
IBT Packlist	IBT Shipping Entry	This report is sent to customers or vendors only if the transaction is for consigned inventory.
IBT Receipt Acknowledgment	IBT Shipping Entry	This report is sent to customers or vendors only if the transaction is for consigned inventory.
Consigned Inventory Usage	Consignment Usage Report	
Consignment Receiver	Consignment Receiving	

Specifying E-mail Lists for Documents

To specify the recipients of emailed reports:

1 To set up customer recipients, select **Sales**, **Customer Maintenance**.

To set up vendor recipients, select **Purchasing**, **Vendor Maintenance**.

2 Select the ID of the customer or vendor.

3 Select **Maintain**, **Email Documents**.

4 In the dialog, a row for each contact and site combination is displayed. For each contact, select which documents to send.

5 The email specified for the contact on the contact's record is displayed. To send the email to a different address, specify the address in the Send Docs to: Email Addr column.

6 Click **Save**.

Emailing Reports

To email reports to customer or vendor contacts:

1 Open the dialog for the report.

2 Select the **Send to document contacts** check box.

3 To preview the email before sending it, select the **Preview** check box. If you preview the message, you can add content to the email. Clear the check box to send the email without reviewing it first.

4 To attach the report as a PDF, select the **PDF Format** check box. Clear the check box to send the report as a Word file.

5 Click **Ok**.

Chapter 7: VISUAL Search Bar

Topic	Page
VISUAL Search Bar	7–2
Using the Search Bar	7–3

VISUAL Search Bar

You can use the search bar to search for any alphanumeric text in your database. The system returns a list of all documents that contain your search terms. In some cases, you can then double-click an item in the list to open the document.

Adding the Search Bar

Before you can display the search bar, you must enable it in Preference Maintenance. Then, you can select the Search Bar option from the File menu. To display the search bar:

1. Select **Admin**, **Preferences**.
2. Click the **User ID** arrow and select your user ID or the ID of the user for whom you want to enable the Search Bar.
3. Find the Visual Mfg section, then find the SearchBar entry. If this section and entry combination does not exist in the Preferences table, click the **Insert Row** button to add it.
4. In the Value column, specify **Y**.
5. Click **Save** and exit Preference Maintenance.
6. From the main window, select **File**, **Search**. The system places a check mark next to Search and displays the search bar.

Using the Search Bar

You can perform a basic search or an advanced search using the search bar.

In a basic search, you specify your search term in the Search box, then click the **Search** button or press enter. The system searches the database for your exact search term and for data similar to your search term. Note that the system does not search the entire database; view the Advanced Search dialog to see the areas of the database that the system searches.

To perform an advanced search:

1 Click the **Filter** button.

2 Specify the following information:

ID – Specify your search term in the ID field.

Like/Exact – Select Like to search for data similar to the term you entered in the ID field. When you select Like, the system will display any column that contains your search term in the Search Results list. For example, if you entered plate in the ID field, the system would display database columns containing 1/4 inch plate and 3/8 inch plate. Select Exact to display database columns containing only your search term and no other text in the Search Results list. For example, if you specified plate, the system would display columns containing plate only. The system would not display columns containing 1/4 inch plate or 3/8 inch plate. Typically, selecting Like returns more results than selecting Exact.

Context – If you would like to limit your search to certain database columns, use the Context field. Click the arrow and select the column you would like to search. For example, if you select cust_order_id, the system searches all cust_order_id columns in the database. Several tables contain the cust_order_id column, including payable (which corresponds to the Accounts Payable Invoice window), shipper (Shipment Entry window), and inventory_trans (Inventory Transaction Entry), among many others. If you select cust from the drop-down list, the system searches all columns that contain “cust,” including cust_order_id, customer_id, customer_name, among others.

Note: When you run a search based on a particular context, the system may not return the source document. For example, if you run a search on the cust_order_id column, the system will not return any information from the Customer Order Entry window. The cust_order_id column is not used in the customer_order table; instead the id column is used.

3 Click **Search**. The system searches the database based on the parameters you specified and returns a list of results.

Using the Search Results List

After you perform a search, the system lists documents based on your parameters in the Search Results table. The Search results table contains the following columns:

Reference – The system inserts the name of the database table where the search term was found.

ID – The system displays the ID of the document where the information was found.

You can drill back to the window where the document was created from the following reference types:

Reference	Drill Back Window
Account	Accounting Window
Account at Native	Accounting Window
Adjustment Detail	Inventory Transaction Entry
Cash Receipt Curr	Cash Application
Cash Receipt Dist	Cash Application
Cash Receipt Line	Cash Application
Cash Receipt	Cash Application
Cust Order Line	Customer Order Entry
Cust Price Effect	Part Maintenance
Customer Order	Customer Order Entry
Customer	Customer Maintenance
Discount Price	Part Maintenance
Employee	Employee Maintenance
Inventory Trans	Inventory Transaction Entry
Part Binary (Part Notations)	Part Maintenance
Part Location	Part Maintenance
Part Warehouse	Part Maintenance
Part	Part Maintenance
Purch Order Line	Purchase Order Entry
Purchase Order	Purchase Order Entry
Receivable	Receivable Invoice Entry
Requirement	Manufacturing Window
Shipper Line	Shipping Entry
Shipper	Shipping Entry
Shop Resource	Shop Resource Maintenance
Trace Inv Trans	Inventory Transaction Entry
Trace Profile	Part Trace Profile Maintenance
Trace	Material Trace History
Vendor Part	Part Maintenance

Reference	Drill Back Window
Vendor	Vendor Maintenance
Work Order	Manufacturing Window

To drill back from one of the above reference types, double-click the table row, or select the row and click the Open button.

By default, the search results list shows 50 results in the window. Click the Next 50 button to view the next 50 documents. If you would like to view all documents in a single list, click the Fill All button. If you use the Fill All option, the system may take longer to populate the grid with the search results.

Exporting Information from the Search Results Table

You can export the search results to Microsoft Excel or to a report.

To export the search results to Excel, click the **Export to Microsoft Excel** button. The system exports the information in the search table to an Excel spreadsheet.

To export the search results to a report, click the output drop-down to select the output format, then click the **Print** button.

The system exports the search result list. It exports the current viewed list only; for example, if you are viewing the first 50 results in a search, the system exports only the first 50. To export all search results, first click the **Fill All** button, then export the data.

Chapter 8: Document Lifecycle

This chapter includes this information:

Topic	Page
Viewing Document Lifecycles	8–2
Lifecycle Source and Target Buttons	8–15

Viewing Document Lifecycles

Several processes go into a typical sales transaction or purchasing transaction. For example, a sale may begin with a quote you provide a potential customer. When the customer accepts the quote, the quote becomes the basis for a customer order. You create a work order, then the order ships. You create an accounts payable invoice, then the customer remits payment. Use the Document Lifecycle feature to track your sales and purchasing processes from beginning to end.

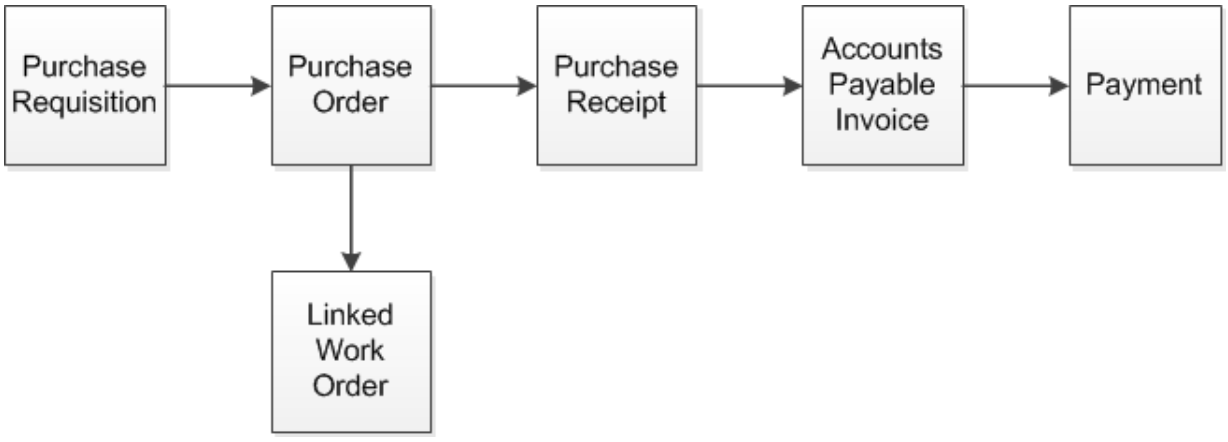
The Lifecycle Document Viewer shows you documents linked to the sales or purchasing document that you are currently viewing. You can drill down to view all linked documents. For example, if you are viewing a purchase order, you can use the Lifecycle Document Viewer to see the purchase receipts, purchase requisitions, work orders, A/P invoices, and A/P payments associated with the purchase order.

Purchasing Lifecycle

You can access the Purchasing Lifecycle Document Viewer in these windows:

- Purchase Requisition Entry
- Purchase Order Entry
- Purchasing Window
- Manufacturing Window
- Purchase Receipt Entry
- AP Invoices
- AP Payments

This diagram shows a complete purchasing lifecycle:



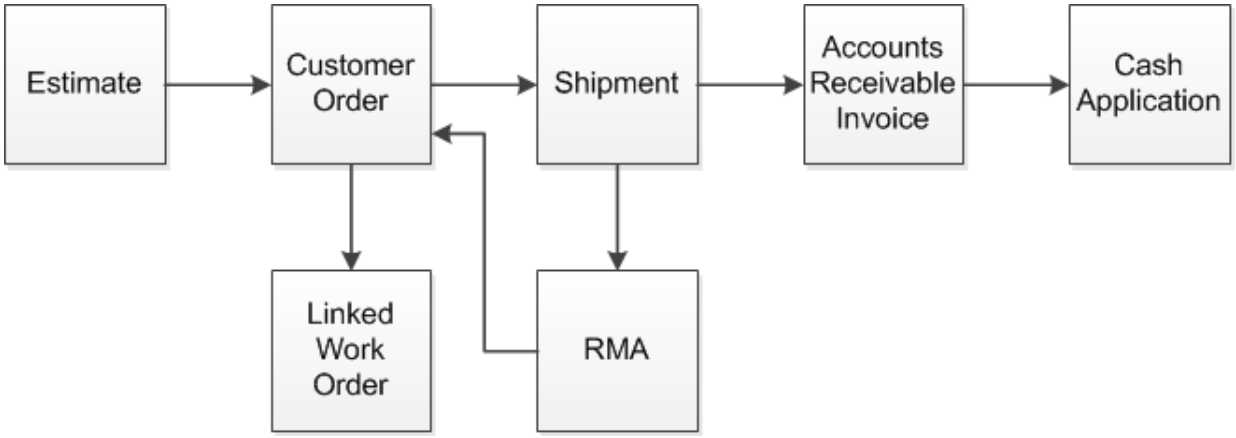
If a purchase order has been allocated to a work order, then the work order is also shown in the lifecycle. The purchase order can be for a material requirement or for an outside service.

Sales Lifecycle

You can access the Lifecycle Document Viewer in these Sales modules:

- Estimating Window
- Customer Order Entry
- Order Management Window
- Manufacturing Window
- Return Material Authorization
- Shipment Entry
- AR Invoices
- AR Payments

This diagram shows a complete sales lifecycle:



If a work order is allocated to a customer order, then the work order is displayed in the lifecycle. If a new customer order is created to address an RMA, then the new customer order is also included in the lifecycle.

Accessing the Lifecycle Document Viewer

To access the Lifecycle Document Viewer, select **Info**, **Document Lifecycle…** in purchasing transaction or sales transaction window. In the Manufacturing Window, select either **Info**, **Sales Lifecycle** or **Info**, **Purchasing Lifecycle**.

Choosing a Lifecycle Document Display

You can view lifecycle information in a Tree display or in a Graphical display.

In the tree display, the documents are displayed in a list categorized by type. To open a document in the lifecycle, double-click the document ID. To view additional details about each document listed in the tree, click Show Detail.

The Tree display shows all documents linked to the transaction you were viewing when you accessed the Document Lifecycle Viewer.

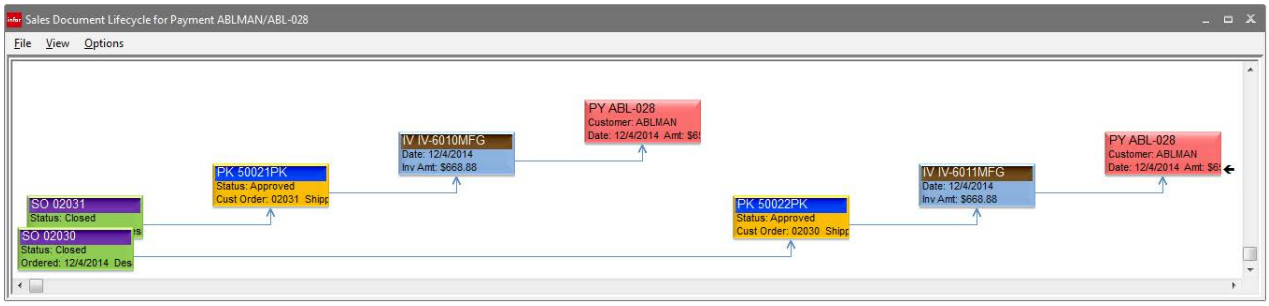
You can also print the Lifecycle report from the Tree view.

In the Graphical display, each document in the lifecycle is represented by a card. On each card, key information about the document is displayed, such as the document ID and the document status. You can customize the information displayed on the cards. Lines drawn between cards show the relationship between the transactions. To open a document, double-click the card.

If a document in the lifecycle has an attached reference file, a paper clip is displayed. Double-click the paper clip to display the Document Reference dialog. You can open the reference from the dialog.

If a document in the lifecycle has attached activities, then an activity icon is displayed. Double-click the icon to view the activities related to the document in Activity Maintenance.

In certain cases, the Graphical display may not show all documents in the lifecycle. If a document is linked to multiple lifecycle paths, then all paths are shown only if they begin with the same document type. For example, say you are viewing an invoice that is linked to two shipments for two orders. If both orders began with an estimate or neither order began with an estimate, then both lifecycle paths linked to the payment are shown.



If one of the orders began with an estimate, but the other did not, then only the lifecycle path for the order that began with an estimate is shown. In cases where only some of the lifecycle paths can be shown, the lifecycle shows the longest paths available.

When multiple paths are shown, the same document may be displayed in the lifecycle multiple times. For example, if an invoice is linked to two shipments, the invoice is displayed twice in the lifecycle.

Your lifecycle view selection persists from session to session. For example, if you are viewing the Graphical Display and then exit the window, the Graphical Display is shown again the next time you access the Document Lifecycle Viewer.

Key Differences in Lifecycle Document Views

This table shows the key differences between the lifecycle document views:

	Tree View	Graphical View
Are all documents in the lifecycle displayed?	Yes	Yes, if all paths in the lifecycle begin with the same document type. If the paths begin with different document types, then only the longest path is shown. For example, say you are viewing an invoice that is linked to two shipments for two orders. If both orders began with an estimate, then both lifecycle paths linked to the payment are shown. If one of the orders began with an estimate, but the other did not, then only the lifecycle path for the order that began with an estimate is shown.
Can I see a completion meter on transactions?	No	Yes
Can I attach the lifecycle viewer to the edge of the main window?	No	Yes, except in the Manufacturing Window, Order Management Window, and Purchase Management Window.
Can I print the Lifecycle report from this view?	Yes	No
Can I see if documents are attached to the transactions? Can I open attached documents?	No	Yes
Can I see if activities are attached to the transactions? Can I open attached activities?	No	Yes

Document Lifecycle and VISUAL Global Financials

Invoices and payments that you create in VISUAL Financials Global Edition are displayed in the sales and purchasing lifecycles. If you double-click an invoice ID or payment ID to open it, the invoice or payment is opened in VISUAL Financials Global Edition.

To use this feature, ensure that the .NET configuration settings are specified correctly in the VISUAL .NET Configuration dialog in Application Global Maintenance. If the user who is currently signed in to VISUAL does not use the same credentials to sign into VISUAL Financials Global Edition, the user is prompted for sign in credentials.

Security and the Document Lifecycle

If a user does not have permission to access a document, then minimal information about the document is displayed in the Document Lifecycle. For example, if a user cannot access Shipping Entry, then the user cannot view detailed information about shipments in the Sales Document Lifecycle. Generally, users without permission to a document can see the document's ID only.

Using the Tree Display

If the Graphical Display is displayed when you open the Document Lifecycle Viewer, select View, Show Graphical Display to clear the check box next to Show Graphical Display. The Tree Display is displayed.

In the Tree View, you can perform these actions:

- View document details
- Configure document details information
- Open a related document
- Print the Document Lifecycle Report

Viewing Document Details

You can view additional information about each document listed in the Document Lifecycle pane. To view document details:

Click the **Show Detail** button. For purchasing lifecycle documents, you can view:

Purchase Requisitions – Requisition ID, Vendor ID, Status, Requisition Date, Purc Order ID.

Purchase Orders – Purc Order ID, Vendor ID, Status, Order Date, Desired Recv Date, Total Ordered.

Work Orders – Work Order ID, Purchase Order ID, Status, Want Date, Quantity.

Purchase Receipts – Receiver ID, Purc Order ID, Act Recv Date.

AP Invoices – Voucher ID, Vendor ID, Receiver ID, Purc Order ID, Invoice Date, Invoice Total

AP Payments – Bank Account ID, Control No, Vendor ID, Payment Date, Payment Amount, Total Payment, Voucher ID.

For sales lifecycle documents, you can view:

Quotes – Quote ID, Customer ID, Status, Quote Date, Expiration Date, Sales Order ID, RMA ID.

Orders – Sales Order ID, Customer ID, Status, Order Date, Desired Ship Date, Customer PO, Total Ordered.

Work Orders – Work Order ID, Sales Order ID, Status, Want Date, Quantity.

RMAs – RMA ID, Shipment ID, Original Order, New Order, Type, Status.

Shipments – Shipment ID, Sales Order ID, Status, Actual Ship Date.

AR Invoices – Invoice ID, Customer ID, Shipment ID, Sales Order ID, Invoice Date, Invoice Total.

AR Payments – Payment Ref ID, Payment ID, Customer ID, Payment Date, Payment Amount, Total Payment, Invoice ID, Cust Order(s).

Configuring Document Details

You can decide which details to view in the detail tables. If you resize or reorder the columns in the detail view, you can save your changes as a default.

Selecting Details to View

You can limit the information displayed in the Lifecycle Viewer. The selections you make affect only the detail information. Your selections do not affect the categories available in the document tree.

If you are viewing the Lifecycle Viewer from a purchasing module, then the selections you make are applied to all purchasing modules. For example, if you access the Lifecycle Viewer from Purchase Order Entry and hide AP Invoices, then AP Invoices are also hidden when you open the Lifecycle Viewer from Purchase Receipt Entry. Similarly, the details you select to view in a sales module applies to all sales modules.

The selections you make remain in effect the next time you open the Lifecycle Viewer. Your selections are also saved in the Preferences Maintenance table. The selections you make for the purchasing lifecycle are stored in the PurchasingLifeCycle section. The selections you make for the sales lifecycle are stored in the SalesLifeCycle section.

To select the details to view:

1. Select the **View** menu.
2. Select the document types to view in the Lifecycle Viewer. A check mark indicates that the information is displayed in the Lifecycle Viewer. Select an item to toggle between selected and cleared. If you are viewing the lifecycle in a purchasing module, the sales lifecycle documents are unavailable for selection. If you are viewing the lifecycle in a sales module, the purchasing documents are unavailable for selection.
3. Repeat the procedure for each document type to view or hide.
4. To hide any module that has no documents, clear the check box next to **Show Document Types with No Data**.

Saving Widths and Positions

You can rearrange and resize the columns in the Details panel. After you customize the columns, you can save your preferences. Select **Options**, **Save Widths and Positions**. When you next access the Lifecycle Document Viewer, the tables in the Details panel are displayed based on your saved settings.

You can only customize the columns of the tables that are displayed in the Details panel.

You can set up a default view for all purchasing modules and for all sales modules. You cannot set up default preferences on a module by module basis. For example, the preferences you save in Customer Order Entry also apply to AR Invoice Entry; however, the preferences do not apply to Purchase Order Entry.

The settings you specify are saved in the Preferences Maintenance table.

Viewing Details in Separate Tables

You can view document details in separate, floating tables. When you use a separate table, you can sort the columns and you can export the table to Excel. You cannot customize the order or size of columns in floating tables.

To view document details as a separate table, click the **Plus** icon in the table that contains the detail information to view. The information is displayed in a separate table. Select **File**, **Send to Microsoft Excel** to export the information to an Excel file.

To close the separate table, select **File**, **Exit**.

Opening a Related Document

To open a related document, either double-click the document ID in the document list or double-click the line for the document in the detail table.

The linked document is displayed in the module in which it was created.

Printing the Document Lifecycle Report

You can print a document lifecycle report. The report shows the lifecycle information you are currently viewing.

To print the report:

1. Select the output method from the output drop-down menu.
2. Click **Print**.

Using the Graphical View

If the Tree View is displayed when you open the Document Lifecycle Viewer, select **View**, **Show Graphical Display**.

A card is displayed for each document in the lifecycle. You can customize the size of the cards and the information displayed on the cards. On certain cards, a completion meter is shown.

Lines are drawn between cards to show the connections between the transactions.

If a document is attached to a transaction, then a paper clip is displayed next to the card. Double-click the paper clip to view the documents. If an activity is attached to a transaction, then the activity button is displayed next to the card. Double-click the button to view the activities attached to the transaction. See "Activity Maintenance" on page 5–10 of this guide.

In the Graphical View, you can perform these actions:

- View information about documents in the lifecycle
- View attached documents and activities
- Customize information on the cards
- Customize the size of the cards
- Attach the lifecycle viewer to the main window

Viewing Information about Documents in the Lifecycle

By default, certain information is displayed on each card in the lifecycle viewer. The information displayed depends upon the type of transaction represented on the card.

Purchasing Transactions

This information is displayed on the purchasing transaction cards:

Purchase Requisitions

Line 1 – Purchase Requisition ID

Line 2 – Status

Line 3 – Requisition Date and Vendor ID

Purchase Order

Line 1 – Purchase Order ID. Line 1 also shows a completion meter. You can use the completion meter to estimate how much of the purchase order has been delivered. If the meter extends beyond the border of the card, then you received more than you ordered on the purchase order.

Line 2 – Status

Line 3 – Order Total (expressed in currency) and Order Date

Work Order

Line 1 – Order ID. The completion meter shows the percentage of the desired quantity that has been received into inventory. If the meter extends beyond the border of the card, then you have received more than the desired quantity of the work order.

Line 2 – Status

Line 3 – Want Date and Quantity

Line 4 – Order ID of the linked purchase order

Purchase Receipt

Line 1 – Receiver ID. Line 1 also shows a completion meter. The completion meter shows the percentage of the order that has been invoiced. If the meter extends beyond the border of the card, then you invoiced more than you ordered.

Line 2 – Received Date

Line 3 – Purchase Order ID

Accounts Payable Invoice

Line 1 – Invoice ID. Line 1 also shows a completion meter. The completion meter shows the percentage of the invoice paid to date. If the meter extends beyond the border of the card, then you overpaid the invoice.

Line 2 – Invoice Date

Line 3 – Invoice Amount

Payment

Line 1 – Payment ID

Line 2 – Bank

Line 3 – Payment Date and Payment Amount

Sales Transactions

This information is displayed on sales transaction cards:

Quote

Line 1 – Quote ID

Line 2 – Status

Line 3 – Quoted date

Sales Order

Line 1 – Order ID. The completion meter shows the percentage of the order shipped. If the meter extends beyond the border of the card, then you overshipped the order.

Line 2 – Status.

Line 3 – Ordered date and Desired Ship date.

Line 4 – Amount (expressed in currency)

Work Order

Line 1 – Order ID. The completion meter shows the percentage of the desired quantity that has been received into inventory. If the meter extends beyond the border of the card, then you have received more than the desired quantity of the work order.

Line 2 – Status

Line 3 – Want Date and Quantity

Line 4 – Order ID of the linked customer order

RMA

Line 1 – RMA ID. The completion meter shows the percentage of the return quantity authorized that has been received. If the meter extends beyond the border of the card, then the customer has returned more than the authorized quantity.

Line 2 – RMA type and RMA Status

Line 3 – Original customer order ID and new customer order ID

Shipment

Line 1 – Packlist ID. The completion meter shows the percentage of the packlist that has been invoiced. If the meter extends beyond the border of the card, then you invoiced more than you shipped.

Line 2 – Status

Line 3 – Customer Order ID and Shipped Date

Invoice

Line 1 – Invoice ID – The completion meter shows the percentage of the invoice paid. If the meter extends beyond the border of the card, then the customer has overpaid the invoice.

Line 2 – Invoice Date

Line 3 – Invoice Amount

Line 4 – Customer Order ID and Packlist ID

Payment

Line 1 – Payment ID

Line 2 – Customer ID

Line 3 – Payment Date and Amount

Customizing Card Information

You can rearrange and relabel the information shown on lines two through four of cards in the Graphical Display. By default, the first line shows the ID of the transaction. You cannot edit this line.

To rearrange and relabel card information:

1 In the Graphical Viewer, select **Options**, **Card Line Preference**.

2 Specify this information:

Object Type – Specify the type of card to edit. If you accessed the Document Lifecycle Viewer from a purchasing module, then only purchasing transaction cards are available. If you access the Document Lifecycle Viewer from a sales module, then only sales transaction cards are available.

Line # – Specify the line to edit. You can select line 2, 3 or 4.

Data Column – Click the arrow to specify the data to show on the line. You can select only from the predefined options.

Hide If – You can hide the data label if no data exists or if the value is zero. For example, if you are editing the Shipment card, you can hide the Invoice Amount information if the invoice amount is 0. To hide information if the value is zero, select Zero. To hide the data label if the information does not exist, select Null. To always show the data label, leave the Hide If cell blank.

Prefix – Specify text to insert at the beginning of the data. You can use the Prefix as the data label. A preview of your prefix and the data is displayed beneath the table. The data is replaced by a token, such as %1.

Suffix – Specify text to insert at the end of the data. If you specify a suffix, a sample is displayed beneath the table.

3 Click **Save**.

Customizing Card Size

You can customize the size of the cards. You can enlarge the cards to show more information, or reduce the size of the cards to show more cards in the window. You can also specify the font to use on the cards.

You can specify up to six card size preferences. You can set up a card size preference for longer lifecycles that shows more cards in the viewer. Or, you can set up a card size preference for shorter lifecycles that uses larger cards.

The settings you specify apply to all cards in both the purchasing lifecycle and sales lifecycle.

To customize the size of the cards:

1 In the Graphical Display, select **Options**, **Size Preference**.

2 In the table, select the preference number to set up.

3 Specify this information:

Font – Specify the font and font size to use. The font you select is applied to all lines on the card. The size you select is applied to lines two through four. To make the first line more prominent, the first line is two point sizes larger than the size you specify.

Bold – To display the text in bold typeface, select the Bold check box. To display the text in plain type face, clear the old check box.

Number of lines of text – Specify the number of card lines to display when cards overlap. For example, if you specify 2 in this field, then you would see the full height of the first card and the first two lines of the second card.

Width (in char cells) – Specify the number of characters to show on each line.

Height (in char cells) – Specify the number of lines to show on each card.

Offset (in char cells) – Specify the number of characters to use as the margin.

4 To specify a preference as the default preference, select the row and then select the **Default** check box. When you open the graphical display, your default settings are used.

5 To view your changes in the Graphical Display, click **Apply**.

6 Click **Save**.

Selecting the Size Preference to View

After you set up size preferences, you can use keyboard controls to select the size preference to view. These keys correspond to the size preferences:

Shift + F1 – Preference 1

Shift + F2 – Preference 2

Shift + F3 – Preference 3

Shift + F4 – Preference 4

Shift + F5 – Preference 5

Shift + F6 – Preference 6

Hold the shift key down while selecting the function key.

You can also select the size preference from the Options menu.

Customizing Card Color

You can select the colors to use for the lifecycle cards.

To customize colors:

1 In the Graphical Display, select **Options**, **Color Preference**. If you access the Color Preferences dialog from a purchasing module, then only purchasing transactions cards are available. If you access the Color Preferences dialog from a sales module, then only sales transaction cards are available.

2 For each transaction, use the color picker to specify the primary and fade to colors to use. If you do not want to use a fade effect on your cards, specify the same color for the primary and fade to colors.

3 To save these colors as your default colors, select the **Save as Default** check box. To use these colors for the current session only, clear the Save as Default check box.

4 Click **Ok**.

Restoring Original Settings

To restore the cards to the original colors used when VISUAL was delivered:

1 In the Graphical Display, select **Options**, **Color Preference**.

2 Click **Restore Defaults**. If you accessed the Color Preferences dialog from a purchasing module, then the purchasing transaction cards are reset. If you accessed the Color Preferences dialog from a sales module, then the sales transaction cards are reset.

Attaching the Lifecycle Viewer to a Window

You can attach the graphical lifecycle display to the edge of the application window. Drag the lifecycle to within a few pixels of the edge of the window. When you release the mouse button, the lifecycle is attached to the edge. You can attach the lifecycle to any edge of the window. When you move the window, the lifecycle is moved with it.

Lifecycle Source and Target Buttons

If you are viewing a transaction, such as a purchase order, you can use the source and target toolbar buttons to view related transactions. Use the source button to view the previous transaction in the lifecycle. Use the target button to view the next transaction in the lifecycle.

For example, in Purchase Order Entry, Source and Target buttons are available. Click the Source button to view the purchase requisition used to create the purchase order you are viewing. Use the Target button to view receipts made for the purchase order. The tooltips for the buttons show which window is opened when you click the button.

If more than one transaction is associated with the transaction you are viewing, you can select the transaction to view when you click the Source or Target button. For example, if you are viewing a purchase order and multiple purchase receipts were made for the order, you can select the receipt to view when you click the Source button.

The toolbar buttons are active only if the related transaction exists. For example, if you are viewing a purchase order but have not received any portion of the order, the Target button is unavailable.

This table shows where source and target toolbar buttons are available:

If you are viewing the...	The source window is...	The target window is...
Estimating Window	n/a	Customer Order Entry
Customer Order Entry	Estimating Window	Shipping Entry
Shipping Entry	Customer Order Entry	Accounts Receivable Invoice Entry
Accounts Receivable Invoice Entry	Shipping Entry	Cash Application
Cash Application	Accounts Receivable Invoice Entry	n/a
Purchase Requisition Entry	n/a	Purchase Order Entry
Purchase Order Entry	Purchase Requisition Entry	Purchase Receipt Entry
Purchase Receipt Entry	Purchase Order Entry	Accounts Payable Invoice Entry
Accounts Payable Invoice Entry	Purchase Receipt Entry	Accounts Payable Payment Entry
Accounts Payable Payment Entry	Accounts Payable Invoice Entry	n/a

Chapter 9: In-context View Panels

This chapter includes this information:

Topic	Page
In-context View Panels	9–2
About the View Panel Charts	9–8

In-context View Panels

You can view additional information about a customer, vendor, or order on view panels. As you view different information in the main window, the view panel is updated to show relevant information. For example, if you are viewing the Part view panel in Customer Order Entry, the information on the panel changes when you select an order line for a different part.

Some view panels have three sets of information: summary, chart, and info. The summary view shows up to ten pieces of information. You can select the information to display on the summary view. The chart shows key information about the object that you are viewing. For example, if you are viewing the Customer view panel, the graph shows the customer's credit limit, credit balance, and total outstanding orders, shipments, and invoices. The Info view shows detailed information about the object that you are viewing. You can customize the Info view.

Other view panels have either only a chart or only the Info view.

This table shows the in-context view panels, where you can access them in the system, and the type of information available:

View Panel Name	Available In	Information Types	Notes
Customer view panel	Customer Maintenance Customer Order Entry Estimating Window Order Management Window Receivable Inquiry AR Invoice Entry	Summary Chart Info	If you access the panel from Customer Maintenance, the panel shows order and credit information for the entity specified on the Entity Credit Limit tab. If you access the panel from Customer Order Entry, the Order Management Window, Estimating Window, or Receivable Inquiry, the panel shows information for the parent entity of the site specified on the order.

View Panel Name	Available In	Information Types	Notes
Part view panel	Customer Order Entry Estimating Window Order Management Window Material Planning Window Purchase Order Entry Purchase Management Window Purchase Requisition Entry	Summary Chart Info	In Part Maintenance, if you select **Tenant** in the site ID field, the information displayed in the view panel is for all sites. The view panel includes information for all sites, whether or not a particular site is a viewable site for the user. In all other cases, the information displayed in the view panel is for the site specified in the main window.
Customer Order Line view panel	Customer Order Entry Order Management Window	Chart	
Performance Leadtime view panel	Customer Order Entry Estimating Window Order Management Window	Chart	To view information in this panel, you must set up a performance leadtime process type and assign it to a part.
Production Cost & Gross Profit	Customer Order Entry Order Management Window	Chart	
Work Order view panel	Manufacturing Window	Info	
Operation view panel	Manufacturing Window	Info	
Material view panel	Manufacturing Window	Info	
Purchase view panel	Purchase Order Entry Purchase Management Window	Info	

View Panel Name	Available In	Information Types	Notes
Vendor view panel	Purchase Order Entry Purchase Management Window Purchase Requisition Entry Material Planning Window Vendor Maintenance Payable Inquiry AP Invoice Entry	Summary Chart Info	If you access the panel from Vendor Maintenance or Payable Inquiry, then the panel shows order information for the entity you specify on the panel. If you access the panel from any another window, then the panel shows order information for parent entity of the site specified in the Site ID field. If you access the panel from the Material Planning Window, then the panel is shown only if you selected a purchased part. The information for the selected part's preferred vendor is shown. In all other windows, information for the vendor selected in the main window is shown.

The title bar of the view panel shows the name of the panel, the ID of the currently selected entity (for information at the entity level) or site (for information at the site level), and the ID of the object whose information you are viewing. For example, if you are viewing a Customer view panel, the title bar shows Customer View, followed by the selected entity, followed by the ID of the customer.

Displaying and Arranging View Panels

To display a view panel in an application, select the panel from the View menu. A check mark is inserted next to the view panel's name, and the panel is displayed.

You can attach the view panel to the left, right, or bottom edge of the window. Drag the view panel to within a few pixels of the edge of the window. When you release the mouse button, the panel is attached to the edge. You can attach view panels to any edge of the window. When you move the window, the panels are moved with it.

The location of the panels and the type of information you were viewing are retained from session to session. The panel arrangement in place when you exit a window remains the same when you re-launch the window. The location of the panels is identical, and the type of information you were viewing when you exited the window is also retained.

To temporarily close a panel, click the X button in the top right corner of the panel. If you view a different ID in the main window, the panel is reopened. For example, if you are viewing customer ABLMAN in Customer Maintenance and close the panel, if you then view customer ACME the panel is reopened. To prevent the panel from being displayed when you next access the VISUAL window, select the panel from the View menu to remove the check mark.

Resizing View Panels

You can resize the view panels both horizontally and vertically. Depending on the type of information you are viewing, the information on the panel responds in different ways.

In the Summary view, information is displayed in two columns. No borders are drawn between the columns. As you stretch and shrink the panel horizontally, the columns become larger and smaller. If you stretch or shrink the panel vertically, the amount of space the columns use remains the same. A scroll bar is displayed when necessary.

In the Chart view, the chart expands and shrinks both horizontally and vertically as you change the size of the panel.

In the Info view, the amount of space taken by the information on the panel does not change when you change the size of the panel. Scroll bars are displayed when necessary.

Customizing the View Panel Interface

When a view panel has multiple information types, you can decide how to display the buttons you use to navigate between the information types.

Choosing a Button Display

When you first open the view panel, a toolbar is displayed at the bottom. You can use the buttons on the toolbar to select the information type to view. For example, to view the chart, click the Chart toolbar button.

You can display the buttons in an “accordion” view. In the accordion view, the buttons are larger and stacked one on top of another. Perform one of these steps:

- Drag up the bar that separates the toolbar from the information. As you drag the bar up, buttons are added to the accordion view.
- Click the arrow in the toolbar and select Show More Buttons. Repeat this step to display additional buttons.

To display the buttons in a toolbar, perform one of these steps:

- Drag down the bar that separates the buttons from the information. As you drag the bar down, buttons are removed from the accordion view and added to the toolbar.

- Click the arrow in the toolbar and select Show Fewer Buttons. Repeat this step to remove all buttons from the accordion view and add them to the toolbar.

Removing Buttons

If you do not use a particular information type, you can remove the button for that type. For example, if you do not use the Info information type in the Customer view panel, you can remove the Info button from the panel interface.

To remove a button, click the arrow in the toolbar, select Add or Remove buttons, and then select the button to remove. To show the button again, repeat the procedure.

You can also use the Navigation Pane Options dialog to remove buttons:

1 Click the arrow in the toolbar and select **Navigation Pane Options**.

2 To remove a button, clear the check box next to the button name.

3 Click **Ok**.

Rearranging Buttons

You can decide the order in which to display the buttons. For example, you can decide to show the Chart button in the first position on the toolbar or the top position in the accordion view.

To change the order:

1 Click the arrow in the toolbar and select **Navigation Pane Options**.

2 To move a button down, click the name of the button, and then click the **Move Down** button. To move a button up, click the name of the button, and then click the **Move Up** button.

3 Click **Ok**.

To return the buttons to their original order, click the **Reset** button.

Setting Up the Summary View

You can specify up to ten pieces of information to display on the Summary view. This section describes the basic procedure to use to set up the Summary view. The information available for selection depends on the type of panel.

In the Summary view, data is displayed in two columns. Each column contains five pieces of information. If you have not set up the summary view panel, certain data is displayed by default. You can change the panel to display the data important to you.

Certain view panels are used in more than one window. For example, the Customer in-context view panel is used in Customer Maintenance, Customer Order Entry, and several other places. You must set up the Summary view in each location where the view panel is used separately. The information

you set up for the view panel in Customer Maintenance is used only in Customer Maintenance, and the information you set up for the view panel in Customer Order Entry is used only in Customer Order Entry. You can set up the Customer Summary view to show certain information when you display the panel in Customer Maintenance, and other information when you display the panel in Customer Order Entry.

To set up the Summary view:

1 On the panel, click the **Summary** button.

2 Select **Config**, **Configure Summary Fields**.

3 For each field number, click the arrow to specify the data to show in the field. Fields 1, 3, 5, 7, and 9 are displayed on the left side of the Summary view. Fields 2, 4, 6, 8, and 10 are displayed on the right side of the Summary view. The fields are displayed in descending order by field number.

   You can leave fields blank.

4 Click **Ok**.

Setting Up the Info View

This section describes the basic procedure to use to set up the Info view. The information available for selection depends on the type of panel.

Certain view panels are used in more than one window. For example, the Customer in-context view panel is used in Customer Maintenance, Customer Order Entry, and several other places. You must set up the Info view in each location where the view panel is used separately. The information you set up for the view panel in Customer Maintenance is used only in Customer Maintenance, and the information you set up for the view panel in Customer Order Entry is used only in Customer Order Entry. You can set up the Customer Info view to show certain information when you display the panel in Customer Maintenance, and other information when you display the panel in Customer Order Entry.

To set up the Info view:

1 On the panel, click the **Info** button.

2 Select **Config**, **Configure Table**. A list of available fields is displayed.

3 To add a field to the panel, select the row and then click **Make Visible**.

   To remove the field from the panel, click the **Make Hidden** button.

   Some field titles are preceded by a Plus sign. These fields are “headers” that help organize the information on the panel. For example, you can select the Contact header for the Vendor panel. If you also select the contact first name and contact last name, the system nests these two fields under Contact. In the panel, you can click the Plus sign to expand the information underneath the header.

4 To edit the name of the data, click in the Title column and specify the name to use.

5 Click **Ok**.

About the View Panel Charts

View panel charts are made up of lines and bars. To view the exact value of a bar, rest the pointer on the bar. To view the exact value of a line, rest the pointer on the circle that is displayed in the middle of the line.

You can click a bar to review the information used to construct the bar. For example, in the Customer View Panel chart, you can click the Orders bar to view the released orders that contributed to the value expressed by the bar. The list of orders is displayed in a grid, and only orders placed in your allowable sites for the entity are displayed. You can sort and arrange the data in the grid in a variety of ways. See "Grids" on page 2–23 in this guide.

To export the contents of the table to Microsoft Excel, right-click in the table and select **Send to Microsoft Excel**.

You can click an ID in the grid to view more information. For example, in the orders grid you can click an order ID to open the order.

Customer View Panel Chart

The Customer View Panel chart shows information about the customer's credit and outstanding balances. The chart has two lines and four bars. All values are shown in the accounting entity's functional currency.

In Customer Order Entry, the Estimating Window, the Order Management Window, and AR Invoice Entry, the chart shows information for the parent accounting entity of the site specified on the header. In Customer Maintenance, the chart shows information for the accounting entity specified on the Entity Credit Limit tab. In Receivable Inquiry, use the drop-down menu at the top of the panel to specify the site whose parent entity information you want to view.

These two lines are shown:

Credit Limit – A line is displayed for the customer's credit limit. in the selected entity.

Credit Balance – A line is displayed for the customer's credit balance. If the customer has a negative credit balance, then no line is displayed. If you view the Customer View Panel Chart in Customer Order Entry or the Order Management window, then the credit balance line value matches the value shown in the Credit Balance field on the Credit tab.The credit balance is calculated by subtracting the customer's outstanding balance from the credit limit. Specify how to calculate customer outstanding balance in Accounting Entity Maintenance.

The chart has four bars. The bars show totals for all sites in the selected accounting entity, including sites you are not allowed to access. When you click a bar, a grid is displayed showing transactions that contribute to the total value of the bar. The grid shows transactions created in your allowable sites only. As a result, the total of the transactions shown in the grid may not match the total shown by the bar.

This table shows the bars displayed in the chart:

Bar	This bar shows...	Click a bar to view
Orders	The total amount of open order lines. A line is open if one of these conditions is true: • The line has a status of On Hold, Firmed, or Released. • The line has a status of Inherit, and the status of the header is On Hold, Firmed, or Released. Sales tax and VAT are not included in the amount calculations.	**Order ID** – The ID of the customer order is displayed. Click an ID to open the order in Customer Order Entry. If you are viewing the Customer View Panel in Customer Order Entry, then the order you select replaces the order you were viewing in order entry. **Desired Ship Date** – The date that the customer wants the order shipped is displayed. **Order Amt** – The monetary value of the order. If the order is late, then the amount is displayed in red. An order is considered to be late if it has not shipped by the desired ship date. **Shipped Amt** – The monetary value of any shipments made against the open lines of the order. Shipments made against closed lines are not included in the calculation. **Currency ID** – The functional currency ID of the selected accounting entity is displayed. **Site ID** – The ID of the site where the transaction was created is displayed.
Shipped	The total amount of uninvoiced shipments. Sales tax and VAT are not included in the amount calculations.	**Packlist ID** – The ID of the packlist used to ship the order. Click the ID to open the shipment in Shipping Entry. **Shipped Amount** – The monetary value of the shipment. If the order did not ship before the desired ship date, then the value is displayed in red. **Shipped Date** – The date that the order shipped is displayed. **Ship Via** – The shipping method used to ship the order is displayed. **Currency ID** – The functional currency ID of the selected accounting entity is displayed. **Site ID** – The ID of the site where the transaction was created is displayed. **Order ID** – The ID of the customer order is displayed. Click an ID to open the order in Customer Order Entry. If you are viewing the Customer View Panel in Customer Order Entry, then the order you select replaces the order you were viewing in order entry.

Bar	This bar shows...	Click a bar to view
Invoices	The total amount of unpaid invoices. Sales tax and VAT are included in the amount calculations.	**Invoice ID** – The ID of the invoice is displayed. Click the ID to open the invoice in Invoice Entry. **Balance Amount** – The total outstanding balance is displayed. If the amount is overdue, then the amount is displayed in red. **Invoice Date** – The date of the invoice is displayed. **Invoice Amount** – The total amount of the invoice is displayed. If the amount is overdue, then the amount is displayed in red. **Paid Amount** – The amount paid to date is displayed. **Currency ID** – The functional currency ID of the selected accounting entity is displayed. **Site ID** – The ID of the site where the transaction was created is displayed.
Total	The sum of the orders, shipments, and invoices bars.	Information about all transactions that contribute to the customer balance. The information shown in the table is a combination of the other three bars. The Type column shows whether the transaction is a customer order, a packlist, or an invoice. Click an ID to open the transaction.

Order Line View Panel Chart

The Order Line View Panel chart shows information about costs and anticipated profit for the selected line. Costs and profit are shown at the site level. All values are shown in the functional currency of the site's parent accounting entity.

The chart has two lines and three bars. These two lines are shown:

Sell Price – The extended price of the customer order line is displayed. The extended price is calculated by multiplying the unit price by the number of units ordered and then applying any pertinent discounts.

Profit – The profit is calculated by subtracting the projected costs from the sell price. If the projected costs are higher than the sell price, then no profit line is shown. If no costs have been specified for the part, then the Profit line is equal to the Sell Price line. In this case, the Sell Price line is superimposed on the Profit line.

This table shows the bars displayed in the chart:

Bar	This bar shows...
Estimated Costs	The estimated costs to produce the quantity on the line. If the customer order line is linked to a work order, then the work order is used to calculate estimated costs. The costs are prorated if the linked quantity from the customer order is less than the total quantity produced by the work order. If the customer order line is not linked to a work order, then the standard costs specified on the part record are used. If the customer order line is partially allocated to a work order, the allocated quantity uses the work order costs and the unallocated quantity uses the part standard costs for the site on the order.
Actual Costs	The actual costs incurred for any shipped quantities. For customer order line quantities linked to a work order, the actual costs from the work order are used to calculate this bar. For customer order line quantities not linked to a work order, the actual cost layers for shipped quantities are used to calculate this bar.
Projected Costs	The projected total costs to produce the quantity on the line. Projected costs are calculated by adding the actual costs for any shipped quantities to the estimated costs for any unshipped quantities. For quantities allocated to a work order, the work order is used to calculate the actual and estimated costs. For quantities not allocated to a work order, the actual cost layer for the shipment is used for the actual costs, and any remaining quantity is calculated using the part standard for the site specified on the order.

Click any bar to view this information:

Supply ID – If any portion of the customer order line is allocated to a work order, then the ID of the work order is displayed. Click the ID to open the work order. If any portion of the customer order line is not allocated to a work order, then Other is displayed.

Supply Qty – If any portion of the customer order line is allocated to a work order, then the allocated quantity is displayed. If no quantities have been received on the work order by the want date, then this value is displayed in red. If any portion of the customer order line is not allocated to a work order, then the quantity of the customer order line that derives costs from the part standard is displayed.

Shipped Qty – The quantity of the line that has shipped is displayed.

Want Date – For quantities linked to a work order, the want date of the work order is displayed. If the quantity is not linked to a work order, then no information is displayed.

Supply Status – For quantities linked to a work order, the status of the work order is displayed. If the quantity is not linked to a work order, then no information is displayed.

Estimated – For quantities linked to a work order, the total of the estimated costs from the work order is displayed. The costs are calculated by adding the costs specified on the Costs tab of all Material cards and Operation cards for the quantity linked to the customer order. For quantities not linked to a work order, the total costs from the part standard for the site on the order are multiplied by the quantity in the Qty column.

Actual – For quantities linked to a work order, the actual costs from finished goods receipts for the work order is displayed. For quantities not linked to a work order, the total of actual cost layers for shipped quantities is displayed.

Projected – For quantities linked to a work order, the estimated costs for any quantities that have not shipped are added to the actual costs for quantities that have shipped. For quantities not linked to a work order, any unshipped quantities are multiplied by the part standard costs for the site and added to the actual costs for quantities that have shipped.

Sell Price – The extended price of the customer order line is displayed. The extended price is calculated by multiplying the unit price by the number of units ordered and then applying any pertinent discounts.

Est. Gross Profit – This value is calculated by subtracting the estimated costs from the sell price.

Proj. Gross Profit – This value is calculated by subtracting the projected costs from the sell price.

Gross Profit Diff. – The estimated gross profit is subtracted from the projected gross profit. If the value is negative, then the number is displayed in red.

Currency ID – The functional currency of the site's parent accounting entity is displayed.

U/M – The unit of measure specified for the part on the customer order line.

Sched Start Date – For quantities linked to a work order, the scheduled start date of the work order is displayed.

Sched Finish Date – For quantities linked to a work order, the scheduled finish date of the work order is displayed.

Order Line View Panel Chart and the Standard Costing Method

If you use the Standard costing method, then these conditions apply to the calculations made for order quantities not allocated to work orders:

- Estimated costs are based on the current part standard. If the standard costs are changed for a part, then the graph is updated accordingly. Original Estimated costs are not saved.
- Actual costs are based on the standard cost at the time of shipment. This calculation is made for both the Actual bar in the graph, and the actual cost portion of the Projected bar. Actual costs are not recalculated if the part standard is changed.
- Projected costs are based on the current part standard for unshipped quantities plus the part standard at the time of shipment for shipped quantities.

For order quantities allocated to work orders, these conditions apply:

- Estimated costs are based on the part standards in place at the time the work order is generated. If the part standards are changed, the estimated costs are not updated unless you update the costs on the work order.
- Projected costs initially match estimated costs. When cost variances occur in the work order, the projected costs will be updated to include the variance and will no longer match the part standard. The variance is considered when calculating the projected gross profit. When the work order costs are posted to the ledger, the variance is posted to the variance accounts and not to the cost of goods sold accounts.

Performance Leadtime View Panel Chart

Use the Leadtime View Panel to view information about the leadtime performance for a particular sales order or quote. You can view two charts: the Standard vs. Actual (Days) chart and the Percent Complete chart.

The Standard vs. Actual (Days) chart shows a comparison of your actual performance and the standards that you specified in the Process Type dialog. The X-axis shows each step in your process. The Standard bar shows the expected number of days required to complete each step. The Actual bar shows the actual number of days it took to complete each step.

The Percent Complete chart shows the percentage complete of each step in the process.

Part View Panel Chart

The Part View Panel chart shows information about the current inventory levels for the selected part. If you are viewing the Part View Panel from Purchase Order Entry, Sales Order Entry, or the Estimating Window, you must select a line in the table to display data in the chart. The chart shows information for the site specified in the Site ID field.

In the Material Planning Window, select a part to display data in the chart. The chart shows information for the site specified in the Site ID field.

In Part Maintenance, if you specify **Tenant** in the part header, then the bars in the chart show information for all sites, whether or not you are allowed to view the sites. When you click a bar, a grid is displayed showing the part quantities that contribute to the total value of the bar. The grid shows quantities in your allowable sites only. As a result, the total of the quantities shown in the grid may not match the total shown by the bar. If you specify a site in the Site ID field, then the chart shows only information for the selected site.

The chart contains one line and four bars.

The line shows the safety stock quantity.

This table shows the bars displayed in the chart:

Bar	This bar shows...	Click a bar to view
On Hand	The current quantity on-hand.	**Warehouse ID** – The ID of the warehouse where the part is stored. All warehouses that can store the part are listed. **Qty** – The quantity currently stored in the warehouse. Click a warehouse ID to view the locations where the part can be stored. This information is displayed: **Location ID** – The ID of the location in the warehouse where the part can be stored is displayed. **Qty** – The quantity currently on hand in the warehouse location is displayed. **Status** – The status of the part in the warehouse location is displayed.
Demand	The current demand for the part.	**Type** – The type of transaction generating the demand is displayed. These demand types are used: **CO** – Customer Order **RQ** – Material Requirement **WH** – Interbranch transfer **Warehouse ID** – The ID of the warehouse that supplies the demand is displayed. **Qty** – The quantity of the demand is displayed. Click the type or the warehouse ID to view the demand transactions. This information is displayed: **ID** – The ID of the demand transaction is displayed. Click the ID to open the record. **Qty** – The quantity of the demand transaction is displayed. If the quantity has not been delivered by the date specified in the next column, then the value is displayed in red. **Desired Ship Date/Required Date** – If the demand is generated by a customer order or interbranch transfer, then the desired ship date of the transaction is displayed. If the demand is generated by a material requirement, then the Required Date specified on the Planning tab of the material requirement card is displayed. **Site ID** – The site associated with the transaction is displayed.

Bar	This bar shows...	Click a bar to view
On Order	The current quantity on order. Quantities supplied as a work order co-product are included.	**Type** – The type of transaction generating the supply order is displayed. These supply types are used: **PO** – Purchase Order **WO** – Work Order **WH** – Interbranch transfer **Warehouse ID** – The ID of the warehouse where the supply order will be delivered is displayed. **Qty** – The quantity of the supply order is displayed. Click the type or the warehouse ID to view the supply transactions. This information is displayed: **ID** – The ID of the supply transaction is displayed. Click the ID to open the record. **Qty** – The quantity of the supply transaction is displayed. If the quantity has not been delivered by the date specified in the next column, then the value is displayed in red. **Desired Recv Date/Want Date** – If the supply is generated by a purchase order or interbranch transfer, then the desired receive date of the transaction is displayed. If the supply is generated by a work order, then the Want Date specified on the work order header card is displayed. **Site ID** – The site associated with the transaction is displayed.
Available	The quantity available to issue to transactions.	**Warehouse ID** – The ID of the warehouse where the part is available. **Qty** – The quantity stored in the warehouse that is available to issue. Click a warehouse ID to view this information: **Location ID** – The ID of the location that stores the quantity is stored is displayed. **Qty** – The quantity available at the location is displayed. **Status** – The status of the location is displayed.

Production Cost & Gross Profit Panel Chart

The Production Cost & Gross Profit Panel chart shows information about costs and anticipated profit for the order. Costs and profit are shown at the site level. All values are shown in the functional currency of the site's parent accounting entity.

The chart has two lines and three bars. These two lines are shown:

Sell Price – The extended price of the customer order is displayed. The extended price is calculated by multiplying the unit price by the number of units ordered and then applying any pertinent discounts for all lines in the order.

Profit – The profit is calculated by subtracting the projected costs from the sell price. If the projected costs are higher than the sell price, then no profit line is shown. If no costs have been specified for the part, then the Profit line is equal to the Sell Price line. In this case, the Sell Price line is superimposed on the Profit line.

This table shows the bars displayed in the chart:

Bar	This bar shows...
Estimated Costs	The estimated costs to produce the quantity in the order. For lines that are linked to a work orders, the work order is used to calculate estimated costs. The costs are prorated if the linked quantity from the customer order is less than the total quantity produced by the work order. If a part in the order is not linked to a work order, then the standard costs specified on the part record are used. If a customer order line is partially allocated to a work order, the allocated quantity uses the work order costs and the unallocated quantity uses the part standard costs for the site on the order.
Actual Costs	The actual costs incurred for any shipped quantities. For quantities linked to a work order, the actual costs from the work order are used to calculate this bar. For quantities not linked to a work order, the actual cost layers for shipped quantities are used to calculate this bar.
Projected Costs	The projected total costs to produce the order. Projected costs are calculated by adding the actual costs for any shipped quantities to the estimated costs for any unshipped quantities. For quantities allocated to a work order, the work order is used to calculate the actual and estimated costs. For quantities not allocated to a work order, the actual cost layer for the shipment is used for the actual costs, and any remaining quantity is calculated using the part standard for the site specified on the order.

Click any bar to view this information:

Ln# – The line number of the order.

Line Status – The status of the order line.

Supply ID – If any portion of the customer order line is allocated to a work order, then the ID of the work order is displayed. Click the ID to open the work order. If any portion of the customer order line is not allocated to a work order, then Other is displayed.

Supply Qty – If any portion of the customer order line is allocated to a work order, then the allocated quantity is displayed. If no quantities have been received on the work order by the want date, then this value is displayed in red. If any portion of the customer order line is not allocated to a work order, then the quantity of the customer order line that derives costs from the part standard is displayed.

Shipped Qty – The quantity of the line that has shipped is displayed.

Want Date – For quantities linked to a work order, the want date of the work order is displayed. If the quantity is not linked to a work order, then no information is displayed.

Supply Status – For quantities linked to a work order, the status of the work order is displayed. If the quantity is not linked to a work order, then no information is displayed.

Estimated – For quantities linked to a work order, the total of the estimated costs from the work order is displayed. The costs are calculated by adding the costs specified on the Costs tab of all Material cards and Operation cards for the quantity linked to the customer order. For quantities not linked to a work order, the total costs from the part standard for the site on the order are multiplied by the quantity in the Qty column.

Actual – For quantities linked to a work order, the actual costs from finished goods receipts for the work order is displayed. For quantities not linked to a work order, the total of actual cost layers for shipped quantities is displayed.

Projected – For quantities linked to a work order, the estimated costs for any quantities that have not shipped are added to the actual costs for quantities that have shipped. For quantities not linked to a work order, any unshipped quantities are multiplied by the part standard costs for the site and added to the actual costs for quantities that have shipped.

Sell Price – The extended price of the customer order line is displayed. The extended price is calculated by multiplying the unit price by the number of units ordered and then applying any pertinent discounts.

Est. Gross Profit – This value is calculated by subtracting the estimated costs from the sell price.

Proj. Gross Profit – This value is calculated by subtracting the projected costs from the sell price.

Gross Profit Diff. – The estimated gross profit is subtracted from the projected gross profit. If the value is negative, then the number is displayed in red.

Currency ID – The functional currency of the site's parent accounting entity is displayed.

U/M – The unit of measure specified for the part on the customer order line.

Sched Start Date – For quantities linked to a work order, the scheduled start date of the work order is displayed.

Sched Finish Date – For quantities linked to a work order, the scheduled finish date of the work order is displayed.

Order Line View Panel Chart and the Standard Costing Method

If you use the Standard costing method, then these conditions apply to the calculations made for order quantities not allocated to work orders:

- Estimated costs are based on the current part standard. If the standard costs are changed for a part, then the graph is updated accordingly. Original Estimated costs are not saved.
- Actual costs are based on the standard cost at the time of shipment. This calculation is made for both the Actual bar in the graph, and the actual cost portion of the Projected bar. Actual costs are not recalculated if the part standard is changed.
- Projected costs are based on the current part standard for unshipped quantities plus the part standard at the time of shipment for shipped quantities.

For order quantities allocated to work orders, these conditions apply:

- Estimated costs are based on the part standards in place at the time the work order is generated. If the part standards are changed, the estimated costs are not updated unless you update the costs on the work order.
- Projected costs initially match estimated costs. When cost variances occur in the work order, the projected costs will be updated to include the variance and will no longer match the part standard. The variance is considered when calculating the projected gross profit. When the work order costs are posted to the ledger, the variance is posted to the variance accounts and not to the cost of goods sold accounts.

Vendor View Panel Chart

The Vendor View Panel shows information about your outstanding transactions with the vendor in an accounting entity. All values are shown in the accounting entity's functional currency.

In Purchase Order Entry, the Purchase Management Window, Purchase Requisition Entry, the Material Planning Window, and AP Invoice Entry, the chart shows information for the parent accounting entity of the site specified on the header. In Vendor Maintenance and Payable Inquiry, use the drop-down menu at the top of the panel to specify the accounting entity.

In the Material Planning Window, information is shown for the preferred vendor of the current part. In all other cases, information is shown for the vendor selected in the main window.

The chart has four bars. The bars show totals for all sites in the selected accounting entity, including sites you are not allowed to access. When you click a bar, a grid is displayed showing transactions that contribute to the total value of the bar. The grid shows transactions created in your allowable sites only. As a result, the total of the transactions shown in the grid may not match the total shown by the bar.

This table shows the bars displayed in the chart:

Bar	This bar shows...	Click a bar to view
Orders	The total amount of open orders. If any lines on the order have been completely received, then those lines are not included in the calculation. An open order has the status of Firmed or Released. Sales tax and VAT are not included in the amount calculations.	**Order ID** – The ID of the purchase order is displayed. Click an ID to open the order in Purchase Order Entry. If you are viewing the Vendor View Panel in Purchase Order Entry, then the order you select replaces the order you were viewing in order entry. **Desired Recv Date** – The date that you want to receive the order is displayed. **Order Amt** – The monetary value of the order line. If the order is late, then the amount is displayed in red. An order is considered to be late if it has not been received the desired receive date. **Received Amt** – The monetary value of any receipts made against the order. Only partial receipts are considered. If a particular line on the purchase order is closed, the line is not considered in the calculation. **Currency ID** – The functional currency ID of the selected accounting entity is displayed. **Site ID** – The ID of the site where the transaction was created is displayed.
Received	The total amount of uninvoiced receipts. Sales tax and VAT are not included in the amount calculations.	**Receiver ID** – The ID of the receiver and the receiver line are displayed. Click the ID to open the receipt in Purchase Receipt Entry. **Received Amount** – The monetary value of the receipt. Only uninvoiced values are shown. If the order was not received before the desired receive date, then the value is displayed in red. **Received Date** – The date that the order was received is displayed. **Purchase Order ID** – The ID of the purchase order that was received. Click the ID to open the order in Purchase Order Entry. **Ship Via** – The shipping method that the vendor used to ship the order is displayed. **Currency ID** – The functional currency ID of the selected accounting entity is displayed. **Site ID** – The ID of the site where the transaction was created is displayed.

Bar	This bar shows...	Click a bar to view
Invoices	The total amount of unpaid invoices. Sales tax and VAT are included in the amount calculations.	**Voucher ID** – The ID of the voucher is displayed. Click the ID to open the voucher in Accounts Payable Invoice Entry. **Balance Amount** – The total outstanding balance is displayed. If the amount is overdue, then the amount is displayed in red. **Invoice Date** – The date of the invoice is displayed. **Invoice Amount** – The total amount of the invoice is displayed. If the amount is overdue, then the amount is displayed in red. **Paid Amount** – The amount paid to date is displayed. **Currency ID** – The functional currency ID of the selected accounting entity is displayed. **Site ID** – The ID of the site where the transaction was created is displayed.
Total	The total amount of open orders, uninvoiced receipts, and unpaid invoices.	Information about all transactions that contribute to your open balance with the vendor. The information shown in the table is a combination of the other three bars. The Type column shows whether the transaction is a purchase order, a receiver, or an invoice. Click an ID to open the transaction.

Chapter 10: Dashboard

This chapter includes this information:

Topic	Page
About the Dashboard	10–2
Setting Up the Dashboard	10–3
Data for Metrics	10–7
Analytics	10–12
Available System Analytics	10–16
Detail Grids	10–27
Available System Detail Grids	10–30

About the Dashboard

Use the Dashboard to display a wide variety of key performance metrics. You can create your own metrics or use predefined system metrics.

Over 40 system metrics are included with VISUAL. These metrics show information about sales, purchasing, and production. You can customize system metrics to show information for the parts, customers, vendors, and so on, that are most important to you.

Two types of metrics are used: analytics and detail grids. Analytics are displayed as a pie chart, vertical bar graph, horizontal bar graph, or line graph. They provide you with a snapshot view of data, and you can compare information in different time periods, for different customers, for different vendors, and so on. Detail grids list information you can use to analyze information about your business. You can access detail grids from an analytic, and you can also display detail grids independently. You can sort the information in the grid by any of the columns and drill to a related document.

If the system metrics do not meet your needs, you can create your own metrics. When you create your own metrics, you first create a data source. A data source is a SQL statement that extracts the information that you want to include in your metrics. After you build the data source, you create the analytic or detail grid. You can share your custom metric with others.

After you decide which metrics and analytics to display in your dashboard, you can share the dashboard with others. You can set up multiple dashboards.

Accessing the Dashboard

To access the dashboard, select **File**, **Dashboard**. You must be running the main VISUAL executable (VM.exe) to access the Dashboard.

Setting Up the Dashboard

To set up the dashboard, first specify the entity whose information you want to view, and specify a caption for the dashboard. Then, add the analytics, detail grids, and status information. You can add the same metric multiple times. For example, if you are a sales manager, you may want to view Bookings vs. Shipments for the entire entity, and also Bookings vs. Shipments filtered specifically for each of the sales reps that report to you.

After you add metrics, use the options on the Window menu to arrange the metrics on your screen. When you are satisfied with your settings, you can save the layout. When you next open the Dashboard, the dashboard you designated as your default is displayed.

Creating a Dashboard

To create a dashboard:

1 Select **File**, **New**.

2 Specify this information:

Entity ID – Select the ID of the accounting entity to use in the metrics.

Caption – Specify the caption to use for the dashboard. The caption is the name of your dashboard. The text you specify is displayed in the title bar after the name of your database. If you share this dashboard, then the caption is used to identify the dashboard in the dashboard Open dialog.

Default – To make this dashboard your default dashboard, select this check box. When you access the dashboard, the default dashboard is displayed. If this dashboard is not your default dashboard, clear the check box.

Shared – To share this dashboard with other users, select this check box. If this dashboard is available only to you, clear this check box.

3 Click **Ok**.

4 Add metrics:

- To add an analytic, click **Add Analytic**. To add a system analytic, click **System**, then click **Ok**. See "Adding an Analytic" on page 10–12 of this guide. To add a custom analytic, click **Custom**, then click **Ok**.
- To add a detail grid, click **Add Detail Grid**. To add a system detail grid, click **System**, then click **Ok**. See "Adding a Detail Grid" on page 10–27 of this guide. To add a custom detail grid, click **Custom**, then click **Ok**.

5 Arrange the metrics. You can resize and move the metrics manually. You can also use the options available in the Window menu to automatically arrange the metrics. Select the Window menu, and then select from these options:

Tile Vertical – When you select this option, the metrics are made as tall as possible. Generally, this results in fewer rows and more columns of metrics. For example, if you are displaying 8 metrics and you select Tile Vertical, the metrics are arranged in two rows of four metrics.

Tile Horizontal – When you select this option, the metrics are made as wide as possible. Generally, this results in more rows of fewer columns of metrics. For example, if you are displaying 8 metrics and you select Tile Horizontal, the metrics are arranged in four rows of two metrics.

Cascade – When you select this option, the metrics are cascaded on top of each other.

Note: Depending on the number of metrics you select, selecting Tile Vertical or Tile Horizontal may result in the same layout.

6 Save your dashboard settings. To save your dashboard settings, perform one of these steps:

- Click **Save**.
- Select **Options**, **Save Dashboard on Exit**. Then, exit the dashboard.

After you save your layout, be careful not to click Save if you temporarily rearrange your dashboard. If you click Save, your previous layout for the dashboard is replaced with the current layout.

What Information Is Saved when You Save a Dashboard?

When you save the dashboard, only the primary analytics and detail grids are saved. The analytics and detail grids are saved with the filters and criteria you specified when you added them.

Any secondary grids or charts opened as a result of clicking an analytic to view more information are not saved. For example, if you are viewing the Sales Bookings analytic and you have clicked a bar to view the bookings for that bar, only the Sales Bookings analytic is saved. The grid you opened when you clicked the bar is not saved.

Opening a Dashboard

When you open a dashboard, the dashboard you open is displayed instead of the dashboard you are currently viewing. You can view only one dashboard at a time.

To open a dashboard:

1 Select **File**, **Open**. In the table, all dashboards you created are listed. If other users created shared dashboards, then these dashboards are also listed.

2 Select the dashboard to open.

3 Click **Ok**.

Displaying the Dashboard on Start Up

You can display the dashboard automatically when you sign into VISUAL. To display the dashboard on start up, select **Options**, **Open Dashboard on VISUAL Sign In**.

Editing a Dashboard

You can make these edits in a dashboard:

- **Change the entity**. To change the entity used in the dashboard, select Options, Dashboard Settings. In the Entity ID field, specify the entity to use, and then click Ok.
- **Change the caption**. To change the caption, select Options, Dashboard Settings. In the Caption field, specify the new caption to use, and then click Ok.
- **Change an analytic**. You can change the filters used in an existing analytic, and you can change the analytic to a different type of analytic. To change the analytic, right-click the analytic and select Chart Criteria. Edit the information, and then click Ok. You cannot change an analytic to a detail grid.
- **Change a detail grid**. You can change the filters used in an existing detail grid, and you can change the detail grid to a different type of detail grid. To change the detail grid, click Item Settings. Edit the information, and then click Ok. You cannot change an analytic to a detail grid.
- **Add a metric**. You can add a metric to an existing dashboard.
- **Rearrange metrics**. You can move and resize the metrics on the dashboard.

To edit a dashboard:

1. Select **File**, **Open**.
2. Select the dashboard to edit, and then click **Ok**.
3. Edit the dashboard.
4. To permanently save your dashboard edits, click **Save**. If you do not want to permanently save your edits, click **Restore**. When you click Restore, the dashboard is reset to its previously saved state.

Creating a Local Copy of a Shared Dashboard

If you open a shared dashboard and click Save, a copy of the dashboard is created and associated with your user ID. If changes are made to the shared dashboard after you save a copy, your copy is not updated.

To copy a shared dashboard:

1. In the dashboard, select **File**, **Open**.
2. Select the shared dashboard to open and then click **Ok**.
3. Click **Save**. A copy is created and associated with your user ID. The next time you select File, Open to open a dashboard, your copy and the shared copy are both listed.

Deleting a Dashboard

Use caution when deleting a dashboard. When you delete a dashboard, the dashboard is permanently deleted. You cannot restore it. If you delete a shared dashboard, the dashboard is deleted for all users.

To delete a dashboard:

1 Select **File**, **Open**.

2 Select the dashboard to delete.

3 Click **Ok**.

4 Click **Delete**. A message is displayed warning you that the active dashboard will be deleted.

To delete the dashboard, click **Yes**.

Data for Metrics

Before you can view system metrics, you must set up the reporting database tables.

Reporting Database Tables

Out-of-the-box Dashboard metrics use the reporting database tables to generate analytics and detail grids. Before you can view these metrics, you must load data into the reporting database tables.

To load data into the tables, first load existing data into the tables. You can manually load the data or use the reporting service to load existing data. You can limit the existing data that you write to the reporting tables by date.

After you load your existing data, you can decide how to keep the reporting database tables up-to-date. You can manually update the data, update the data automatically any time you change the VISUAL database, or use a service to update the data.

If you load your data manually, you can control when the update occurs. Loading the data manually offers you the most control over the data you load. You can choose to load only certain types of data, and you can use a date range to restrict the amount.

If you perform live updates of your data, then the reporting tables are always up to date with the latest information. Depending on the size of your database and the number of users, updating the data automatically may result in performance issues.

If you use a service to update the data, you specify when the reporting tables should be updated. You can specify a certain time of day to update the reporting tables, or you can specify how frequently to check for updates. When you use the service, each time a transaction is created, updated or deleted, a record is written to the SOA_DOC_SYNC table. When the service is run, the service checks this table to locate the information to update.

Loading Existing Data into the Reporting Database Tables

You can manually load existing data into the reporting database tables or use the reporting service to load the data.

Manually Loading Existing Data into the Reporting Database Tables

Only the SYSADM user can perform this procedure.

To load existing data:

1. Select **Admin**, **Application Global Maintenance**.
2. Select **Maintain**, **Visual Reporting Data**.
3. To load existing data immediately, in the Update Type section click either **Manual** or **Live**. You can also use the service to load existing data at a later time.

4 In the Start Date and End Date fields, specify the date range for the information to load. Leave both fields blank to load all existing data. To load all data after a certain date, specify a date in the Start Date field only.

5 In the table, select the data types to load. All data types except for VISUAL menu are used in the Dashboard metrics. You can use SHIFT+click and CTRL+click to select multiple rows.

6 Click **Load**.

Using the Reporting Data Loader Service to Load Existing Data

You can use the service to load existing data into the reporting tables. Use this feature to load existing data during a down-time for your company, such as over the weekend or later in the evening.

Only the SYSADM user can perform this procedure. The service must also be installed. See "Installing the Visual Reporting Data Loader Service" on page 10–9 of this guide.

To use the service to load existing data:

1 Select **Admin**, **Application Global Maintenance**.

2 Select **Maintain**, **Visual Reporting Data**.

3 In the Update Type section click **Service**.

4 In the Start Date and End Date fields, specify the date range for the information to load. Leave both fields blank to load all existing data. To load all data after a certain date, specify a date in the Start Date field only.

5 In the table, select the data types to load. All data types except for VISUAL menu are used in the Dashboard metrics. You can use SHIFT+click and CTRL+click to select multiple rows.

6 Click **Load**. If you selected Calendar Dates, the service immediately updates the reporting tables with calendar date information. For all other data types, the service updates the reporting tables when it is next scheduled to be run.

Updating the Reporting Database Tables

After you load existing data into the reporting database tables, you can update the tables in three ways: manually, with live updates, or with a service.

To update the tables manually, click Manual in the Update Type section. Then, use the procedure for loading existing data to update the tables.

To use live updates, click Live in the Update Type section. Anytime a user add, edits, or deletes a record that affects the metrics, the reporting tables are automatically updated. While this ensures that you reporting tables are always up-to-date, performance issues can occur.

To use the Visual Reporting Data Loader Service, you must first install the service and then specify when to run the service.

Installing the Visual Reporting Data Loader Service

The Reporting Data Loader Service updates the reporting tables on the days and times you specify. The service is run against a specific VISUAL database. If you have multiple VISUAL databases and would like to run the service on all databases, then you must install the service once for each database.

To install the service:

1. In your VISUAL executables directory, locate VRDTASVC.EXE.
2. Right-click VRDTASVC.EXE and select **Run as Administrator**. The Sign In dialog is displayed.
3. Specify this information:

   User ID – Specify the user ID that the service uses to sign into the VISUAL database. This can be any valid VISUAL user ID.

   Password – Specify the password associated with the user ID.

   Database – Specify the database on which to run the service.
4. Click **Sign In**. The name and description of the service is displayed.
5. Specify this information:

   Log File Directory – Specify where to store the log file for the service.

   Polling Interval – Specify how frequently the service should check for updates. The maximum value is 900 seconds.

   Log Level – Specify the level of information to write to the log file. Click one of these options:

   None – To write the time the service started, click this option. This option is recommended for normal production environments.

   Error – To write the time the service started and any error messages, click this option.

   Info – To write to the time the service started, error messages, and additional information about the service, click this option. The use of this option is recommended only if you are troubleshooting issues with the service. When you use this option, the size of the log file grows quickly.
6. Click **Install Service**.

Scheduling the Service

Only the SYSADM user can perform this procedure.

To schedule the service:

1. Select **Admin**, **Application Global Maintenanc**e.
2. Select **Maintain**, **Visual Reporting Data...**.
3. In the Update Type section, click **Service**.
4. Use the Service Schedule section to specify when the service is active. Specify this information:

Start Date – Specify the date that the service should start checking for updates. Leave this field blank or specify today's date if you do not want to delay the start of the service.

End Date – Specify the last date that the service should check for updates. Leave this field blank if you do not want to set up an expiration date for the service.

Enabled – To use the service, select this check box. To stop using the service, clear this check box.

5 In the Run Type section, specify whether the service continually checks for updates on the days you specify or checks for updates only at specified times. Click one of these options:

Immediate – To indicate that the service should continually check for updates on the days you specify, click this option. When you click this option, the polling interval specified when the service was installed is used to determine how frequently the service checks for updates. For example, if 600 was specified as the polling interval, then the service checks for updates every 600 seconds (10 minutes).

Weekly – To indicate that the service should check for updates only on the days and times you specify, click this option. When you click this option, the Run At fields become active.

6 In the Days of Week section, specify the days of the week to run the service.

7 The Run At section is available only if you clicked Weekly in the Run Type section. Use the Run At section to specify the times of day that the service should check for updates. The times you specify apply to all days that you run the service. You can run the service up to 6 times a day.

Note: The service may not run exactly at the time you specify. The service is prompted to check for updates at the time you specify, but the polling interval specified for the service may pass before the data is written to the reporting tables.

8 Click **Save**.

Monitoring the Service

You can view when the Reporting Data Loader Service was last run in the Visual Reporting Data Loader dialog. You can use this information to verify that your reporting tables are up-to-date. You can also reset the last run date.

Only the SYSADM user can perform this procedure.

To view and reset the last run date:

1 Select **Admin**, **Application Global Maintenance**.

2 Select **Maintain**, **Visual Reporting Data...**.

3 The date that the service was last run is displayed in the Last Run field. To clear this date, click **Clear**, and then click **Save**.

Removing the Reporting Data Loader Service

To remove the service:

1 In your VISUAL executables directory, locate VRDTASVC.EXE.

2 Right-click the VRDTASVC.EXE and select Run as Administrator. The Sign In dialog is displayed.

3 Specify this information:

User ID – Specify the user ID that the service uses to sign into the VISUAL database. This can be any valid VISUAL user ID.

Password – Specify the password associated with the user ID.

Database – Specify the database on which to run the service.

4 Click **Sign In**.

5 Click **Remove Service**.

Dashboard and VISUAL Financials Global Edition

If you use Infor VISUAL Financials Global Edition 7.4 or later, you can set up subscriptions in VISUAL Exchange to update the reporting database tables when you create or edit transactions in VISUAL Financials Global Edition. In VISUAL Exchange, activate these subscriptions:

- VFIN_PAYABLE and VFIN_VMFG_VF_PAYABLE
- VFIN_RECV_INVOICE and VFIN_VMFG_VR_RECEIVABLE

After you activate the subscriptions, you can request exchanges to load existing data into the reporting tables. As long as the subscriptions are active and the Exchange service is running, any new transaction information is exchanged into the reporting database tables automatically.

See “Activating Subscriptions for VISUAL Dashboard” and “Loading Existing Data into VISUAL Dashboard Reporting Tables” in the VISUAL Exchange online help.

Analytics

Analytics provide you with a snapshot view of data in your database.

All analytics are displayed as a pie chart, vertical bar graph, horizontal bar graph, or line graph. The analytic you select determines what type of chart or graph is used. You cannot select the type of graph. You also cannot customize the colors used in the graphs.

You can perform these tasks:

- View the values of the data that make up the chart or graph
- View the transactions that make up each data point
- Print the graph

VISUAL is delivered with a library of system analytics. These analytics provide insight into a variety of sales, purchasing, and engineering functions.

You can also create custom analytics. See "Custom Dashboard Metrics" on page 11–1 in this guide.

Adding an Analytic

To add an analytic:

1. Click **Add Analytic**.
2. Specify the type of analytic to add. To add an analytic that was delivered with VISUAL, click **System**. To add a custom metric, click **Custom**.
3. Click **Ok**.
4. In the Chart Type field, select the analytic to view.
5. In the Caption field, specify the caption. A default caption is inserted, but you can override the default. If you apply a particular filter to the analytic, you can change the caption to indicate the filter used.
6. Specify the settings and filters to apply to the analytic. The settings and filters that are available depend upon the analytic, but these fields are common:

   Top N – For analytics that show a certain number of bars, such as Top N Customers by Revenue, specify the number of bars to show.

   Series Category – In a bar graph, the series category determines what the bars in the graph represent. For example, if you select the Amount Purchased From Supplier analytic, and you specify Product Code as the series category, then each bar represents the total amount purchased by product code. In a pie chart, the series category determines what each of the wedges in the pie represent. For example, if you select the Tasks analytic and you specify Type as the Series Category, then the pie chart shows the percentage of tasks of each type.

   Series Grouping – Series grouping applies to bar graphs only. The series grouping determines what categories are used on the X-axis. For example, if you select Week as the series grouping, then each bucket on the X-axis represents one week. For date-based series groupings, the start

date of the grouping is used for the label. For example, if you specify Quarter as the series grouping, and you show information for the four quarters in 2015, then the start date of each quarter is used as the label on the X-axis: 1/1/2015, 4/1/2015, 7/1/2015, and 10/1/2015.

Sites – Select the sites to include in the metric. The child sites of the accounting entity specified for the dashboard are displayed, provided you are allowed to access them in security settings.

7 Use the Period Type, Periods, Horizon Periods, Begin Date, and End Date fields to specify the date range for the data in the analytic. You can specify date ranges in these ways:

- **No limitation by date.** To view all available data, specify Date Range in the Period Type field. Leave the Begin Date and End Date fields blank. If you do not specify a date range or specify a large date range, the analytic may take a long time to load.
- **By a specific date range.** To specify a date range, first specify Date Range in the Period Type field. Then, use the Begin Date and End Date fields to specify the date range. To view all information after a specific date, specify the date in the Begin Date field and leave the End Date field blank. To view all information before a specific date, specify the date in the End Date field and leave the Begin Date field blank. To view information for one specific date, specify the date in both the Begin Date and End Date fields.
- **By a specific number of past periods, future periods, or both**. To include data for a certain number of periods, specify the type of period to use in the Period Type field. You can select Days, Weeks, Months, Quarters, or Years.

  Use the Periods field to indicate the number of current and past periods to include. To include the current period only, specify 1 in the Periods field. To include past periods, specify the total number of periods to view including the current period. For example, to include the current period and the previous two periods, specify 3 in the Periods field.

  Use the Horizon Periods field to indicate the number of future periods to include. For example, to include the next two periods after the current period, specify 2 in the Horizon Periods field.

8 If filters are available for the analytic, fields are displayed below the End Date field. Specify the additional filters to use.

9 Click **Ok**.

Changing an Analytic

After you add an analytic, you can change the filters for the analytic or select a different analytic to display. To change an analytic, right-click the analytic and select **Chart Settings**. Change the chart information and filters as needed, and then click **Ok**.

Using the Slider in an Analytic

If an analytic contains a large amount of data, a slider is displayed. To scroll through the data in the analytic, click in the center of the slider and move the slider to the left or to the right. To change the number of buckets displayed on the X-axis, change the size of the slider. Click on the edge of the slider and make the slider smaller to display. Make the slider larger to view fewer buckets in the X-axis. Make the slider smaller to view more buckets in the X-axis.

You may need to exit and reopen the Dashboard to view the slider.

Viewing Analytic Data

When you display an analytic, you can view the underlying data used to create the analytic. To view data for a single bar or pie wedge, place your cursor over the bar or wedge. For bars, the value is displayed. For wedges, the percentage represented by the wedge is displayed. In line graphs, a circle is displayed to indicate the data points. Place your cursor over the circle to view the value.

To view the underlying data for the entire graph, right-click in the graph and select **Detail Data**.

Viewing Transactions for a Data Point

To view more details about each bar or wedge, click the bar or wedge. For example, if you are viewing the Top Customers by Revenue bar graph, click a bar to view the list transactions that contribute to the customer's total revenue. If a piece of data is underlined when you place your cursor on it, you can click the data to open up the related maintenance window. For example, in the Top Customers by Revenue detail grid you can click the customer ID to open the customer's record in Customer Maintenance and the Invoice ID to open the invoice in Accounts Receivable Invoice Entry. To export the contents of the grid to Microsoft Excel, right-click and select **Microsoft Excel**.

Printing an Analytic

When you print an analytic, your only option is to send the analytic to a printer. You cannot view, e-mail, or print the analytic to a file.

To print an analytic:

1. Click in the analytic to select it.
2. Click **Print**.
3. Select your printer, and then click **Ok**.

Removing an Analytic

To remove an analytic from the dashboard, click the Close button in the upper right corner.

If you are permanently removing the analytic from the dashboard, click **Save**.

If you are temporarily removing the analytic from the dashboard, do not click Save. To redisplay the analytic, click **Restore**.

Available System Analytics

This section describes the analytics that are delivered with VISUAL. For each analytic, this information is provided:

Type – The type of graph used is provided.

Y-axis – The value used for the Y-axis scale is provided.

Series categories (bars/wedges) – For bar graphs, the series category determines what the bars in the graph represent. For pie charts, the series category determines what the wedges represent. If you can select a series category, then the available selections are provided. Otherwise, the default category is displayed.

Series groupings (X-axis) – The series grouping determines the buckets used on the X-axis. If you can select a series grouping, then the available selections are provided. Otherwise, the default grouping is listed. If an analytic, such as a pie chart, does not use the X-axis, then n/a is listed.

Date filter applies to – If an analytic can be filtered by date, then the date used to determine if a transaction should be included in the analytic is provided. For example, if you apply a date filter to the Open Accounts Receivable analytic, then invoices with an invoice date that falls within your date filter are included in the analysis.

Filters – If other filters are available, a list is provided. You can use filters alone or in combination. For example, in the Amount Purchased From Supplier analytic you can view amounts purchased for a single vendor or for a single part. Or, you can combine these filters to view the amount of a particular part purchased from a particular supplier.

Detail grid – If you can click a bar or wedge to view more information, then the information you can view is briefly described.

Amount Purchased From Supplier

This analytic shows the monetary amounts of materials you purchase.

Type: Bar Graph

Y-axis: Amount (expressed in the accounting entity’s functional currency)

Series categories (bars): Vendor ID, Buyer, Product Code, Commodity Code. Each bar shows the total amount specified on the purchase order lines that make up the category.

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Purchase Order Date

Filters: Vendor ID, Buyer, Product Code, Commodity Code, Part ID, Site ID

Detail grid: Click a bar to open the Amount Purchased from Supplier Detail grid filtered to display the information that contributes to the bar. See "Amount Purchased From Supplier Detail" on page 10–30 of this guide.

Bookings vs. Shipments

This analytic shows the monetary total of your customer orders and the monetary total of shipments to your customers.

Type: Bar Graph

Y-axis: Amount (expressed in the accounting entity's functional currency)

Series categories (bars): No categories available for selection. For each series grouping, the chart shows one bar for bookings (customer orders) and one bar for shipments. In the bar for bookings, the extension price (quantity multiplied by unit price with discount applied) for each customer order line in the bar is shown. In the bar for shipments, the total value of the shipments is shown (shipped quantity multiplied by unit price with discount applied).

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Customer Order Date

Filters: Sales Rep ID, Product Code, Part ID, Site ID

Detail grids: Click a Booking bar to view the customer orders that contribute to the total shown by the bar in the Bookings vs. Shipments Detail grid. Click a Shipments bar to view the packlists that contribute to the total shown by the bar in the Bookings vs. Shipments Detail grid. See "Bookings vs. Shipments Detail" on page 10–30 of this guide.

Delivery Performance

This analytic shows the number of shipments you delivered early, the number delivered on time, and the number delivered late.

Type: Stacked Bar Graph

Y-axis: Number of shipment lines

Series categories (bars): No categories available for selection. For each series grouping, the chart shows a stacked bar. Each bar can have up to three parts. The bottom part shows shipment lines shipped on time. The middle part shows shipment lines shipped early. The top part shows shipment lines shipped late.

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Shipped Date

Filters: Customer ID, Sales Rep ID, or Part ID, Site ID

Detail grid: Click a section of a bar to open the Delivery Performance Detail grid filtered to display the shipments that contribute to the section. See "Delivery Performance Detail" on page 10–31 of this guide.

Open Accounts Receivable

This analytic shows the monetary value of outstanding accounts receivable invoices.

Type: Bar Graph

Y-axis: Amount (expressed in the accounting entity's functional currency)

Series categories (bars): Overall, Customer, Sales Rep

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Invoice Date

Filters: Customer ID, Sales Rep ID, Site ID

Detail grid: Click a bar to open the Open Accounts Receivable Detail grid filtered to display the invoices that contribute to the bar. See "Open Accounts Receivable Detail" on page 10–31 of this guide.

Open Accounts Payable

This analytic shows the monetary value of outstanding accounts payable invoices.

Type: Bar Graph

Y-axis: Amount (expressed in the accounting entity's functional currency)

Series categories (bars): Overall, Vendor

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Invoice Date

Filters: Vendor ID, Site ID

Detail grid: Click a bar to open the Open Accounts Payable Detail grid filtered to display the invoices that contribute to the bar. See "Open Accounts Payable Detail" on page 10–31 of this guide.

Process Activity % Over Std

This analytic shows the percentage of steps in your leadtime processes that took longer than the specified standard.

Type: Bar Graph

Y-axis: Percent

Series categories (bars): Process Type, Process ID

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: End date of process ID

Filters: Customer ID, Territory, Product Code, Part ID, Process ID, Process Type, Sites.

Detail Grid: Click a bar to view the Process Activity % Over Std detail grid filtered to display the process IDs that contribute to the bar.

Process Activity Average Performance

This analytic shows the difference between the standard established for each leadtime process and the actual amount of time each process took. The difference is expressed as a positive percentage for processes that took longer than the standard and as a negative percentage for processes that were completed in less time than the standard.

Type: Bar Graph

Y-axis: Percent

Series categories (bars): Process Type, Process ID

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: End date of process ID

Filters: Customer ID, Territory, Product Code, Part ID, Process ID, Process Type, Sites.

Detail Grid: Click a bar to view the Process Activity Average Performance detail grid filtered to display the process IDs that contribute to the bar.

Sales Bookings

This analytic shows the monetary value of customer orders.

Type: Bar Graph

Y-axis: Amount (expressed in the accounting entity's functional currency)

Series categories (bars): Overall, Territory, Customer, Sales Rep, Product Code

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Customer Order Date

Filters: Customer ID, Sales Rep ID, Territory, Product Code, Part ID, Site ID

Detail grid: Click a bar to open the Sales Booking Detail grid filtered to display the orders that contribute to the bar. See "Sales Booking Detail" on page 10–32 of this guide.

Shipments

This analytic shows the monetary value of shipments.

Type: Bar Graph

Y-axis: Amount (expressed in the accounting entity's functional currency)

Series categories (bars): Overall, Territory, Customer, Sales Rep, Product Code

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Actual Ship Date

Filters: Customer ID, Sales Rep ID, Territory, Product Code, Part ID, Site ID

Detail grid: Click a bar to open the Shipments Detail grid filtered to display the shipment lines that contribute to the bar. See "Shipments Detail" on page 10–33 of this guide.

Tasks

This analytic shows tasks created by Purchase Requisition Entry, ECN Entry, and Workflow.

Type: Pie chart

Y-axis: n/a

Series categories (wedges): Type, User ID, Status

Series groupings (X-axis): n/a

Date filter applies to: Create Date

Filters: Site ID

Detail grid: Click a wedge to open the Tasks Detail grid filtered to display the tasks that contribute to the wedge. See "Tasks Detail" on page 10–33 of this guide.

Top Customers by Open Balance

This analytic shows the customers with the highest unpaid invoice amounts. Unpaid invoices that are overdue and invoices that are not due to be paid yet are included. You can specify the number of customers to view in the chart.

Type: Horizontal bar graph

Y-axis: Customer IDs

Series categories (bars): None available for selection. Bars show the customers' total open balances.

Series groupings (X-axis): None available for selection. X-axis shows Amount (expressed in the accounting entity's functional currency).

Date filter applies to: Invoice Date

Filters: Sales Rep ID, Site ID

Detail grid: Click a bar to open the Top 5 Customers by Open Balance Detail grid filtered to display the invoices that contribute to the bar. The detail grid shows information for the selected customer only. See "Top Customers by Open Balance Detail" on page 10–33 of this guide.

Top Customers by Overdue Balance

This analytic shows the customers with the highest amount unpaid, overdue invoices. If an invoice is not due to be paid yet, the balance of the invoice is not included. You can specify the number of customers to view in the chart.

Type: Horizontal bar graph

Y-axis: Customer IDs

Series categories (bars): None available for selection. Bars show the customers' total overdue balances.

Series groupings (X-axis): None available for selection. X-axis shows Amount (expressed in the accounting entity's functional currency)

Date filter applies to: Invoice Date

Filters: Sales Rep ID, Site ID

Detail grid: Click a bar to open the Top 5 Customers by Overdue Balance Detail grid filtered to display the invoices that contribute to the bar. The detail grid shows information for the selected customer only. See "Top Customers by Overdue Balance Detail" on page 10–34 of this guide.

Top Customers by Revenue

This analytic shows the customers with the highest invoice amounts. Paid and unpaid invoices are included in the calculation. You can specify the number of customers to view in the chart.

Type: Horizontal bar graph

Y-axis: Customer IDs

Series categories (bars): None available for selection. Bars show the customers' total invoice amounts.

Series groupings (X-axis): None available for selection. X-axis shows Amount (expressed in the accounting entity's functional currency).

Date filter applies to: Invoice Date

Filters: Sales Rep ID, Site ID

Detail grid: Click a bar to open the Top 5 Customers by Revenue Detail grid filtered to display the invoices that contribute to the bar. The detail grid shows information for the selected customer only. See "Top Customers by Revenue Detail" on page 10–34 of this guide.

Top Vendors by Open Balance

This analytic shows the vendors with whom you have the highest unpaid invoice amounts. Unpaid invoices that are overdue and invoices that are not due to be paid yet are included. You can specify the number of vendors to view in the chart.

Type: Horizontal bar graph

Y-axis: Vendor IDs

Series categories (bars): None available for selection. Bars show the total open balance with each vendor.

Series groupings (X-axis): None available for selection. X-axis shows Amount (expressed in the accounting entity's functional currency).

Date filter applies to: Invoice Date

Filters: Site ID

Detail grid: Click a bar to open the Top 5 Vendors by Open Balance Detail grid filtered to display the invoices that contribute to the bar. The detail grid shows invoices for the selected vendor only. See "Top Vendors by Open Balance Detail" on page 10–34 of this guide.

Top Vendors by Overdue Balance

This analytic shows the vendors with whom you have the highest overdue invoice amounts. You can specify the number of vendors to view in the chart.

Type: Horizontal bar graph

Y-axis: Vendor IDs

Series categories (bars): None available for selection. Bars show the your total overdue balance with each vendor.

Series groupings (X-axis): None available for selection. X-axis shows Amount (expressed in the accounting entity's functional currency).

Date filter applies to: Invoice Date

Filters: Site ID

Detail grid: Click a bar to open the Top 5 Vendors by Overdue Balance Detail grid filtered to display the invoices that contribute to the bar. The detail grid shows invoices for the selected vendor only. See "Top Vendors by Overdue Balance Detail" on page 10–34 of this guide.

Vendor Performance

This analytic shows the number of purchases you received early, the number received on time, and the number received late.

Type: Stacked Bar Graph

Y-axis: Number of purchase receipt lines

Series categories (bars): No categories available for selection. For each series grouping, the chart shows a stacked bar. Each bar can have up to three parts. The bottom part shows orders received on time. The middle part shows orders received early. The top part shows orders received late.

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Received Date

Filters: Vendor ID, Buyer, Product Code, Commodity Code, Part ID, Site ID

Detail grid: Click a section of the bar to view the Vendor Performance Detail grid filtered to display the purchase receipt lines that contribute to that section. See "Vendor Performance Detail" on page 10–35 of this guide.

Vendor Price Performance

This analytic compares the costs of purchase receipts with the amounts invoiced for the purchase orders.

Type: Bar Graph

Y-axis: Amount (expressed in accounting entity's functional currency)

Series categories (bars): No categories available for selection. For each series grouping, the chart shows one bar for the value of purchase receipts and one bar for the value of the associated invoices.

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Invoice Date

Filters: Vendor ID, Site ID

Detail grid: Click a Received bar to view the Vendor Price Performance Detail grid filtered to display the purchase receipt lines that contributed to the bar. Click an Invoiced bar to view the Vendor Price Performance Detail grid filtered to display invoice lines associated with the purchase receipt lines. See "Vendor Price Performance Detail" on page 10–35 of this guide.

Work Order Estimated vs. Actual

This analytic compares the estimated costs of work orders with the actual costs incurred. Only closed orders are evaluated.

Type: Bar Graph

Y-axis: Amount (expressed in accounting entity's functional currency)

Series categories (bars): No categories available for selection. For each series grouping, the chart shows one bar for the estimated cost and one bar for the actual costs.

Series groupings (X-axis): Product Code, Planner, Part ID

Date filter applies to: Work Order Closed date

Filters: Work Order ID, Product Code, Part ID, Planner ID, Site ID

Detail grid: Click either bar in an X-axis bucket to view the Work Order Estimate vs. Actual Detail grid filtered to display the estimated and actual costs of the work orders that contributed to the bars. See "Work Order Estimated vs. Actual Detail" on page 10–36 of this guide.

Work Order Estimated vs. Actual Overall

This analytic compares the estimated costs of work orders with the actual costs incurred during particular periods of time. Only closed orders are evaluated.

Type: Bar Graph

Y-axis: Amount (expressed in accounting entity's functional currency)

Series categories (bars): No categories available for selection. For each series grouping, the chart shows one bar for the estimated cost and one bar for the actual costs.

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Work Order Closed Date

Filters: Work Order ID, Product Code, Part ID, Planner ID, Site ID

Detail grid: Click either bar in an X-axis bucket to view the Work Order Estimate vs. Actual Detail grid filtered to display the estimated and actual costs of the work orders that contributed to the bars. See "Work Order Estimated vs. Actual Detail" on page 10–36 of this guide.

Work Order Estimated vs. Projected

This analytic compares the estimated costs of work orders with the projected costs incurred by part ID, planner ID, product code, or overall for all work orders that meet your analytic criteria. All work orders are evaluated. Projected costs are calculated by adding the actual costs for the completed portion of a work order to the estimated costs for the incomplete portion of a work order.

Type: Bar Graph

Y-axis: Amount (expressed in accounting entity's functional currency)

Series categories (bars): No categories available for selection. For each series grouping, the chart shows one bar for the projected cost and one bar for the estimated costs.

Series groupings (X-axis): Product Code, Planner, Part ID, Overall

Date filter applies to: Want Date

Filters: Work Order ID, Product Code, Part ID, Planner ID, Site ID

Detail grid: Click either bar in an X-axis bucket to view the Work Order Estimate vs. Projected Detail grid filtered to display the estimated and actual costs of the work orders that contributed to the bars. See "Work Order Estimated vs. Projected Detail" on page 10–36 of this guide.

Work Order Estimated vs. Projected Overall

This analytic compares the estimated costs of work orders with the projected costs incurred during particular periods of time.

Type: Bar Graph

Y-axis: Amount (expressed in accounting entity's functional currency)

Series categories (bars): No categories available for selection. For each series grouping, the chart shows one bar for the projected cost and one bar for the estimated costs.

Series groupings (X-axis): Day, Week, Month, Quarter, Year

Date filter applies to: Want Date

Filters: Work Order ID, Product Code, Part ID, Planner ID, Status, Site ID

Detail grid: Click either bar in an X-axis bucket to view the Work Order Estimate vs. Projected Detail grid filtered to display the estimated and projected costs of the work orders that contributed to the bars. See "Work Order Estimated vs. Projected Detail" on page 10–36 of this guide.

Top Projects

This analytic is available only if you are licensed to use projects/A&D functionality. This analytic shows the projects with the highest target price. You can specify the number of projects to view in the chart.

Type: Bar Graph

Y-axis: Amount (expressed in accounting entity's functional currency)

Series categories (bars): No categories available for selection. For each series grouping, the chart shows these bars: Target Price, Target Cost, Target Profit Amount, Actual Amount. The actual amount is the total of actual costs incurred.

Series groupings (X-axis): No groupings available for selection. The series grouping is Project ID.

Date filter applies to: n/a. Date filter is not available.

Filters: Customer ID, Project Status, Business Line, Project Type, Contract Type, Contract Admin, Program Manager, Financial Analyst, Site ID

Detail grid: Click any bar to view the Project Info detail grid filtered to the selected project. See "Project Info" on page 10–37 of this guide.

Project Summary

This analytic is available only if you are licensed to use projects/A&D functionality. This analytic shows how project summary values have changed over time. The amounts displayed are based on your current ETC.

When you view the chart, you can view summary information measured in monetary amounts or summary information measured in hours. For example, you can compare EAC Amounts to Actual Amounts, or Budget Hours to Actual Hours, but you cannot compare EAC Amounts to Actual Hours.

Type: Line Graph

Y-axis: Amount (expressed in accounting entity's functional currency)

Available lines: Budget Amount, Budget Hours, Actual Amount, Actual Hours, EAC Amount, EAC Hours, Earned Amount, Earned Hours, Budget Variance, Cost Variance, EAC Budget Variance, Schedule Variance.

Series groupings (X-axis): No groupings available for selection. The series grouping is month and year.

Date filter applies to: Project performance duration. For example, if you began a project in January 2014 and ended the project in December 2014, you could view data for March 2014 through June 2014.

Filters: Project ID, Site ID. You must select a project ID to view data in this chart.

Detail grid: n/a

Detail Grids

Detail grids list information you can use to analyze information about your business. You can sort the information in the grid by any of the columns, drill to a related document, or export the information in the grid to Microsoft Excel.

VISUAL is delivered with a library of detail grids. These detail grids provide insight into a variety of sales, purchasing, and engineering functions.

You can also create custom detail grids. See "Custom Dashboard Metrics" on page 11–1 in this guide.

Adding a Detail Grid

To add a detail grid:

1. Click **Add Detail Grid**.
2. Specify the type of analytic to add. To add an analytic that was delivered with VISUAL, click **System**. To add a custom metric, click **Custom**.
3. Click **Ok**.
4. In the Grid Configuration field, select the grid to view.
5. In the Caption field, specify the caption. A default caption is inserted, but you can override the default. If you apply a particular filter to the detail grid, you can change the caption to indicate the filter used.
6. For grids that show information for a certain number of customers or vendors, such as Top N Customers by Revenue, specify the number of customers or vendors to include.
7. In the Sites field, select the sites to include in the metric. The child sites of the accounting entity specified for the dashboard are displayed, provided you are allowed to access them in security settings.
8. Use the Period Type, Periods, Horizon Periods, Begin Date, and End Date fields to specify the date range for the data in the analytic. You can specify date ranges in these ways:
    - **No limitation by date.** To view all available data, specify Date Range in the Period Type field. Leave the Begin Date and End Date fields blank. If you do not specify a date range or specify a large date range, the analytic may take a long time to load.
    - **By a specific date range.** To specify a date range, first specify Date Range in the Period Type field. Then, use the Begin Date and End Date fields to specify the date range. To view all information after a specific date, specify the date in the Begin Date field and leave the End Date field blank. To view all information before a specific date, specify the date in the End Date field and leave the Begin Date field blank. To view information for one specific date, specify the date in both the Begin Date and End Date fields.
    - **By a specific number of past periods, future periods, or both**. To include data for a certain number of periods, specify the type of period to use in the Period Type field. You can select Days, Weeks, Months, Quarters, or Years.

Use the Periods field to indicate the number of current and past periods to include. To include the current period only, specify 1 in the Periods field. To include past periods, specify the total number of periods to view including the current period. For example, to include the current period and the previous two periods, specify 3 in the Periods field.

Use the Horizon Periods field to indicate the number of future periods to include. For example, to include the next two periods after the current period, specify 2 in the Horizon Periods field.If filters are available for the detail grid, fields are displayed below the End Date field. Specify the additional filters to use.

9 Click **Ok**.

Changing a Detail Grid

After you add a detail grid, you can change the filters for the detail grid or select a different detail grid to display. To change a detail grid:

1 Right-click in the detail grid and select **Grid Settings**.

2 Change the information and filters as needed.

3 Click **Ok**.

Sorting Detail Grids

To sort a detail grid by a particular column, click the column header. The information in the grid is sorted by the column is ascending order. To sort the information in descending order, click the column header again.

Drilling to Related Records

If an ID piece of data in the detail grid has an arrow next to it, you can open the record for the ID in its related maintenance window. For example, you can open a customer record in Customer Maintenance directly from the Bookings vs. Shipment Detail grid.To open the record, click in the cell and then click the arrow.

Exporting Information to Excel

To export the contents of the grid to Microsoft Excel, first select the rows to export. Then, right-click and select **Microsoft Excel**.

Removing a Detail Grid

To remove a detail grid from the dashboard, click the Close button in the upper right corner.

Available System Detail Grids

This section describes the detail grids. For each detail grid, this information is provided:

Date filter applies to – If the detail grid can be filtered by date, then the date used to determine if a transaction should be included in the analytic is provided. For example, if you apply a date filter to the Open Accounts Receivable Detail grid, then invoices with an invoice date that falls within your date filter are included in the analysis.

Filters – If other filters are available, a list is provided. You can use filters alone or in combination. For example, in the Amount Purchased From Supplier analytic you can view amounts purchased for a single vendor or for a product code. Or, you can combine these filters to view the amount of parts with a particular product code purchased from a particular supplier.

Red text – In the detail grids, certain text is displayed in red. The reason text is in red is provided.

Details – A list of the details available in the grid is provided.

Amount Purchased From Supplier Detail

This grid lists purchase orders.

Date filter applies to: Purchase Order Date

Filters: Vendor ID, Buyer, Product Code, Commodity Code, Site ID

Red text: n/a

Details: Vendor ID, Vendor Name, Purc Order ID, PO Ln No, PO Del Ln No, Purc Order Date, Desired Recv Date, Status, Order Qty, Received Qty, Purchase U/M, Warehouse ID, Amount Ordered, Amount Received, Unit Price, Fixed Chg, Minimum Chg, Trade Disc. Pct., Currency ID, Part ID, Part Desc., Service ID, Service Desc., Site ID, Buyer, Product Code, Commodity Code.

Bookings vs. Shipments Detail

This grid lists bookings (customer orders) and shipments.

Date filter applies to: For bookings, Customer Order Date. For shipments, Actual Ship Date

Filters: Type (Shipment or Booking), Customer ID, Sales Rep ID, Territory, Product Code, Commodity Code, Part ID, Site ID

Red text: n/a

Details: Type (Shipment or Booking), Customer ID, Customer Name, Cust Order ID, CO Ln No, CO Del Ln No, Packlist ID, Ship Ln No, Ship Del Ln No, Cust Order Date, Desired Ship Date, Status, Part ID, Part Desc., Service Charge ID, Order Qty, Shipped Qty, Selling U/M, Unit Price, Trade Disc. Pct., Amount Ordered, Amount Shipped, Balance Amount, Sales Rep, Territory, Product Code, Commodity Code, Currency ID, Site ID

Customer Revenue Detail

This grid lists all customer invoices.

Date filter applies to: Invoice Date

Filters: Customer ID, Sales Rep ID, Territory, Product Code, Commodity Code, Site ID

Red text: If the Balance Amount is red, then it is overdue.

Details: Customer ID, Customer Name, Invoice ID, Invoice Date, Due Date, Last Paid Date, Total Amount, Discount Given, Paid Amount, Balance Amount, Sales Rep, Site ID

Delivery Performance Detail

This grid lists all late, on time, and early shipments.

Date filter applies to: Actual Ship Date (Shipped Date)

Filters: Type (Late, On Time, Early), Customer ID, Sales Rep ID, Part ID, Site ID

Red text: n/a

Details: Type (Late, On Time, Early), Days Different (Shipped Date minus Desired Ship Date), Packlist ID, Shipment Line #, Shipment Delivery Line #, Customer Order ID, Customer Order Line #, Customer Order Delivery Line #, Customer Order Date, Desired Ship Date, Shipped Date, Order Qty, Shipped Qty, Selling U/M, Status, Customer ID, Customer Name, Sales Rep, Product Code, Territory, Commodity Code, Part Desc. Service Charge ID, Site ID.

Open Accounts Payable Detail

This grid lists outstanding accounts payable invoices.

Date filter applies to: Invoice Date

Filters: Vendor ID, Site ID

Red text: If the Balance Amount is red, then it is overdue.

Details: Voucher ID, Invoice ID, Invoice Date, Vendor ID, Vendor Name, Payment Date, Due Date, Last Paid Date, Posting Date, Pay Status, Total Amount, Discount Taken, Paid Amount, Balance Amount, Currency ID, Type, Site ID

Open Accounts Receivable Detail

This grid lists outstanding accounts receivable invoices.

Date filter applies to: Invoice Date

Filters: Customer ID, Sales Rep ID, Site ID

Red text: If the Balance Amount is red, then it is overdue.

Details: Invoice ID, Invoice Date, Customer ID, Customer Name, Last Paid Date, Posting Date, Due Date, Total Amount, Discount Given, Paid Amount, Balance Amount, Sales Rep, Currency ID, Type, Site ID

Process Activity % Over Std

This grid lists leadtime process IDs. The Over column identifies processes that took longer than the expected standard.

Date filter applies to: End date of process ID

Filters: Customer ID, Territory, Product Code, Part ID, Process ID, Process Type, Sites.

Red text: n/a

Details: Process ID, Process Type, Type, Document ID (always shows the customer order ID), Customer ID, Customer Name, Part ID, Part Desc., Desired Shipped Date, Last Shipped Date, Standard Days, Actual Days, Over, Site ID

Process Activity Average Performance

This grid lists leadtime process IDs. The Percent Over column shows how much more or less time a process took than the established standard.

Date filter applies to: End date of process ID

Filters: Customer ID, Territory, Product Code, Part ID, Process ID, Process Type, Sites.

Red text: n/a

Details: Process ID, Process Type, Type, Document ID (always shows the customer order ID), Customer ID, Customer Name, Part ID, Part Desc., Desired Shipped Date, Last Shipped Date, Standard Days, Actual Days, Percent Over, Site ID

Sales Booking Detail

This grid lists customer orders.

Date filter applies to: Customer Order Date

Filters: Customer ID, Sales Rep ID, Territory, Product Code, Commodity Code, Part ID, Site ID

Red text: n/a

Details: Customer ID, Customer Name, Cust Order ID, CO Line No, CO Del Ln No, Cust Order Date, Desired Ship Date, Status, Order Qty, Selling U/M, Unit Price, Trade Disc. Pct., Amount Ordered, Currency ID, Part ID, Part Desc., Service Charge ID, Sales Rep, Territory, Product Code, Commodity Code, Site ID.

Shipments Detail

This grid lists shipment lines.

Date filter applies to: Actual Ship Date

Filters: Customer ID, Sales Rep ID, Territory, Product Code, Commodity Code, Site ID

Red text: n/a

Details: Customer ID, Customer Name, Packlist ID, Ship Ln No., Ship Del Ln No., Cust Order ID, CO Line No, CO Del Ln No, Order Qty, Shipped Qty, Selling U/M, Amount Shipped, Desired Ship Date, Part ID, Part Desc., Service Charge ID, Sales Rep, Territory, Product Code, Commodity Code, Currency ID, Site ID.

Tasks Detail

This grid lists tasks created by Purchase Requisition Entry, ECN Entry, and Workflow.

Date filter applies to: Create Date

Filters: Status, Site ID

Red text: n/a

Details: Task Type/#.Seq, Reference ID, User ID, Status, Sub Type, Date Completed, Specifications, Reject Code, Reject Task ID, Create Date, Site ID.

Top Customers by Open Balance Detail

This grid lists the unpaid invoices for the five customers with the largest open balance. Unpaid invoices that are overdue and invoices that are not due to be paid yet are included. You can specify the number of customers to view in the grid.

Date filter applies to: Invoice Date

Filters: Site ID

Red text: If the Balance Amount is red, the invoice is overdue.

Details: Customer ID, Customer Name, Invoice Date, Due Date, Last Paid Date, Total Amount, Discount Given, Paid Amount, Balance Amount, Sales Rep, Site ID.

Top Customers by Overdue Balance Detail

This grid lists the overdue invoices for the five customers with the largest overdue balance. You can specify the number of customers to view in the grid.

Date filter applies to: Invoice Date

Filters: Site ID

Red text: If the Balance Amount is red, the invoice is overdue.

Details: Customer ID, Customer Name, Invoice Date, Due Date, Last Paid Date, Total Amount, Discount Given, Paid Amount, Balance Amount, Sales Rep, Site ID.

Top Customers by Revenue Detail

This grid lists the invoices for the five customers with the highest total invoice amounts. You can specify the number of customers to view in the grid.

Date filter applies to: Invoice Date

Filters: Sales Rep ID, Territory, Product Code, Commodity Code, Site ID

Red text: If the Balance Amount is red, the invoice is overdue.

Details: Customer ID, Customer Name, Invoice Date, Due Date, Last Paid Date, Total Amount, Discount Given, Paid Amount, Balance Amount, Sales Rep, Site ID.

Top Vendors by Open Balance Detail

This grid lists the invoices for the five vendors with whom you have the highest unpaid invoice amounts. Unpaid invoices that are overdue and invoices that are not due to be paid yet are included. You can specify the number of vendors to view in the grid.

Date filter applies to: Invoice Date

Filters: Site ID

Red text: If the Balance Amount is red, the invoice is overdue.

Details: Vendor ID, Vendor Name, Voucher ID, Invoice ID, Invoice Date, Payment Date, Due Date, Last Paid Date, Posting Date, Pay Status, Total Amount, Discount Taken, Paid Amount, Balance Amount, Currency ID, Type, Site ID

Top Vendors by Overdue Balance Detail

This grid lists the invoices for the five vendors with whom you have the highest overdue invoice amounts. You can specify the number of vendors to view in the grid.

Date filter applies to: Invoice Date

Filters: Site ID

Red text: If the Balance Amount is red, the invoice is overdue.

Details: Vendor ID, Vendor Name, Voucher ID, Invoice ID, Invoice Date, Payment Date, Due Date, Last Paid Date, Posting Date, Pay Status, Total Amount, Discount Taken, Paid Amount, Balance Amount, Currency ID, Type, Site ID

Vendor Performance Detail

This grid shows the number of purchases you received early, the number received on time, and the number received late.

Date filter applies to: Received Date

Filters: Type (On Time, Early, Late), Vendor ID, Buyer, Product Code, Commodity Code, Part ID, Site ID.

Red text: n/a

Details: Type, Days Diff., Vendor ID, Vendor Name, Receiver ID, Rcvr Ln No, Rcvr Del Ln, Purc Order ID, PO Ln No, PO Del Ln No, Purc Order Date, Desired Recv Date, Received Date, Received Qty, Order Qty, Purchase U/M, Status, Buyer, Product Code, Commodity Code, Part ID, Part Desc., Service ID, Service Desc., Site ID

Vendor Price Performance Detail

This grid compares the costs of materials and services received from vendors with the amounts invoiced for the receipts.

Tip: Group this grid by Purc Order ID, and then sort the grid by PO Ln No to group received lines for a purchase order with invoiced lines for a purchase order.

Date filter applies to: Invoice Date

Filters: Type (Received or Invoiced), Vendor ID, Site ID

Red text: n/a

Details: Type (Received or Invoiced), Invoice Date, Due Date (Invoices only), Vendor ID, Vendor Name, Voucher ID (Invoices only), Line No (Invoices only), Purchase Order, PO Ln No, PO Del Ln No, Received Qty, Purchase U/M (Received only), Amount Received (for Received lines, the amount on th purchase order line. For Invoiced lines, the amount invoiced), Currency ID, Site ID.

Work Order Estimated vs. Actual Detail

This grid compares the estimated costs of work orders with the actual costs incurred. Only closed orders are evaluated.

Date filter applies to: Work Order Closed Date

Filters: Product Code, Commodity Code, Part ID, Planner ID, Site ID

Red text: The Variance text is red if the actual cost is higher than the estimated cost.

Details: Work Order ID, Estimated Cost, Actual Cost, Variance, Release Date, Want Date, Close Date, Desired Qty, Received Qty, Stock U/M, Part ID, Part Desc. Status, Product Code, Commodity Code, Warehouse ID, Planner ID, Site ID.

Work Order Estimated vs. Projected Detail

This grid compares the estimated costs of work orders with the projected costs. All work orders are evaluated. Projected costs are calculated by adding the actual costs for the completed portion of a work order to the estimated costs for the incomplete portion of a work order.

Date filter applies to: Want Date

Filters: Product Code, Commodity Code, Part ID, Planner ID, Site ID

Red text: The Variance text is red if the projected cost is higher than the estimated cost.

Details: Work Order ID, Estimated Cost, Projected Cost, Variance, Release Date, Want Date, Close Date, Desired Qty, Received Qty, Stock U/M, Part ID, Part Desc. Status, Product Code, Commodity Code, Warehouse ID, Planner ID, Site ID.

Project Actual Cost Detail

This detail grid is available only if you are licensed to use projects/A&D functionality. This detail grid shows the sources of costs for the project.

Date filter applies to: n/a. A date filter is not available.

Filters: Project ID, Customer ID, Site ID

Red text: n/a

Details: Project ID, Task No, Project Desc., Project Type, Proj Type Desc., Contract Type, Account Year, Account Period, WBS Code, Category ID, Dept ID, Cost Cat ID, Source Type, Source Type ID, Source Ln No., Customer ID, Customer Name, Currency ID, Site ID

Project Info

This detail grid is available only if you are licensed to use projects/A&D functionality. This detail grid shows basic information about your projects, such as the type of project, the customer, and target price, target cost, and target profit.

Double-click a line to open the Project Summary analytic. When the analytic is opened, the budget amount is displayed. You can select other amounts to view in the analytic.

Date Filter Applies to: n/a. A date filter is not available.

Filters: Project ID, Customer ID, Site ID

Red text: n/a

Details: Project ID, Project Desc., Project Type, Proj Type Desc., Customer ID, Customer Name, Target Price, Target Cost, Target Profit, Currency ID, Site ID

Chapter 11: Custom Dashboard Metrics

This chapter includes this information:

Topic	Page
Custom Metrics	11–2
Creating Data Sources	11–4
Building Analytics	11–19
Building Detail Grids	11–30
Exporting User-defined Metrics and Data Sources	11–35
Importing User-defined Metrics and Data Sources	11–36
Specifying Security Settings for Metrics	11–37
End Users and Custom Metrics	11–38

Custom Metrics

You can create custom metrics based on any table, set of tables, or views in the database. To create a custom metric, you first define a data source. Then, you use the data source to build a metric.

You can create two types of metrics: analytics and detail grids.

About Data Sources

Data sources contain the table columns and database view columns that are used as the basis of the metrics that you build. You can use the same data source as the basis of multiple metrics.

Data sources determine the options that are available for users to select when they add a metric to their dashboards. You can specify the filters that users can apply to the metric.

Data sources also determine the features that are available on a detail grid. You can set up drill-to links that allow users to click an ID to open the record in its maintenance window. You can also specify colors to use in the detail grid.

About Analytics

Use analytics to represent your data in chart form. When you create an analytic, you specify certain information that end users cannot change and certain information that they can change when they add the analytic to their dashboards.

Users cannot change this information that you specify when you create the analytic:

- The data source for the analytic
- The type of analytic. You can create value based, period based, and top N analytics.
- The chart type.
- The column in the data source to use for values in the analytic.
- Value aggregation setting.
- X-axis and Y-axis formats.
- Legend position and alignment.

Users can change this information:

- Series column.
- Category column.
- Chart title.
- Date range for data.
- For Top N charts, the default number of results to show in the analytic.

About Detail Grids

Use detail grids to represent your information in table form. When you create a detail grid, you specify certain information that end users cannot change and certain information that they can change when they add the detail grid to their dashboards.

- The data source for the detail grid
- The type of detail grid. You can create detail, top N, and bottom N grids.
- For top N and bottom N grids, the column in the data source that is used to determine the top or bottom values.
- For top N and bottom N grids, the value aggregation setting.
- The columns to include in the grid.

Users can change this information:

- For Top N charts, the default number of results to show in the analytic.
- Chart title
- Date range for the chart

Creating Data Sources

To build a data source, follow these steps:

1. Select the base table and the reference tables. All data sources must have one base table. The base table is the primary source of data for your metric. For example, if you are creating a metric based on customer sales, you would likely use the CUST_ORDER_LINE table as the base table. To extend the information that is available to your metric, you can select additional reference tables. See "Selecting Tables for the Data Source" on page 11–4 in this guide.
2. If you selected multiple tables, specify how to join the tables. When you join tables, you specify a piece of information that is common to both tables. For example, if you wanted to include the customer's ID in your metric, you could join the CUSTOMER_ORDER table to the CUST_ORDER_LINE table. If you wanted to include the customer's name, you could then join the CUSTOMER table to the CUSTOMER_ORDER table. See "Joining Tables" on page 11–5 in this guide.
3. Select the columns to include in your data source. When you create an analytic or detail grid, you can base the analytic or grid on the columns that you select for the data source. See "Selecting Columns for the Data Source" on page 11–6 in this guide.
4. Optionally, specify a SQL statement to use in place of a column ID. You can use a SQL statement to combine values from more than one column together or to specify a hierarchy of columns to use when a null value is found. See "Adding Column SQL Statements" on page 11–7 in this guide.
5. Optionally, add drill-to functionality to columns. See "Drill To Columns" on page 11–8 in this guide
6. Optionally, specify the filters that users can apply when they add an analytic or detail grid. See "Specifying Filters" on page 11–11 in this guide.
7. Optionally, add color to columns. See "Adding Color" on page 11–14 in this guide.
8. Optionally, specify a data filter that is always applied to the query. See "Filtering the Data Source" on page 11–16 in this guide
9. Review the SQL statement. When you add tables, columns, custom SQL statements, and filters, a SQL statement is built and displayed on the Query tab. See "Viewing the Query" on page 11–17 in this guide.
10. Test the SQL statement. After you finish constructing the data source, test the performance of the statement on the Data tab. See "Testing the Query" on page 11–17 in this guide.
11. Change the status of the data source to Active. See "Activating the Data Source" on page 11–18 in this guide.

Selecting Tables for the Data Source

To select tables for the data source:

1. Select **File**, **Dashboard**.
2. Select **Edit**, **Edit Data Source**.
3. In the header, specify this information:

Data Source ID – Specify the ID for the data source.

Description – Specify a description of the data source.

Scope – You cannot edit this field. Custom is displayed.

Status – Specify the status of the data source. To indicate that the data source is ready to be used in the construction of a metric, specify Active. To indicate that the data source is not ready to be used in the construction of a metric, specify Draft. To indicate that the data source is no longer valid to be used in the construction of a metric, specify Obsolete.

4 In the Tables tab, specify the tables and views to include in the data source. Add the base table or view first, and then add reference tables and views. To add a table or view:

   a Click the **Insert** button.

   b Double-click the **Name** browse button and select the table or view.

   c In the Alias column, specify the alias to use for the table when the SQL query is built. The alias must begin with a letter and can only contain upper case letters, lower case letters, numbers and the underscore character (_).

5 Click **Save**

Joining Tables

If you added multiple tables to your data source, specify how to join them.

To join tables:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source whose tables you are joining.

4 In the table, select the child table that you are joining to the base table or to another reference table.

5 In the Join Type column, specify the type of join to use. Specify one of these options:

   Inner – Specify this option to include rows from the parent and child table where a match exists.

   Left Outer – Specify this option to include all rows from the parent table and rows from the child table that match the criteria that you specify.

6 In the Join Conditions section, specify the condition that must be fulfilled for table rows to be returned by the query. Specify this information:

   Reference Table Column – Click the drop-down arrow and select the column to use for the join criteria.

   Parent Table/Column – Click the **Table** drop-down arrow and select the table to use as the parent table. Click the **Column** drop-down arrow and select the table column to use for the join criteria.

7 Click Add.

Selecting Columns for the Data Source

To add columns to the data source:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Click the Columns tab.

5 Specify the columns to include in the query. Perform one of these steps:

- To add columns individually, click the Insert button. Double-click the Column Name browse button or the Table Alias browse button and select the column to add. Click **Ok**.
- To add multiple columns, click the Insert Multiple button. Select the Selected check box for the columns that you are adding. Click **Ok**.

6 If necessary, edit the value in the Seq No column. The sequence number determines the order of the columns in the query.

7 Specify this information:

Label – Specify the label to use for the column. The label is used as the column header in a detail grid and can also be used as a label for the X-axis or Y-axis in analytics.

Visible – To display the column in the detail grid, select this check box.

Data Type – The data type associated with the column that you selected is inserted. This is an internal data type. It is not necessarily the same as the data type in the database.

Data Format – If the data type is Date Time or Number, specify the format to use to display the data.

This table shows the formats that you can specify for the Date Time data type:

Format	Example
d MMMM, yyyy	11 August, 2016
dddd, MMMM d, yyyy	Thursday, August 11, 2016
M/d/yy	8/11/16
dd-MM-yyyy	11-08-2016
d “of” MMMM, yyyy	11 of August, 2016
M/d/yy-hh.mm.ss AM/PM	8/11/2016 01:33:25 PM

This table shows the formats that you can specify for the Number data type:

Format	Example
0.00%	7.00%
0.00e+00	3.65e+03

Format	Example
0.00e-00	3.65e03
$#,##0; ($#,##0)	$1,350 ($1,350)
0.00	95.00

8 Click **Save**.

Adding Column SQL Statements

To write a SQL statement to include in the query, use the Column SQL field. For example, you can write a SQL statement that specifies an alternate column to use if another column has a null value. Or, you can use a SQL statement to add the values of columns together.

To specify a SQL statement:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Click the **Columns** tab.

5 Click Insert.

6 Specify this information:

Column Name – Specify a unique name to use for the column.

Label – Specify the label to use for the data. The label is used as the column header in a detail grid and can also be used as a label for the X-axis or Y-axis in analytics.

Visible – To display the results of the SQL statement in the detail grid, select this check box.

Data Type – Specify the type of data that the SQL statement returns. This is an internal data type. It is not necessarily the same as the data type in the database.

7 In the SQL field, specify the SQL statement.

8 Click **Save**.

Drill To Columns

When you create a data source, you can specify which columns in the metric grids are drill-to columns. When a grid column is a drill-to column, users can click the information in the column to view more information in a related VISUAL executable. To create drill-to columns and to specify the VISUAL executable that is opened when a user clicks a dill to link, use the Class Name field.

Depending on the value that you specify in the Class Name field, the column becomes a drill-to column in the grid. If you specify Date in the Class Name field, the column does not become a drill-to column. In all other cases, the class name that you select determines the window that is opened when a user clicks a drill-to link. For example, if you select Activity ID in the Class Name field, then clicking the drill-to link opens Activity Entry.

To function properly, the primary key for the window that is opened with the drill-to link must be provided. If the column where you add the drill-to link contains the primary key, then you do not need to complete any additional configuration steps. For example, if Seq No 6 in your data source is set up to show customer_order.customer_ID, and you specify Customer ID in the Class Name field, then the drill-to to Customer Maintenance is complete.

If the column where you add the drill-to link does not contain the primary key for the drill-to window, then you must use the Drill To Configuration dialog to complete the drill-to link. The Drill To Configuration dialog lists the parameters that are used to open the associated window. For each parameter, specify either a column from your data source or a literal value. If you use a literal value, then the value you specify is always used for the parameter. For example, if you are creating a drill-to link for work order IDs, you can specify the literal value W for work order type instead of including a work order type column in your data source.

This table shows the class names, the window associated with each class name, and the expected parameters for each class:

Class name	Window	Expected Parameters	Notes
Activity ID	Activity Entry	Activity ID	
Control No	Accounts Payable Payment Entry	Bank Account ID Control No	You must use the Drill To Configuration dialog to set up this drill-to link.
Customer ID	Customer Maintenance	Customer ID	
Customer Name	Customer Maintenance	Customer ID	You must use the Drill To Configuration dialog to set up this drill-to link.
Customer Order ID	Customer Order Entry Order Management Window	Customer Order ID	
Date	n/a	n/a	Use the Date class name to create a standard date column.
IBT ID	IBT Entry	IBT ID	
Inventory Transaction ID	Inventory Transaction Entry	Inventory Transaction ID	

Class name	Window	Expected Parameters	Notes
Invoice ID	Accounts Receivable Invoice Entry	Invoice ID (Accounts Receivable)	
Labor Transaction ID	Labor Ticket Entry	Labor Transaction ID	
Packlist ID	Shipping Entry	Packlist ID	
Part ID	Part Maintenance	Part ID Site ID	Site ID is optional. To specify site information, you must use the Drill To Configuration dialog. If you specify a value for the Site ID parameter, then the site-level record for the part is opened in Part Maintenance. If you do not specify a Site ID parameter, then the tenant-level record is opened.
Part Description	Part Maintenance	Part ID Site ID	You must use the Drill To Configuration dialog to set up this drill-to link. Site ID is optional. See the notes for the Part ID class name.
Payment ID	Cash Application	Customer ID Payment ID	You must use the Drill To Configuration dialog to set up this drill-to link.
Project ID	Project Maintenance	Project ID	
Purchase Order ID	Purchase Order Entry Purchase Management Window	Purchase Order ID	
Quote ID	Estimating Window	Quote ID	
Receiver ID	Purchase Receipt Entry	Receiver ID	
RFQ ID	Request for Quote Maintenance	RFQ ID	

Class name	Window	Expected Parameters	Notes
Resource ID	Shop Resource Maintenance	Resource ID Site ID	If the column contains the resource ID, you do not need to configure the parameters.
Vendor ID	Vendor Maintenance	Vendor ID	
Vendor Name	Vendor Maintenance	Vendor ID	You must use the Drill To Configuration dialog to set up this drill-to link.
Voucher ID	Accounts Payable Invoice Entry	Voucher ID	
Work Order ID	Manufacturing Window	Type Base ID Lot ID Split ID Part ID	You must use the Drill To Configuration dialog to set up this drill-to link. Part ID is optional.

Specifying Drill-to Columns

To specify the columns that users can use to drill to additional information:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Locate the row that contains the metric column to which you are adding a drill-to link.

5 In the Class Name column, specify the class name.

6 Click **Save**.

7 If the metric column does not contain the required parameter for the class name, click the **Drill To Config** button.

8 Specify the value for the parameter. Perform one of these steps:

- To use a column from your data source for the parameter value, select Column in the Param Type field. In the Param Value field, click the drop-down button and select the column from your data source. The column that you select should match the information required by the parameter name. For example, if the parameter name is Part ID, then the column that you select should be a database column that contains a part ID.

- To use a literal value for the parameter value, select Literal in the Param Type field. In the Param Value field, specify the value to use.

Note: You cannot add parameters. The parameters displayed in the Drill To Configuration dialog are the only valid parameters.

9 Click **Save**.

10 Click **Close**.

Using the Project ID Class in Drill-to Columns

The Project ID drill-to class contains two parameters: Project ID and Application. The Application parameter is always a literal value; you cannot specify Column in the Param Type column. Use the drop-down list in the Param Value column to select the application to open when a user clicks a project ID.

Specifying Filters

You can provide filters that users can apply to a metric when they add it to their dashboards. For example, you can allow users to filter metrics by date, by a range of IDs, or by a list of predefined values.

The types of filters that can be applied to column depend upon the data type.

To add filters to the metric:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 In the Filter Type field, specify the filter to use. This table shows the filter types that are available for each data type:

Data type	Filter type
Number	**Value** – The user can filter the metric to include data for one specific value. **Value (<=)** – The user can filter the metric to include data for a specific value and all values less than the specified value. **Value (>=)** – The user can filter the metric to include data for a specific value and all values greater than the specified value. **Value (<=,>=)** – The user can filter the metric to include data for a specific range of values. The values that the user specifies are included.

Data type	Filter type
String	**Browse** – The user can filter the metric to include data for a specific value. If you specify this filter type, a field with a browse button is available for the user to select a single value. **Browse Range** – The user can filter the metric to include data for a range of values. If you specify this filter type, two fields with browse buttons are available for the user to select a range of values. **Drop List** – The user can select a single value on which to filter from a list. If you specify this filter type, a drop-down field is available to the user. **List** – The user can select multiple values on which to filter from a list. If you specify this filter type, a multi-select field is available to the user. **Range** – The user can filter the metric to include data for a range of values. If you specify this filter type, two fields are available for the user to select the range of values. Browse buttons are not provided. **Value** – The user can filter the metric to include data for a specific value. If you specify this filter type, a field is available for the user to specify the value. A browse button is not provided.
Date Time	**Range** – The user can filter the metric to include data for a range of dates. If you specify this filter type, two fields are available for the user to specify the start and end dates. Browse buttons are not provided. If you use more than one Date Time column in your data source, then you can apply the Range filter type to only one of the Date Time columns.

5 If you selected Drop List or List as the filter type, specify how to build the filter list. This table shows the source types, a description of the filter source type, and the filter text to specify:

Filter Source Type	Description	Filter Text
Configuration	Select this option to specify the browse dialog to use. The browse configuration determines the dialog that is opened when the user clicks the browse button for the filter.	Click the **Edit Filter Text** button to select the browse dialog to use. The configuration that you select should match the data in the database column. For example, if you specified CUSTOMER_ID as the Column Name, then select Customer as the filter text.

Filter Source Type	Description	Filter Text
Enum Codes	Select this option to use common status codes, such as work order status and customer order line status. These codes are read from the ENUM_CODES database table. When the user adds the metric, the translated value of each code is displayed. For example, if you add customer status codes, the user sees Closed, Firmed, Hold, Released, and Cancelled instead of C, F, H, R and X.	To select the codes to use as the filter: **1** Click the **Edit Filter Text** button. **2** In the Table field, select the table that contains the codes to use. For example, if you are providing filters for customer credit status, select Customer. **3** In the Column field, select the code type. **4** Click **Ok**.
Enum List	Select this option to manually create a list of translated values for the user. You can use this option to limit the choice of codes found in the ENUM_CODES database. For example, use the Enum List option to limit a customer order status filter to only Released and Firmed. You can also use this option if you included a particular ID in your data source but not the description. For example, if carrier IDs are in your data source but not carrier descriptions, you could this option to present the descriptions instead of the IDs.	Specify valid selections in pairs. The User Value is the text that is displayed to the end user. The Data Value is the code used in the system. For example, to allow users to select Firmed as a filter for customer orders, specify Firmed as the User Value and F as the Data Value. **1** Click the **Edit Filter Text** button. **2** Click **Insert**. **3** In the User Value column, specify the text to display to the end user. **4** In the Data Value, specify the code that is used in the system. **5** Click **Ok**.
List	Select this option to create a list of options for the user. The option that the user selects is the value used in the SQL query.	Specify valid selections separated by commas. Do not use spaces before or after the commas.

Filter Source Type	Description	Filter Text
Query	Select this option to create a list based on a SQL query. The query you specify must be for a single column. This option is useful if you want to present users with a list of distinct values instead of all values from a particular database column. For example, you could specify this statement: select distinct rel_type from v_task If you used this query, users could select from a list of Related To types. Related To types are used with Activities.	Specify a query that references one table.
Table	Select this option to create a list of all values in a database column.	To select the database column to use as the filter: **1** Click the **Edit Filter Text** button. **2** In the Table field, select the table that contains the database column. **3** In the Column field, select the column. **4** Click **Ok**.
Viewable Sites	Apply this filter source type to a data source column for Site ID. Select this option to present a list of the user's viewable sites.	n/a
Viewable Warehouses	Apply this filter source type to a data source column for warehouse ID. Select this option to present a list of the user's viewable warehouses.	n/a

Adding Color

You can add color to detail grids. You can use colors in these ways:

- You can specify static colors for columns. When you specify static colors, the colors are used for the column regardless of the data in the column. Use this method to draw attention to certain

columns or to categorize columns. For example, in a grid that shows work order costs, you could use a certain color for projected costs and another color for actual costs.

- You can specify conditions under which a cell has a particular color. Use this method to draw attention to a cell when the information meets criteria that you specify. For example, you could specify that the text color of a cell should be red if the value in the cell is negative.

You can specify a background color and a text color for columns and cells.

Specifying Static Colors for Columns

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Select the row that contains the column to which you are adding color.

5 Click **Edit Colors**.

6 In the Column Colors section, specify this information:

Background – Click the browse button and select the color to use for the background of the cell.

Text – Click the browse button and select the color to use for the text.

7 Click **Ok**. The RGB values for the colors that you selected are displayed in the Background Color and Text Color columns.

Specifying Conditional Colors for Cells

To set up conditional colors, you must first create hidden column SQL statements that contain the conditions that must be met. Then, you associate the hidden column with a visible column in your data source.

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Create column SQL Statements that contain the conditions. If you want to specify a color for both the cell background and the cell text, you must create two column SQL statements.

a Click **Insert**.

b Specify this information:

Column Name – Specify a name to use for the column. The name that you specify is replaced with the SQL statement when the query is constructed.

Visible – Clear the visible check box.

Data Type – Specify String

c In the Column SQL field, specify the SQL statement to use in place of the column name. Specify the condition that must be met and the RGB value of the color to use. For example, if your data source contains the vr.ORDER_QTY column, you could write this statement to show orders with a quantity greater than 100 in a different color:

(case when vr.ORDER_QTY > 100 then '255,0,0' else '' end)

d Click **Save**.

5 Select the row that contains the column where you want to apply the conditional color. For example, if you created the SQL statement in step 4C, you would select the row that contains the vr.ORDER_QTY column.

6 Click **Edit Colors**.

7 In the Background section, click **Column**, and then select the column that contains the SQL statement that you wrote for the background column color.

8 In the Text section, click **Column**, and then select the column that contains the SQL statement that you wrote for the text color.

9 Click **Ok**.

Filtering the Data Source

Use the Filter tab to specify filters that are always applied to the query results. For example, if you wanted the data source to include work orders with a status of Released only, and your table alias for the WORK_ORDER table is wo, then you could specify this statement in the Filter tab:

wo.status = 'R'

To limit query results to a user's viewable sites, you must use the @VIEWABLE_SITES token in the Filter tab. For example, to limit the work orders returned by a query to those work orders created in a user's viewable sites, you would specify this statement in the Filter tab:

wo.site_id IN (@VIEWABLE_SITES)

You can also use the @CURRENT_USER_ID token to limit query results to records associated with the user. For example, to build a metric that allows users to view a list of customer orders that they entered, and co is the table alias for customer_order, you would specify this statement in the Filter tab:

co.entered_by = '@CURRENT_USER_ID'

Specifying a Filter for the Data Source

To specify a filter for the data source:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Click the **Filter** tab.

5 Specify the SQL statement to use as the filter. The statement you specify is appended after a WHERE clause in the query.

6 Click **Save**.

Viewing the Query

After you specify the tables, columns, and filters for your data source, use the Query tab to review the SQL statement that was constructed. You cannot edit the statement directly on the Query tab. To edit the statement, change your selections on the Tables, Columns, and Filter tabs.

To review the query:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Click the **Query** tab.

Testing the Query

To test the query, use the Data tab.

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Click the **Data** tab.

5 Optionally, specify a date range for the data in the Begin Date and End Date fields. You can specify this information if you specified a filter type of Range for a Date/Time

6 column in the data source.

7 Click **Populate**. Your query is executed. In the data table, each column that you marked as visible on the Columns tab is displayed. Under the table, the time required to execute the query is displayed. You can use this information to measure the performance of the query. If the query took a long time to execute, you can simplify the query.

8 Optionally, click the **Export to Excel** button to send the results of your query to a Microsoft Excel spreadsheet.

Activating the Data Source

To activate the data source:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Click the Status drop-down button and select **Active**.

5 Click **Save**.

Copying a Data Source

You can create a new data source by copying an existing data source. You can copy custom and vendor data sources. If you copy a vendor data source, the new data source has a scope of custom.

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Click **Copy**.

5 Specify the name of the new data source.

6 Click **Ok**.

Deleting a Data Source

You can delete a data source only if it is not used as the source for a Detail Grid or Analytic. If a data source is used for a Detail Grid or Analytic, you must either specify a different data source to use or delete the detail grid or analytic.

To delete a data source:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Data Source**.

3 In the Data Source ID field, select the data source.

4 Click **Delete**.

5 Click **Yes** to confirm the deletion. The data source is deleted and the Edit Data Source dialog is cleared.

Building Analytics

After you create a data source, you can use the data source as the basis for an analytic.

To build an analytic, follow these basic steps:

1. Specify a configuration ID, description, and data source.
2. Select the analytic type. The analytic type that you select determines the other information that you specify in the dialog.
3. Select the chart type. The chart type that you select determines the other information that you specify in the dialog.
4. Specify the measurement basis of the graph. The measurement basis is the value that you are measuring. You can specify a column in your data source that has the data type of number, or you can count the number of times pieces of data are used in a column in your data source.
5. Specify label and chart axis formats.
6. Test the analytic.
7. Activate the analytic.

Analytic Types

The analytic type determines the measurement scope of the analytic. You can select these analytic types:

Value Based – The Value Based analytic type returns results by category. For example, you can use this analytic type to create a graph that shows the Total Shipped Quantity grouped by Customer ID. The value that you specify in the Category Column determines how the data is grouped. The value that you specify in the Value Column determines what is measured. If you created a Total Shipped Quantity by Customer ID metric, you would specify customer ID in the Category Column and total shipped quantity in the Value Column.

Top N – The Top N analytic type also returns results by category. In this analytic, the results are limited by the number specified in the Top N field. For example, you can use the Top N analytic to create a Top 5 Customers by Total Orders analytic. When users add the analytic to their dashboards, they determine how many results to return.

Period Based – The Period Based analytic type returns results over a duration. For example, you can use the Period Based analytic to create an Open Accounts Receivable by Month analytic. When you create this type of analytic, you must select a period type, such as CAL_DAY, in the Category Column.

Measurement Basis

To specify the value that is measured in the analytic, use the Value Column and Value Aggregation fields. You can measure data in these ways:

Count – You can count the number of times particular IDs appear in a column in your data source. To specify the column to analyze, use the Category Column field. For example, to count activities by activity type, specify Count in the Value Aggregation field and Activity_Type_ID in the Category Column field. You can add a series to the category that you specify. When you add a series, the category column is broken down into smaller data points. For example, if you specified STATUS in the Series column, your analytic would have a category for each activity type. Within each activity type, separate data points would be shown for each activity status.

The Category Column and Series Column values that you specify are default values. When users add the analytic to their dashboards, they can select a different Category Column and Series Column.

Total Value of a Database Column – You can add values in a database column that has Number as a data type. To specify the column to analyze, specify None or Sum in the Value Aggregation field, and then specify the column to analyze in the Value Column field. For example, if you specified TOTAL_SHIPPED_QUANTITY in the Value Column field, then the analytic would show the total of all values on the TOTAL_SHIPPED_QUANTITY column.

Use the Category Column to break down the total into categories. For example, if you specified CUSTOMER_ID in the Category Column field, an analytic that showed the total shipped quantity for each customer is displayed. Use the Series Column to break down each category total. For example, if you specified PART_ID in the Series Column field, then the total shipped quantity for each part purchased by each customer is displayed.

Creating Value-based Analytics

Use value-based analytics to analyze a value in your database.

You can measure these values:

- **Count**. You can count the number of times each ID is used in a database column. To specify the column to analyze, use the Category Column field. For example, if you select CATEGORY_ID in the Category Column field, then an analytic that shows how many times each category occurs in your data source is displayed.
- **Value Column**. You can select a data source column that has the Number data type. To specify the column to analyze, use the Value Column field. You can use the Category Column field to view subtotals by another column in your data source. For example, you can select AMOUNT_ORDERED in the Value Column field and CUSTOMER_ID in the Category Column field to create a chart that shows the total amount ordered for each customer ID in your database.

To add a sub-category to the analytic, use the Series Column field. For example, you can specify PART_ID in the Series Column field to view the total amount ordered of each part by each customer. You can add sub-categories to count and value column analytics.

To add a value-based analytic:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Analytic**.

3 Specify this information:

Configuration ID – Specify a name for the analytic.

Description – Specify a description of the analytic.

Data Source ID – Specify the data source to use as the basis of this analytic.

Analytic Type – Specify **Value Based**.

4 Specify the type of chart. For value-based analytics, you can use any chart type. Although you can select Line as the chart type, using a Line chart for a value-based analytic does not result in a meaningful chart. Generally, you should use Line charts with period based charts.

5 Specify the data to measure:

- To count the instances of IDs in a database column, specify this information:

  Value Aggregation – Specify **Count**.

  Category Column – For line, bar, and column charts, specify the data source column to use. The analytic shows the number of times each ID is used in the column. For example, if you select SALES_REP in this field, then the analytic shows the total number of times each sales rep ID appears in your data set. If you selected a bar-type chart or a column-type chart, one bar or column for each ID in the column that you selected is displayed.

  This field is unavailable for pie charts and doughnut charts.

  Series Column – For line, bar, and column charts, you can optionally specify a sub-category. For example, if you selected CUSTOMER_ID in this field and SALES_REP in the Category Column field, the analytic shows the number of records in your data set contain both a particular sales rep ID and a particular customer ID. Depending on the chart type you select, your chart would contain a bucket for each sales rep ID. In each sales rep ID bucket, a bar or column is displayed for each customer ID.

  For pie charts and doughnut charts, use this field to specify data source column for the chart. For example, if you select SALES_REP in this field, then each unique instance of a sales rep in your data set is represented by a wedge. The size of the wedge indicates the number of times the sales rep ID occurs in your data set.

- To use a value column, specify this information:

  Value Aggregation – The recommended value is Sum. If you specify None, the performance of the metric will be slower than if you specify Sum.

  Value Column – Specify the column to use to provide values to the chart. Only columns that have a data type of Number are displayed in the list. All values in the column that you select are added. For example, if you select AMOUNT_ORDERED in the Value Column field, the total of all values in the AMOUNT_ORDERED column is displayed. Depending on the type of chart you select, a single bar, column, solid pie, or solid doughnut is displayed.

  Category Column – For line, bar, and column charts, use this field to break the grand total of the value column into subtotals. For example, if you select AMOUNT_ORDERED in the Value Column field and CUSTOMER_ID in the Category Column field, a chart that shows the total amount that each customer ordered is displayed. If you selected a bar-type chart or a column-type chart, one bar or column for each ID in the category column is displayed.

  Series Column – For line, bar, and column charts, use this field to break the category subtotals into smaller subtotals. For example, if you select AMOUNT_ORDERED in the Value Column field, CUSTOMER_ID in the Category Column field, and PART_ID in the Series

Column field, a chart that shows one bucket for each customer ID is created. In each customer ID bucket, a bar or column for each part ID is created. Each bar shows the total amount that each customer ordered of each part.

If you selected a pie chart or a doughnut chart, then use the Series Column field to break the grand total of the value column into subtotals. One wedge for each unique ID in the series column is displayed.

6 Click **Save**.

Creating Period-based Analytics

Use period-based analytics to analyze how values in your data source changed over time.

To create a period-based analytic, your data source must contain columns that can be used as time periods. You can use the columns in the VR_CAL_DATE table, or you can use other columns that show a date, such as an INVOICE_DATE column.

The VR_CAL_DATE table contains columns that translate dates into days, weeks, months, quarters, and years. You can join the VR_CAL_DATE table to your data source. When you create the analytic, you can map the columns in the VR_CAL_DATE table to the periods shown on the Period tab.

To use a date column from other tables in your data source, you must apply a SQL statement to the column to extract the period information. For example, if you want to use the INVOICE_DATE column as the source for the period month bucket, you would write a SQL statement that extracts the month and year from the INVOICE_DATE.

When you create the analytic, the column that you select for the Category Column must match one of the columns that you specified on the Period tab.

You can measure these values:

- **Count**. You can count the number of times each time period occurs in your data source. For example, if you specified CAL_YEAR in the Category Column field, then an analytic that shows how many times each year occurs in your data source is displayed.
- **Value Column**. You can select a data source column that has the Number data type. To specify the column to analyze, use the Value Column field. For example, if you select AMOUNT_ORDERED in the Value Column field and CAL_YEAR in the Category Column field, an analytic that shows the total amount ordered for each year in your data source is displayed.

To add a sub-category to the analytic, use the Series Column field. For example, you can specify PART_ID in the Series Column field to view the total amount ordered of each part in each year. You can add sub-categories to count and value column analytics.

To create a period-based analytic:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Analytic**.

3 Specify this information:

Configuration ID – Specify a name for the analytic.

Description – Specify a description of the analytic.

Data Source ID – Specify the data source to use as the basis of this analytic.

Analytic Type – Specify **Period Based**.

4 Specify the type of chart. For period-based analytics, you can use bar charts, column charts, or line charts. You cannot use pie or doughnut charts.

5 Click the **Period** tab.

6 In the Period Calendar Type field, select Reporting if you are using the VR_CAL_DATE table as the source of the period buckets. Select Derived if you are using other pieces of data in your data source as the source of the period buckets.

7 In the Period Column fields, specify the column that corresponds to the period type. For example, if you are using the VR_CAL_DATE table, you would select CAL_MONTH in the Period Month Column.

8 Specify the data to measure:

- To count the instances of periods in a database column, specify this information:

  Value Aggregation – Specify **Count**.

  Category Column – Click the down arrow and select the period to count. You can select any of the columns that you defined on the Period tab. For example, if you selected CAL_MONTH in this field, the analytic would show the number of times each Month/Year combination occurs in your data source.

  Series Column – Optionally, specify a sub-category. For example, if you selected CUSTOMER_ID in this field, the analytic shows the number of records in your data set contain both a particular Month/Year combination and a particular customer ID. Depending on the chart type you select, your chart would contain a bucket for each month. In each month bucket, a bar or column is displayed for each customer ID.

- To use a value column, specify this information:

  Value Aggregation – The recommended value is Sum. If you specify None, the performance of the metric will be slower than if you specify Sum.

  Value Column – Specify the column to use to provide values to the chart. Only columns that have a data type of Number are displayed in the list. All values in the column that you select are added. For example, if you select AMOUNT_ORDERED in the Value Column field, the total of all values in the AMOUNT_ORDERED column is displayed.

  Category Column – Use this field to break the grand total of the value column into subtotals by period. For example, if you select AMOUNT_ORDERED in the Value Column field and CAL_WEEK in the Category Column field, a chart that shows the total amount that each customer ordered each week is displayed.

  Series Column – Use this field to break the category subtotals into smaller subtotals. For example, if you select AMOUNT_ORDERED in the Value Column field, CAL_WEEK in the Category Column field, and PART_ID in the Series Column field, a chart that shows one bucket for each week is created. In each bucket, a bar or column for each part ID is created. Each bar shows the total amount that each customer ordered of each part.

9 Click **Save**.

Creating Top N Analytics

Use Top N analytics to analyze the top results in your data source. For example, you can use this analytic type to find customers with the highest amount ordered values or users with the most activities assigned to them.

When users add the analytic to their dashboards, they decide the number of results to display in the analytic.

You can measure these values:

- **Count**. You can count the number of times each ID is used in a database column. To specify the column to analyze, use the Category Column field. For example, if you select CATEGORY_ID in the Category Column field, then an analytic that shows how many times each category occurs in your data source is displayed. If users specified 5 as the Top N value, then the five most common categories in the data source are displayed.
- **Individual values**. You can identify the top individual values in a database column. To examine individual values, specify **None** in the Value Aggregation field. To specify the column to analyze, use the Value Column field. For example, if you select AMOUNT_ORDERED in the Value Column, an analytic that shows the highest values in the AMOUNT_ORDERED column is displayed. If you selected CUSTOMER_ID in the Category Column field, the analytic would show the customers that placed the highest value order lines.
- **Aggregate values.** You can identify the top sums in a database column. To examine sums, specify Sum in the Value Aggregation field. To specify the information to analyze, use the Value Column and Category Column field. For example, if you select AMOUNT_ORDERED in the Value Column field and CUSTOMER_ID in the Category Column field, the top customers by total amount ordered for all orders are displayed.

You cannot add a Series Column to a top N analytic.

To create a top N analytic:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Analytic**.

3 Specify this information:

Configuration ID – Specify a name for the analytic.

Description – Specify a description of the analytic.

Data Source ID – Specify the data source to use as the basis of this analytic.

Analytic Type – Specify **Top N**.

4 Specify the type of chart. For Top N analytics, you can use bar and column charts. Although you can select Line as the chart type, using a Line chart for a top N analytic does not result in a meaningful chart. Generally, you should use Line charts with period based charts.

You cannot use a pie or doughnut chart.

5 Specify the data to measure:

- To count the instances of IDs in a database column, specify this information:

Value Aggregation – Specify **Count**.

Category Column – Click the down arrow and select the data to count. The analytic shows the number of times each ID is used in the column. For example, if you select SALES_REP in this field, then the analytic shows the total number of times each sales rep ID appears in your data set. If you selected a bar-type chart or a column-type chart, one bar or column for each ID in the column that you selected is displayed.

- To measure the top individual values in a column, specify this information:

  Value Aggregation – Specify **None**.

  Value Column – Specify the column to use to provide values to the chart. Only columns that have a data type of Number are displayed in the list. For example, if you select AMOUNT_ORDERED in the Value Column field, the analytic identifies the top individual values in the amount ordered.

  Category Column – Use this field to break the grand total of the value column into subtotals. For example, if you select AMOUNT_ORDERED in the Value Column field and ORDER_ID in the Category Column field, a chart that shows the orders associated with the largest individual AMOUNT_ORDERED values is displayed.

- To measure the aggregated values in a column, specify this information:

  Value Aggregation – Specify **Sum**.

  Value Column – Specify the column to use to provide values to the chart. Only columns that have a data type of Number are displayed in the list.

  Category Column – Use this field to specify how the column that you selected in the Value Column field is added. For example, if you select CUSTOMER_ID in the Category Column field and AMOUNT_ORDERED in the Value Column field, the total amount ordered for each customer in your data source is calculated.

6 Click **Save**.

Formatting Analytics

Use the Series, Chart, X Axis, and Y Axis tabs to format the appearance of the analytic.

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Analytic**.

3 In the Configuration ID field, select the analytic.

4 Use the Series tab to format the labels used for the data shown in the chart. Use these check boxes:

Show Series Label – Select this check box to display the value of each line, bar, column, or wedge. The value is displayed above each object.

Show Series Tooltip– Select this check box to display the value of a bar, column, line, or wedge when a user places the mouse on the object.

5 If you are displaying series labels or tooltips and the series shows a number, specify the format for the number. In the list, the letter determines the type of number that is displayed. The number

next to the letter determines the precision of the number. The number of zeros determines the number of decimal places in the number. Microsoft .NET number formats are used. You can select these formats:

No letter – Only the number is displayed.

c – Currency. The currency symbol that is displayed depends on the settings that you use in the Region and Language area of the Windows Control Panel.

e – Exponential format expressed with a lower case e.

E – Exponential format expressed with an upper case E.

g – General format expressed with a lower case g. If the length exceeds the number you select, then the number is converted to the exponential format.

G – General format expressed with an upper case G. If the length exceeds the number you select, then the number is converted to the exponential format.

p – Percentage

N – Number format

n – Number format

r – Round-trip format. If the number string needs to be parsed back into its original number format, this format ensures that the number is parsed correctly.

6 To add a title and a legend to the chart, use the Chart tab. Specify this information:

Title – Specify a title to display above the chart.

Show Legend – To display a legend for the chart, select this check box. If you select the check box, specify this information:

Legend Position – Specify on which side of the chart to display the legend. You can select Bottom, Left, Right, or Top.

Legend Alignment – Specify how to align the legend. You can select Bottom, Center, Right, Left, or Top.

7 If you are creating a line, bar, or column chart, click the **X-Axis** tab to format the X-Axis. For line and bar charts, the selections that you make on this tab are applied to the horizontal axis at the bottom of the chart. For column charts, the selections that you make on this tab are applied to the vertical axis at the left of the chart. The selections that you make on this tab are not applied to doughnut or pie charts.

Specify this information:

X Axis Title – Specify a title for the axis:

- To use the label associated with the column that you selected in the Category Column field, select Column Label. Define labels for columns in the data source. If users change the category column when they add the analytic to their dashboards, the label is updated to match the new column selection.
- To specify a static label, select Custom. Specify the label to use in the field.
- If you do not want to display an x-axis title, specify hidden.

X-Axis Line Style – Select the line style for the axis.

X-Axis Label Angle – To display x-axis labels at an angle, specify a value. You can specify any value. If you leave the field blank or specify 0, the label is displayed horizontally. To display the label vertically, specify 90.

X-Axis Label Format – If the x-axis label is a number, specify the format for the number.

8 If you are creating a line, bar, or column chart, use the Y-Axis tab to format the Y-axis. For line and bar charts, the selections that you make on this tab are applied to the vertical access at the left of the chart. For column charts, the selections that you make on this tab are applied to the horizontal access at the bottom of the chart. The selections that you make on this tab are not applied to doughnut or pie charts.

Specify this information:

Y Axis Title – Specify a title for the axis:

- To use the label associated with the column that you selected in the Category Column field, select Column Label. Define labels for columns in the data source. If users change the category column when they add the analytic to their dashboards, the label is updated to match the new column selection.
- To specify a static label, select Custom. Specify the label to use in the field.
- If you do not want to display an axis title, specify hidden.

Y-Axis Line Style – Select the line style for the axis.

Y-Axis Label Angle – To display axis labels at an angle, specify a value. You can specify any value. If you leave the field blank or specify 0, the label is displayed horizontally. To display the label vertically, specify 90.

Y-Axis Label Format – If the axis label is a number, specify the format for the number.

9 Click **Save**.

Specifying Default Settings

When you create an analytic, you can specify a default date filter. If you created a top N analytic, you can also specify the default number of results to display in the analytic.

To use a date filter, your data source must contain at least one date column that has a Filter Type of Range. If your data source does not meet these criteria, then the analytic cannot be filtered by date.

When users add the analytic to their dashboards, they can change the default settings.

To specify the default settings:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Analytic**.

3 In the Configuration ID field, select the analytic.

4 Specify the date filters:

- To use periods, click the Period Type drop-down button and select the type of period to use. In the Periods field, specify the number of past periods to include in the date filter. In the Horizon

Periods field, specify the number of future periods to include in the date filter. For example, to create a date filter that includes records from two weeks before today and one week after today, specify Weeks in the Period Type field, 2 in the Periods field, and 1 in the Horizon Periods field.

- To specify a date range, click the Period Type drop-down button and select Date Range. Specify the first date in the range in the Begin Date field. Specify the last date in the range in the End Date field.

5 If your analytic is a Top N analytic, specify the default number of results to display in the Top N field.

6 Click **Save**.

Testing Analytics

To test the performance of an analytic:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Analytic**.

3 In the Configuration ID field, select the analytic. The amount of time it took to construct the analytic is displayed above the tabs.

4 To view the data used to construct the analytic, click the **Chart Data** tab.

5 To view all visible columns from your data source, click the **Detail Data** tab. To populate the table, select the **Populate Detail** check box.

Activating Analytics

To activate the analytic:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Analytic**.

3 In the Configuration ID field, select the analytic. The amount of time it took to construct the analytic is displayed above the tabs.

4 Click the **Status** drop-down button and select Active.

Copying Analytics

You can create a new analytic by copying an existing analytic. To copy an analytic:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Analytic**.

3 In the Configuration ID field, select the analytic.

4 Click **Copy**.

5 In the New Configuration ID field, specify the ID of the new analytic.

6 Click **Ok**. The new analytic is loaded in the dialog.

Building Detail Grids

After you create a data source, you can use the data source as the basis for a detail grid.

To build a detail grid, follow these basic steps:

1. Specify a configuration ID, description, data source, and title.
2. Select the grid type. The type that you select determines the other information that you specify in the dialog.
3. Specify the columns to include in the detail grid.
4. Test the detail grid.
5. Activate the detail grid.

Detail Grid Types

The detail grid type determines the measurement scope of the analytic. You can select these analytic types:

Detail – The Detail type shows all results from your data source.

Top N – The Top N type shows the largest results found in a value column that you specify.

Bottom N – The Bottom N type shows the smallest results found in a value column that you specify.

Creating Detail Type Grids

To create a detail type grid:

1. Select **File**, **Dashboard**.
2. Select **Edit**, **Edit Detail Grid**.
3. Specify this information:

   Configuration ID – Specify a name for the analytic.

   Description – Specify a description of the analytic.

   Data Source ID – Specify the data source to use as the basis of this analytic.

   Title – Specify the title of the grid. When users add the detail grid to their dashboards, the title is displayed in the title bar of the detail grid.

   Grid Type – Specify Detail.
4. In the Columns table, select the Include check box to specify the columns to include in the detail grid. When you select the Include check box, a sequence number is inserted in the Seq # field. You can change the sequence value.
5. Specify the default date filters:

- To use periods, click the Period Type drop-down button and select the type of period to use. In the Periods field, specify the number of past periods to include in the date filter. In the Horizon Periods field, specify the number of future periods to include in the date filter. For example, to create a date filter that includes records from two weeks before today and one week after today, specify Weeks in the Period Type field, 2 in the Periods field, and 1 in the Horizon Periods field.
- To specify a date range, click the Period Type drop-down button and select Date Range. Specify the first date in the range in the Begin Date field. Specify the last date in the range in the End Date field.

When users add the detail grid to their dashboards, they can specify different date filters.

6 Click **Save**.

7 To review the appearance and performance of the detail grid, click the Data tab.

8 Select the Populate Detail check box. The detail grid is constructed based on the parameters that you specified. The number of rows included in the grid, the amount of time it took to construct the grid, and the number of rows per second are displayed.

9 When you are finished creating the detail grid, click the Status drop-down button and select Active. Users can now add the detail grid to their dashboards.

Creating Top N and Bottom N Detail Grids with Individual Values

Use the settings described in this procedure to create a grid that identifies the top individual values or bottom individual values in a column in your data source. For example, you could use these settings to identify the highest value order lines in a data source.

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Detail Grid**.

3 Specify this information:

Configuration ID – Specify a name for the analytic.

Description – Specify a description of the analytic.

Data Source ID – Specify the data source to use as the basis of this analytic.

Title – Specify the title of the grid. When users add the detail grid to their dashboards, the title is displayed in the title bar of the detail grid.

Grid Type – Specify **Top N** to create a grid that contains the largest results. Specify **Bottom N** to create a grid that contains the smallest results.

4 In the Value Column field, click the drop-down button and select the column to evaluate.

5 In the Value Aggregation field, specify **None**.

6 In the Top N or Bottom N field, specify the number of results to display in the metric. The label of this field changes depending on the value that you select in the Grid Type field.

7 Specify the default date filters:

- To use periods, click the Period Type drop-down button and select the type of period to use. In the Periods field, specify the number of past periods to include in the date filter. In the Horizon Periods field, specify the number of future periods to include in the date filter. For example, to create a date filter that includes records from two weeks before today and one week after today, specify Weeks in the Period Type field, 2 in the Periods field, and 1 in the Horizon Periods field.
- To specify a date range, click the Period Type drop-down button and select **Date Range**. Specify the first date in the range in the Begin Date field. Specify the last date in the range in the End Date field.

When users add the detail grid to their dashboards, they can specify different date filters.

8 In the Columns table, specify the columns to include in the detail grid. The column that you specify in the Value Column field is always included in the detail grid.

9 Click **Save**.

10 To review the appearance and performance of the detail grid, click the **Data** tab.

11 Select the **Populate Detail** check box. The detail grid is constructed based on the parameters that you specified. The number of rows included in the grid, the amount of time it took to construct the grid, and the number of rows per second are displayed.

12 When you are finished creating the detail grid, click the Status drop-down button and select **Active**.

13 Click **Save**. Users can now add the detail grid to their dashboards.

Creating Top N and Bottom N Detail Grids with Aggregated Values

Use the settings described in this procedure to create a grid that identifies the top aggregated values or bottom aggregated values in a column in your data source. For example, you could use these settings to identify the customers with the lowest total amount ordered.

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Detail Grid**.

3 Specify this information:

Configuration ID – Specify a name for the analytic.

Description – Specify a description of the analytic.

Data Source ID – Specify the data source to use as the basis of this analytic.

Title – Specify the title of the grid. When users add the detail grid to their dashboards, the title is displayed in the title bar of the detail grid.

Grid Type – Specify **Top N** to create a grid that contains the largest results. Specify **Bottom N** to create a grid that contains the smallest results.

4 In the Value Column field, click the drop-down button and select the column to evaluate.

5 In the Value Aggregation field, specify **Sum**.

6 In the Top N or Bottom N field, specify the number of results to display in the metric. The label of this field changes depending on the value that you select in the Grid Type field.

7 Specify the default date filters:

- To use periods, click the Period Type drop-down button and select the type of period to use. In the Periods field, specify the number of past periods to include in the date filter. In the Horizon Periods field, specify the number of future periods to include in the date filter. For example, to create a date filter that includes records from two weeks before today and one week after today, specify Weeks in the Period Type field, 2 in the Periods field, and 1 in the Horizon Periods field.
- To specify a date range, click the Period Type drop-down button and select **Date Range**. Specify the first date in the range in the Begin Date field. Specify the last date in the range in the End Date field.

When users add the detail grid to their dashboards, they can specify different date filters.

8 In the Columns table, select the column to use as the value category. This column determines how values in the value column are added. For example, to calculate the total amount ordered by customer, specify AMOUNT_ORDERED in the Value Column field and select the Customer ID check box in the column table.

You can select additional columns. Any other columns that you select become part of the definition of the value category. For example, if you selected both Customer ID and Part ID in the Columns table and specified AMOUNT_ORDERED in the Value Column, a metric that shows the total amount ordered for each customer ID/part ID combination is displayed.

9 Click **Save**.

10 To review the appearance and performance of the detail grid, click the **Data** tab.

11 Select the **Populate Detail** check box. The detail grid is constructed based on the parameters that you specified. The number of rows included in the grid, the amount of time it took to construct the grid, and the number of rows per second are displayed.

12 When you are finished creating the detail grid, click the Status drop-down button and select **Active**.

13 Click **Save**. Users can now add the detail grid to their dashboards.

Copying Detail Grids

You can create a new detail grid by copying an existing detail grid. To copy a detail grid:

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Edit Detail Grid**.

3 In the Configuration ID field, select the detail grid.

4 Click **Copy**.

5 In the New Configuration ID field, specify the ID of the new detail grid.

6 Click **Ok**. The new detail grid is loaded in the dialog.

Exporting User-defined Metrics and Data Sources

You can export analytics, detail grids, and data sources to an XML file. You can export both custom content and vendor content. Vendor content is provided by Infor. You cannot edit vendor content.

1. Select **File**, **Dashboard**.
2. Select **Edit**, **Export Content**. A table that lists all custom data sources, analytics, and detail grids is displayed. Use the Data Source, Analytic, and Detail Grid check boxes to filter the type of content displayed in the table. Use the Scope options to select the sources of content to include in the table.
3. To select an item for export, select the **Include** check box. To select all items, click the **Include** button.
4. In the File field, specify the name of the export file.
5. Click **Export**.

Importing User-defined Metrics and Data Sources

You can import user-defined content into your database. You can import both custom content and vendor content. Vendor content is provided by Infor. You cannot edit vendor content.

1 Select **File**, **Dashboard**.

2 Select **Edit**, **Import Content**.

3 Click the browse button and select the file to import.

4 Click **Open**.

5 Click **Import**.

Specifying Security Settings for Metrics

Use Security Maintenance to restrict access to system and custom metrics. You can secure metrics for individual users and for security profiles.

If a user does not have access to a metric, the user cannot add the metric to a dashboard or view the metric on a shared dashboard.

1 Select **Security**, **Security Maintenance**.

2 Perform one of these steps:

- To specify security settings for profiles, click **Profile**. Click the **Profile ID** browse button and select the profile.
- To specify security settings for an individual user, click **User**. Click the **User ID** browse button and select the user ID.

3 Click the **Dashboard Item Security** tab. By default, all analytics and detail grids are listed. Use the Custom Analytic, System Analytic, Custom Detail Grid, and System Detail Grid check boxes to filter the information in the table. For example, to view only custom analytics, click the System Analytic, Custom Detail Grid, and System Detail Grid check boxes.

4 To prevent the use of an analytic or grid, clear the **Access** check box.

5 Click **Save**.

End Users and Custom Metrics

After you design analytics and detail grids and change their statuses to active, users can add them to their dashboards.

When users add a metric, they can choose settings in a dialog. The options that are available in the dialog depend upon the selections that you made in the data source and the edit analytic or edit detail grid.

This table shows the source of each field on the dialog:

Dialog field	Source	Notes
Configuration ID	Edit User Detail Grid Edit User Analytic	
Title	Edit User Detail Grid Edit User Analytic	Users can override the value that you specify in the source.
Series Grouping	Edit User Analytic	Users can override the value that you specify in the source.
Series Category	Edit User Analytic	Users can override the value that you specify in the source.
Period Type, Periods, Horizon Periods, Begin Date, End Date	Edit User Detail Grid Edit User Analytic	Users can override the value that you specify in the source.
Filters	Data Source	Users can specify the filter values, but they cannot add or remove filter types.

Chapter 12: Reporting

This chapter contains this information:

Topic	Page
Reporting	12–2
Using User Defined Reports	12–6

Reporting

You can run these types of reports:

General Reports – General reports are available from the main window and are located under the menu to which they are related. For example, the Customer Backlog Report appears on the Sales menu.

Specific Reports – Many windows have specific reports that you cannot access from anywhere else. For example, you can only print Acknowledgments and Customer Orders from the Customer Order Entry window.

Many reports support the viewing of your data in Print, On-screen, or Electronic formats.

Accessing Reports

To access general reports, click the menu that relates to the report you want to print and click the report name.

To access specific reports, open the window that relates to the report you want to print and select the report you want from the File menu.

Choosing Information to Print in Reports

Most Report dialog boxes give you the option to specify ranges for your report information—for example, Starting and Ending Dates. If you have a large database with many documents, you may want to carefully specify ranges for your report information. Otherwise, you may end up printing very large reports when you are only interested in a small amount of specific information. For example, if you have more than 10,000 parts in your database but only want your report to cover those you purchase from a certain vendor, you can tailor your report to print the information you want.

For example, the Print Purchase Orders dialog allows you to specify ranges for the following:

- Starting and Ending Dates
- Starting and Ending Vendor IDs
- Purchase Orders
- Order Status
- Depth of detail

After you select the various ranges for the information in your report, select where you want to output your report. You can select the following options:

Print – Use the Print option to send your reports to a printer.

View – Use the View option to send your report to a report view application so you can see the report on screen.

File – Use the File option to send the report to a text file and save it to your computer.

E-Mail – Select this option to send the report in a Rich Text Format through a Microsoft Outlook e-mail message. To convert this document to PDF (Portable Document Format), select the **PDF Format** check box. To send this e-mail to all of the contacts associated with this document, select the **Send to Document Contacts** check box. To preview the e-mail before sending it to the Document Contacts associated with the document, select the **Preview** check box.

If you selected E-Mail, when you generate the report the system attaches the report to an e-mail message in your default e-mail application. See “Using User Defined Reports” on page 12-6. If Microsoft Outlook is your default e-mail application consult your Microsoft Outlook documentation for information on specifying recipients and sending the e-mail.

If you selected the **Send to Document Contacts** check box, the e-mail is addressed to the associated contacts. The e-mail is sent without any further input from the user.

Selecting Sites in Reports

If you are licensed to use multiple sites, you can select to view information for more than one entity or site in many reports. When you can run a report for multiple sites and accounting entities, you are presented with a list of your allowable sites when you click the Site ID arrow.

To select all of your allowable sites in a particular accounting entity, click the appropriate accounting entity check box. For example, to select the two sites that belong to accounting entity USEAST, select the USEAST check box. If you have included all of an accounting entity’s sites in a report, you can clear the accounting entity check box to omit the accounting entity’s sites from the report.

To select individual sites within in an accounting entity, click the appropriate site check box. Clear the individual site check box to omit the site from the report.

When you make your selections in the Site ID list, your Site ID selections are inserted in the Site ID field.

Receiving QRP Files in Rich Text Format

You can view the contents of a .rtf (Rich Text Format) file by double-clicking the attachment or saving it to your work station. The application associated with the file type .rtf opens the file.

E-mailing Reports

If your computer has a default e-mail client, then no preparation is required to e-mail VISUAL reports. Your computer’s e-mail client is used when you e-mail reports. However, if your system’s default e-mail client is configured incorrectly, or if no default e-mail client is configured, then to send e-mail from VISUAL you must either:

- Set your installed e-mail client as the default.

  OR

- Use SMTP (Simple Mail Transfer Protocol) settings in VISUAL to connect to an e-mail server such as Gmail or Thunderbird. With this method you send VISUAL reports from the VISUAL e-mail dialog. It is assumed that you have a valid account sign in credentials with the SMTP provider. Set up e-mail preference entries in the eMail section of the Preferences Maintenance window.

Setting your Installed E-mail Client as the Default

If your e-mail client is not configured as the default, you will see an Email Settings dialog when you send a report via e-mail.

To configure your installed e-mail client as the default:

1. In the Windows Control Panel, click **Default Programs**.
2. Click **Set your default programs**.
3. From the list of available software, select the installed e-mail client to be the default, for example Microsoft Outlook.
4. Click **Choose defaults for this program**.
5. In the Set associations for a program window, select the **MAILTO** check box in the Protocols section.
6. Click **Save**.
7. Select a report to generate.
8. Select **E-Mail** for the output format and then click **Ok**.

Configuring SMTP E-mail Settings

If an e-mail client is not installed on your computer, you can configure VISUAL to send e-mail using SMTP relay. When VISUAL is configured to use SMTP relay for outgoing e-mail, a simple e-mail dialog is provided to allow you to add e-mail recipients and attach reports.

To configure VISUAL to use SMTP when no default e-mail client exists:

1. Select **Admin**, **Preferences Maintenance**.
2. Select **eMail** from the **Section Filter** drop-down list.
3. Click the **Insert** toolbar button and add an entry for each of these preferences:

   Server Address - The host name of the outgoing SMTP server address that your e-mail uses, for instance smtp.example.com.

   Server Port - The port name used by the outgoing SMTP mail server. Port numbers 25, 465, or 587 are frequently used, but check with your e-mail service.

   User Name - The user name for your default e-mail account. This may be your full e-mail address.

User Password - The password that you use to sign in to your default e-mail account.

Use SSL - Some SMTP providers require the use of Secure Socket Layer (SSL) security. To enable SSL Security, specify “Y” as a value. If your SMTP provider does not require SSL, specify “N” as a value.

4 Click **Save**.

Using SMTP to E-mail Reports

After you set up SMTP relay settings, a VISUAL e-mail dialog is opened when you e-mail a report.

To e-mail a report using SMTP:

1 Select your report and then select E-Mail as your output format and click **Ok**.

The VISUAL e-mail dialog displays with the report attached and the User Name you specified when you specified SMTP settings as the From e-mail address. You can:

- Specify recipient e-mail addresses as To: or Cc:
- Specify a subject
- Write a message
- Add more attachments
- Run the spell check
- Print the e-mail.

2 Click **Send**.

Chapter 13: Query Tool

This chapter includes this information:

Topic	Page
About the Query Tool	13–2
Creating a Query	13–3
Query Toolbar Buttons	13–23

About the Query Tool

Use the Query Tool to search your VISUAL database. Select database tables and columns from a display tree and choose basic SQL commands from a drop-down list to quickly build your SQL query. View your query results in an output table within the tool, or print, email, or export your query results to Microsoft Excel.

You can also attach your query to a toolbar button for use in the Query Tool or in other VISUAL applications.

Caution: Users can access any information in the database via the Query Tool, regardless of their security settings. The data displayed may be sensitive; therefore, the system administrator may want to limit accessibility to VMQUERY.exe.

Prerequisite Knowledge

To use the Query Tool, you should have an understanding of SQL commands, statements, and the expected results of a SQL statement.

Starting the Query Tool

To access the Query Tool, select **Admin**, **Query Tool**.

Setting Preferences

Define your display preferences for the Database Tree shown in the Query Tool.

To set your preferences from within the Query Tool window:

1. Select **Options**, **Database Tree Display Options**.
2. Select the **Show data type next to column name** check box to display the data type and size associated with each column. The data type and size are displayed in parentheses after the column name. If you do not select this check box, the data type and size are not displayed.

   Knowing the data type and size is useful both for SQL command usage and for improving database query results.
3. Click **OK** to save your preference, or **Cancel** to exit without a changed display.

The Database Tables and Columns panel is refreshed with your updated display preference.

Creating a Query

If you know the SQL Query you want to use, you can manually type it into the Query Input field.

If you are unsure of the syntax or format to use for your SQL Query, you can use the Query Tool's built-in functionality to help you write the query.

To use built-in functionality to write a query:

1 Select **Admin**, **Query Tool**.

2 In the Database Tables and Columns field, find the table that contains the column that you want to add to your query. To find the table, use the Table Search field. Enter all or a portion of the table name, then click the Search button. The list of tables is filtered based on your search criteria.

3 Add a column from the database table to your query. To add the column, perform one of these steps:

- Double-click the column name
- Drag and drop the column name to the Query field

To select multiple columns, hold down the CTRL key and click the column names. Then, drag and drop the columns to the Query field.

After you add columns to the Query field, these actions occur:

- The column that you selected is added to the Query field. The SELECT SQL command is written automatically.
- The table that you selected is added to the Join Tables field.
- The list of tables in the Database Tables and Columns field is updated to show only those tables that can be joined to the first table you selected. A table can be joined if it shares a piece of data in common with the first table that you selected. For example, you can join the CUSTOMER_ORDER table to the CUSTOMER table because they share the customer ID as a piece of data.

  The data that the two tables share in common is displayed after the table name.

  Some tables are displayed in blue text, and other tables are displayed in red text. If a table name is displayed in blue text, then the table in the Join Tables field contains a foreign key reference to the table. If a table name is displayed in red, then the table displayed in red contains a foreign key reference to the table in the Join Tables field.

4 Optionally, add a column from a second table to your query.

a Specify how to join the second table to the first table:

To use an inner join, clear the **Left Outer Join** check box.

To use a left outer join, select the **Left Outer Join** check box.

If you do not want the join statement to be written for you automatically, select the **No Auto Joining** check box.

b Add columns from the second table to the query.

5 Optionally, specify table aliases. Table aliases can make your queries easier to read. Specify the table alias immediately after the table name. To add table aliases, first save your query. Then, specify the aliases and save the query again.

6 Optionally, specify column aliases. If you specify column aliases, the aliases are used as the column headers in the query results table. To specify a column alias, specify the alias to use in double quotation marks after the column. For example, if your query included CUSTOMER.ID, and you wanted to use Customer Identification as the column name, you would specify “Customer Identification” after CUSTOMER.ID.

7 To add other SQL commands to your query, use the SQL Command list. Select a command from the list to add it to your query. See "SQL Commands" on page 13–10 in this guide.

8 To construct the statement as a single line, select the **singe line sql statement** check box.

Creating Interactive Queries

You can display a dialog that prompts your query users to specify the bind variables for a WHERE clause. You can require users to specify an exact value or allow users to specify wildcards in their variables.

To require an exact value, use this syntax:

WHERE TABLE.COLUMN =:”Field label in dialog”

To allow users to specify wildcards, use this syntax:

WHERE TABLE.COLUMN like :”Field label in dialog”

To allow users to specify a range of values, such as a range of dates, use this syntax:

WHERE TABLE.COLUMN > :”Beginning field label” and table.column < :”End Field label”

For example, if you specified WHERE CUSTOMER_ORDER.ID like: “My Customer Order ID”, a dialog is displayed when the user runs the query. The dialog would contain one field named My Customer Order ID. The user could specify wildcards in the dialog.

Or, if you specified WHERE CUSTOMER_ORDER.ORDER_DATE > :”Beginning Order Date” and CUSTOMER_ORDER.ORDER_DATE < “Ending Order Date”, a dialog is displayed when the user runs the query. The dialog would contain a field named Beginning Order Date and a field named Ending Order Date. The user could specify the date range of the orders.

You can include multiple columns in the WHERE clause and prompt the user to specify a value for each column. When the query is run, columns with null values are not included in the results. Consult a SQL guide for information about how null values are handled in SQL queries.

You can also use a single quotation mark instead of the double quotation mark.

Adding Drill-to Buttons to Query Results

To add drill-to buttons, you must clear the No Auto Joining check box when you write the query.

The drill-to buttons are added automatically provided that your query includes the required primary or foreign keys and columns. For example, you can drill into Site Maintenance if SITE.ID or CUSTOMER_ORDER.SITE_ID is included in your query.

You must also specifically select the database column in your query. For example, if you specified SELECT * FROM RECEIVER, drill-to links would not be added to the query result. If you specified SELECT r.ID, r.PURC_ORDER_ID, r.SITE_ID FROM RECEIVER r, then the query result would include drill-to buttons for the receiver ID, purchase order ID, and site ID.

This table shows the tables and columns that support drill-tos and the window that the drill-to button opens:

Database Table	Database Column	Drills to	Notes
CURRENCY	ID	Exchange Rate Maintenance	To activate the link, an entity ID column must be included in the query.
	VOUCHER_ID	Accounts Payable Invoice Entry	
	VENDOR_ID	Vendor Maintenance	
	SITE_ID	Site Maintenance	
	PAYB_GL_ACCT_ID	Accounting Window	
	CURRENCY_ID	Exchange Rate Maintenance	To activate the link, an entity ID column must be included in the query.
RECEIVABLE	INVOICE_ID	Accounts Receivable Invoice Entry	
	CUSTOMER_ID	Customer Maintenance	
	SITE_ID	Site Maintenance	
	CURRENCY_ID	Exchange Rate Maintenance	To activate the link, an entity ID column must be included in the query.

Database Table	Database Column	Drills to	Notes
ACCOUNT	ID	Accounting Window	
	CURRENCY_ID		To activate the link, an entity ID column must be included in the query.
CUSTOMER	ID	Customer Maintenance	
	DEF_TRANS_CURRENCY_ID	Exchange Rate Maintenance	To activate the link, an entity ID column must be included in the query.
EMPLOYEE	ID	Employee Maintenance	
INVENTORY_TRANS	TRANSACTION_ID	Inventory Transaction Entry	
	SITE_ID	Site Maintenance	
	GL_ADJ_ACCOUNT_ID	Accounting Window	
LABOR_TICKET	TRANSACTION_ID	Labor Ticket Entry	
	EMPLOYEE_ID	Employee Maintenance	
	RESOURCE_ID	Shop Resource Maintenance	
	SITE_ID	Site Maintenance	
WORK_ORDER	TYPE BASE_ID LOT_ID SPLIT_IT SUB_ID	Manufacturing Window	To activate the link, all columns listed in the Database Columns column must be included in the query. the Part ID must also be included
	PART_ID	Part Maintenance	
	SITE_ID	Site Maintenance	

Database Table	Database Column	Drills to	Notes
CUSTOMER_ORDER	ID	Customer Order Entry	
	CUSTOMER_ID	Customer Maintenance	
	SITE_ID	Site Maintenance	
	CURRENCY_ID	Exchange Rate Maintenance	To activate the link, an entity ID column must be included in the query.
PART	ID	Part Maintenance	If Site ID is included in the query, Part Maintenance is opened at the site level. If Site ID is not included, Part Maintenance is opened at the tenant level.
	PREF_VENDOR_ID	Vendor Maintenance	
PART_SITE	PART_ID	Part Maintenance	If Site ID is included in the query, Part Maintenance is opened at the site level. If Site ID is not included, Part Maintenance is opened at the tenant level.
	SITE_ID	Site Maintenance	

Database Table	Database Column	Drills to	Notes
PURCHASE_ORDER	ID	Purchase Order Entry	
	VENDOR_ID	Vendor Maintenance	
	SITE_ID	Site Maintenance	
	CURRENCY_ID	Exchange Rate Maintenance	To activate the link, an entity ID column must be included in the query.
RECEIVER	ID	Purchase Receipt Entry	
	PURC_ORDER_ID	Purchase Order Entry	
	SITE_ID	Site Maintenance	
SHOP_RESOURCE	ID	Shop Resource Maintenance	If Site ID is included in the query, Shop Resource Maintenance is opened at the site level. If Site ID is not included, Shop Resource Maintenance is opened at the tenant level.
	SITE_ID	Site Maintenance	
	AFB_GL_ACCT_ID	Accounting Window	
SHOP_RESOURCE_SITE	ID	Shop Resource Maintenance	If Site ID is included in the query, Shop Resource Maintenance is opened at the site level. If Site ID is not included, Shop Resource Maintenance is opened at the tenant level.
	SITE_ID	Site Maintenance	

Database Table	Database Column	Drills to	Notes
SHIPPER	PACKLIST_ID	Shipping Entry	
	CUST_ORDER_ID	Customer Order Entry	
	SITE_ID	Site Maintenance	
SITE	ID	Site Maintenance	
VENDOR	ID	Vendor Maintenance	
	CURRENCY_ID	Exchange Rate Maintenance	To activate the link, an entity ID column must be included in the query.
	DEF_EXP_GL_ACCT_ID	Accounting Window	
	DEF_TRANS_CURRENCY	Exchange Rate Maintenance	
WAREHOUSE	ID	Warehouse Maintenance	
	CUSTOMER_ID	Customer Maintenance	
	VENDOR_ID	Vendor Maintenance	
	SITE_ID	Site Maintenance	

SQL Commands

This table shows the SQL Commands available from the drop-down list and some basic usage guidelines:

SQL Command	Description
BETWEEN	Use this operator in a WHERE clause to filter a result set that meets a specified range of values. **Syntax:** SELECT column_name(s) FROM table_name WHERE column_name BETWEEN value1 AND value2 **Example:** SELECT * FROM customer_order WHERE order_date BETWEEN '01/01/2015' AND '12/31/2015' **Result:** The query returns all customer order records with order dates between 01/01/2015 and 12/31/2015.
EXISTS	Use this condition with a subquery within a SELECT statement to test for the existence of rows in a table. **Syntax:** WHERE EXISTS (subquery) **Example:** SELECT * FROM part WHERE EXISTS (SELECT * FROM purc_order_line WHERE part.id=purc_order_line.part_id) **Result:** The query returns data from the part table for all Part IDs used on purchase order lines.

SQL Command	Description
FROM	Use this clause in a SELECT statement to create a result set from a table. **Syntax:** SELECT column_name(s) FROM table_name **Example:** SELECT * FROM account_balance **Result:** This query returns all records in the account_balance table.
GROUP BY	Use this clause to specify how to group the results of a SELECT statement, particularly when you use an aggregate function such as SUM or COUNT. The columns you specify in the select statement must be included in the GROUP BY clause. **Syntax:** SELECT column_name, aggregate function FROM table_name GROUP BY table_name.column_name **Example:** SELECT part_id, count(*) FROM cust_order_line GROUP BY part_id **Result:** This query returns the number of times each part is used on customer order lines. The results are sorted by Part ID.

SQL Command	Description
IN	Use this operator to specify multiple values in a WHERE clause. **Syntax:** SELECT column_name(s) FROM table_name WHERE column_name IN (value1,value2,…) **Example:** SELECT * FROM customer WHERE country IN ('USA', 'UK', 'Italy', 'India') **Result:** This query returns all records in the customer table where the country column is equal to USA, UK, Italy, or India.
INNER JOIN	Use this clause to combine rows from two or more tables where a match exists between columns. **Syntax:** SELECT column_name(s) FROM table_name1 INNER JOIN table_name2 ON table_name1.column_name=table_name2.column_name **Example:** SELECT part.id, part.qty_on_hand, purc_order_line.purc_order_id, PURC_ORDER_LINE.USER_ORDER_QTY FROM part INNER JOIN purc_order_line ON part.id=purc_order_line.part_id **Result:** This query returns a list of parts used on purchase order lines. The results include the tenant-level quantity on hand from the part table and the quantity ordered from the purchase order line.

SQL Command	Description
LEFT JOIN	See LEFT OUTER JOIN. **Syntax:** SELECT column_name(s) FROM (table_name1 LEFT JOIN table_name2 ON table_name1.column_name=table2.column_name) **Example:** SELECT * FROM (part LEFT JOIN part_location ON part.id = part_location.part_id) **Result:** See LEFT OUTER JOIN.
LEFT OUTER JOIN	Use this clause to create a result set that combines rows from two or more tables based on a common field. This clause returns all rows from the left table, or table_name1, with the matching rows from the right table, or table_name2. When there is no match, the returned result is a NULL on the right side. **Syntax:** SELECT column_name(s) FROM table_name1 LEFT OUTER JOIN table_name2 ON table_name1.column_name = table_name2.column_name **Example:** SELECT * FROM part LEFT OUTER JOIN part_location ON part.id = part_location.part_id **Result:** This query returns a list of all parts and part locations. All columns from the part table are on the left side of the results. All columns from the part_location table are on the right side of the results. The two tables are joined on the Part ID. If a part is not assigned to a part location, then the right side of the results is null.

SQL Command	Description
LIKE	Use this operator in a WHERE clause to filter a result set based on a pattern in a column. You can use wildcards in your pattern. Use % to indicate any number of missing characters. Use _ to indicate one missing character. **Syntax:** SELECT column_name(s) FROM table_name WHERE column_name LIKE pattern **Example:** SELECT * FROM payable WHERE terms_id LIKE '5%60' **Result:** This query returns records from the payable table where the Terms ID begins with 5, followed by any number of characters, and ends with 60. For example, all rows containing terms IDs such as 510N60, 530N60, and 5%30N60 are returned.

SQL Command	Description
OUTER JOIN	Use FULL, LEFT, or RIGHT in conjunction with this clause to combine rows from two or more tables or views based on a common field. All rows from both tables are returned in a FULL OUTER JOIN. See LEFT OUTER JOIN and RIGHT OUTER JOIN for details about those clauses. **Syntax:** SELECT column_name(s) FROM table_name1 [FULL|LEFT|RIGHT] OUTER JOIN table_name2 ON table_name1.column_name=table_name2.column_name **Example:** SELECT * FROM part_site FULL OUTER JOIN vendor ON part_site.pref_vendor_id = vendor.id **Result:** This query returns all rows in the part_site table. If a part has a preferred vendor, then the row for the vendor ID is matched to the part_site row. All rows from the vendor table for vendor IDs that are not used as preferred vendors are listed at the end of the query.
ORDER BY	Use this clause to sort the result set by keyword in either an ascending (ASC) or descending (DESC) order. **Syntax:** SELECT column_name(s) FROM table_name ORDER BY column_name [AS|DESC] **Example:** SELECT purc_order_id, received_date FROM receiver ORDER BY received_date DESC **Result:** This query returns a list of purchase order IDs and received dates from the receiver table sorted in descending order by received date.

SQL Command	Description
RIGHT JOIN	See RIGHT OUTER JOIN. **Syntax:** SELECT column_name(s) FROM (table_name1 RIGHT JOIN table_name2 ON table_name1.column_name=table_name2.column_name) **Example:** SELECT shipment_dist.cust_order_id, shipment_dist.posting_date FROM (shipment_dist RIGHT JOIN shipper ON shipment_dist.cust_order_id = shipper.cust_order_id) **Result:** See RIGHT OUTER JOIN.

SQL Command	Description
RIGHT OUTER JOIN	Use this clause to create a result set that combines rows from two or more tables based on a common field. This clause returns all rows from the right table, or table_name2, with the matching rows from the left table, or table_name1. When there is no match, the returned result is a NULL on the left side. **Syntax:** SELECT column_name(s) FROM table_name1 RIGHT OUTER JOIN table_name2 ON table_name1.column_name = table_name2.column_name **Example:** SELECT shipment_dist.cust_order_id, shipment_dist.posting_date, shipper.cust_order_id FROM shipment_dist RIGHT OUTER JOIN shipper ON shipment_dist.cust_order_id = shipper.cust_order_id **Result:** The query returns a list of Customer Order IDs and the dates the distributions for the orders were posted. If a Customer ID has no posted distributions, then no data is displayed in the shipment_dist.cust_order_id and shipment_dist.posting_date query result columns.
SELECT	Use this statement to retrieve information from one or more tables in the database. **Syntax:** SELECT column_name(s) FROM table_name **Example:** SELECT invoice_id, packlist_id, status, actual_del_date FROM shipper **Result:** This query returns all data in the invoice_id, packlist_id, status, and actual_del_date columns of the shipper table.

SQL Command	Description
SELECT *	Use this statement and parameter to retrieve all information from one or more tables in the database. **Syntax:** SELECT * FROM table_name **Example:** SELECT * FROM wo_sch_priority **Result:** This query returns all rows in the wo_sch_priority table.
SELECT DISTINCT	Use this to retrieve a single instance of each value from the table. **Syntax:** SELECT DISTINCT column_name(s) FROM table_name **Example:** SELECT DISTINCT city, state FROM vendor **Result:** This query returns each unique city and state combination from the vendor table. If you have multiple vendors located in Boston, MA, the Boston and MA combination is returned only once.

SQL Command	Description
UNION	Use this operator to combine the results of two or more SELECT statements. A result set from a UNION operator is the same as UNION ALL except that duplicate rows are eliminated. **Syntax:** SELECT column_name(s) FROM table_name1 UNION SELECT column_name(s) FROM table_name2 **Example:** SELECT department_id FROM labor_ticket UNION SELECT department_id FROM employee **Result:** The query results show Department IDs used in both labor tickets and employee records. Duplicate values are removed.
UNION ALL	Use this operator to combine the results of two or more SELECT statements that use similar data types and where the result sets have the same number of fields. **Syntax:** SELECT column_name(s) FROM table_name1 UNION ALL SELECT column_name(s) FROM table_name2 **Example:** SELECT department_id FROM labor_ticket UNION ALL SELECT department_id FROM employee **Result:** The query results show Department IDs used in both labor tickets and employee records. Duplicate values are retained.

SQL Command	Description
WHERE	Use this clause to filter the results in a SELECT statement. **Syntax:** SELECT column_name(s) FROM table_name WHERE column_name operator value **Example:** SELECT site_id, id, order_date FROM customer_order WHERE site_id = 'MMC' AND customer_id = 'ABLMAN' **Result:** The query results show a list of Customer Order IDs and order dates for orders placed for ABLMAN in the MMC site.

Running the Query

After you define the query in the Query Input panel, run your query to retrieve the data from the database.

To run your query:

1. Confirm that your query is displayed in the Query Input panel. You can either select your query from the Query Name drop-down list or manually enter your query command in the panel.
2. Click the **Run** toolbar button.
3. If your query includes a prompt in the WHERE clause, a dialog is displayed. Specify the variables to use for the WHERE clause, then click **Ok**.

   The results are shown in the Output table.

   When you run the query the query input command is checked for correct syntax, order, objects, and data type usage. If the SQL query input command is incorrect, a SQL error dialog is displayed. Consult a SQL syntax guide for reference.

Viewing Query Results

Query results are displayed in the Output table in columns and rows. The column headings correspond to the columns queried. If you specified aliases for the columns, the aliases are displayed as the column headings. The rows show the database information requested by the executed query.

If a cell contains a drill-to arrow, you can click the arrow to open the record.

You can edit the output table information by right-clicking on a table cell and selecting cut, copy, or paste. This feature is useful for privacy and security reasons if you need to remove confidential data before forwarding the printed or exported output to someone. Changing information in the output table does not change the information in your database.

Saving a Query

If you run the same query frequently, you can save the query input for future use. Queries are saved by user. You can access your saved queries from any workstation, provided that your User ID is used to sign into the system.

To save a query:

1 Specify the query in the Query Input panel.

2 Specify a name for the query in the Query Name field.

3 Click **Save**.

To delete a saved query, specify the query in the Query Name field, and then click **Delete Query**.

Clearing Query Output

To clear the Query Output table from the Query Tool, select **Edit**, **Clear query output**. All items in the Output table are removed.

Printing Query Results

Use the Print Query Output option to print the first five columns of output information. To print the query results:

1 Select **File**, **Print Query Output**.

2 Select your preferred output format from the **Print Query Output** drop-down list.

- If you select **Print**, the query output is sent to your printer.
- If you select **View**, the query output appears in the Report Viewer window.
- If you select **File**, you are prompted for the file name in the dialog box. Enter the file name and click **Ok**.
- If you select **E-Mail**, a file is attached to a Microsoft Outlook e-mail in RTF format, or PDF format if you select the **PDF Format** check box. Refer to your Microsoft Outlook user documentation for more information on addressing and sending e-mail.

3 Click **Ok** to print your query output, or **Close** to exit without printing.

Exporting Query Results to Excel

You can export the information from your Query Tool Output table to Microsoft Excel. Then you can further sort and manipulate the data.

To export the query results displayed in the Query Tool Output table to Microsoft Excel select **File**, **Send query output to Excel**. Excel is opened and a spreadsheet is populated with the information as it is displayed in the Query Tool Output table.

To export specific rows to Excel, select the rows in the Query Tool Output table and then select **File**, **Send query output to Excel**.

Customizing Table Join Relationships

If you use custom tables or views in your database, you can use the Extra Joins table to define the relationships between tables.

Note: When you open the Extra Joins dialog, the dialog is populated with custom joins between standard VISUAL tables. We recommend that you do not delete or edit these relationships.

To set up custom relationships:

1 Select **Options**, **Extra Join Edit**.

2 Click **Insert**.

3 Specify this information:

Parent Table – Specify the table that contains the primary key to which the child table refers.

Child Table – Specify the table that contains the foreign key reference to the parent table's primary key.

Relation Name – Specify a name for the relationship.

Child Columns – Specify the names of the columns in the child table that contain the foreign key reference.

Additional Where – Optionally, specify a WHERE clause to limit the relationship between the tables. You do not need to enter the WHERE SQL command. You only need to specify the condition to meet.

4 Click **Save**.

Query Toolbar Buttons

You can add toolbar buttons for queries in both the Query Tool and in all other applications in VISUAL.

Adding a Query Button to the Query Tool Toolbar

You can add buttons for queries to the Query Tool toolbar. After you add a toolbar button for a query, you can click the button to run the query.

To add a toolbar button:

1 In the Query Name field, select the query.

2 Select **File**, **Add User Toolbar**.

To customize the button and tooltip, use Toolbar Maintenance. See "Adding User Toolbars" on page 4–12 in this guide.

Adding a Query Button to Other Application Toolbars

You can add a toolbar button for a query in any application in VISUAL. See "Adding User Toolbars" on page 4–12 in this guide.

Index

A

Accessing
  help files 1–7
Adding
  commands to existing groups 4–8
  new groups 4–9
  non-menu items to groups 4–9
Adding Headings
  graphical menu 4–3
Adding Programs
  to headings 4–4
Adding Sub-Menus
  graphical menu 4–5
Advanced
  toolbars 2–7
Arranging
  toolbars 2–10
Auto Numbering
  using 3–3

B

Background Color
  changing 4–3
Bookmarks
  using 1–4
Browse Result Set, printing 3–18
Browse Table
  editing column layouts 3–17
Browse Window Columns, resizing 3–17
Browsing
  by SQL statement 3–13
Buttons
  window table 2–18

C

Cartesian Products 3–13
Cascading
  notations 3–22
  specifications 3–22
Changing
  background color 4–3, 4–8
  program settings 4–5
Changing Sub-Menus
  graphical menu 4–5
Check Boxes
  using 2–17
Columns
  hiding 2–22
  moving 2–21
  renaming 2–22
  resizing 2–21
  showing 2–22
Commands
  adding to existing groups 4–8
  editing 4–10
  removing from groups 4–10
Configuring
  line item tables 2–21
Copying
  objects 3–5
Creating
  new documents 3–2
Customizing
  personal menu 4–8

D

Deleting
  objects 3–6
  table rows 2–20
Documents
  locking 3–6

E

Edit
  menu 2–5
Editing
  commands 4–10
  group captions 4–10
Existing Groups
  adding commands 4–8

F

File Menu 2–4

G

Graphical Menu
  modifying 4–3
  resetting 4–5
Group Captions
  editing 4–10
Groups
  adding non-ERP Express commands 4–9
  removing 4–11
  removing commands 4–10

H

Headings
  adding programs 4–4
  removing programs 4–4
Help
  menu 2–5
  navigating 1–8
Help Files
  accessing 1–7
  using 1–7
Hiding
  columns 2–22

I

Index Tab
  using 1–8
Info Menu 2–6
Initial Entry
  searching on 3–10
Inserting
  table rows 2–19

K

Keep Browse Visible 3–10
Keyboard
  using with tables 2–20

L

Line Item Tables
  configuring 2–21
Links
  using 1–4
Locking
  documents 3–6
Lot ID/Eng ID 3–2

M

Macros
  menu 2–6
Main
  toolbars 2–7
Menu
  Edit 2–5
  File 2–4
  Help 2–5
  Info 2–6
  macros 2–6
  notes 2–6
  options 2–5
  View 2–5
Menus
  right-click 2–12
Modifying
  existing objects 3–5
  table rows 2–20
Moving
  columns 2–21

N

Navigating
  help 1–8
New Documents
  creating 3–2
New groups
  adding 4–9
Non-ERP (Express) Commands
  adding to groups 4–9
Notations
  accessing 3–20
  adding 3–23
  cascading 3–22
  deleting 3–23
  modifying 3–23
  resizing 3–22
  showing multiple 3–21
  spell check 3–23
  tiling 3–22
  viewing 3–22
  working with 3–22
Notations Menu 3–21
Notes
  menu 2–6

O

Objects
  copying 3–5
  deleting 3–6
  modifying existing 3–5
OLE2 3–19
Option Buttons
  using 2–16
Options
  menu 2–5

P

Passwords
  changing 1–3
Personal Menu
  customizing 4–8
  starting 4–11
  using 4–7
Picture/Objects
  using 3–19
Printing
  the browse result set 3–18
Program Settings
  changing 4–5

Q

Quick Filtering 3–11

R

Receiving
  reports using E-mail 12–3
Refreshing from the database 3–19
Removing
  commands from groups 4–10
  groups 4–11
Removing Programs
  from headings 4–4
Renaming
  columns 2–22
Resetting
  graphical menu 4–5
Resizing
  columns 2–21
  toolbars 2–11
Right-click
  menus 2–12

S

Scrolling
  in tables 2–21
Search Items
  selecting 3–15
Search Tab
  using 1–8
Searching
  lists 3–11
  on initial entry 3–10
Searching Process
  stopping 3–14
Selecting
  search item 3–11
  table rows 2–19
Setting Up
  user toolbar 2–11
Showing
  columns 2–22
Site-level Overrides for Certain Records 3–5
Sorting
  visible columns 3–14
Specifications
  accessing 3–20
  cascading 3–22
  resizing 3–22
  showing multiple 3–21
  spell check 3–23
  tiling 3–22
  working with 3–22
Split ID 3–3
SQL Command 13–10
SQL Statements
  browsing by 3–13
Stopping
  the searching process 3–14
Sub ID 3–3
Supported applications
  program security 2–13

T

Table Components 2–18
Table Rows
  deleting 2–20
  inserting 2–19
  modifying 2–20
  selecting 2–19
Tables
  scrolling 2–21
  working with 2–18
Tiling
  notations 3–22
  specifications 3–22
Toolbar Buttons 3–21
Toolbars
  arranging 2–10
  in applications 2–7
  main 2–7
  resizing 2–11
  ToolTips 2–7
  turning on and off 2–11
  user 4–12
ToolTips
  in toolbars 2–7

U

Understanding
  Document IDs 3–2
  Master IDs 3–2
  Work Order IDs 3–2
User
  toolbars 4–12
User Reports Menu 2–6
User Toolbars
  setting up 4–13
Using
  auto numbering 3–3
  bookmarks 1–4
  check boxes 2–17
  help files 1–12
  index tab 1–8
  keyboard with tables 2–20
  links 1–4
  option buttons 2–16
  Picture/Object and OLE2 3–19
  search tab 1–8

this guide 1–4
VISUAL Documentation 1–4
Using Spell Check 3–23

V

View
menu 2–5
Visible Columns
sorting by 3–13

W

Work Order IDs
understanding 3–2