# Norton 2000™ Implementation Guide

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C H A P T E R 1

# Getting started

Before installing Norton 2000, review the system requirements listed below to ensure your system has adequate resources to install and run the application.

## System requirements

To use Norton 2000, you must have either Windows 3.1, Windows 3.11, Windows 95, Windows 98, or Windows NT successfully installed. Running Norton 2000 can be a resource-intensive operation which, depending on the selected options, may produce duplicate spreadsheets and large reports.

You must have the following minimum requirements:

- 386 processor or greater
- 16 MB or more of installed memory
- 48 MB or more of available swap file space
- 10 MB or more of available disk space

**Note:** To create Microsoft Excel spreadsheets with year 2000 issues color-coded for severity or to modify Microsoft Excel spreadsheets with Norton 2000 Fix Assistant, you must have Microsoft Excel version 5.0 or later installed.

# Setup options

The Norton 2000 Setup program allows you to choose from the following main installation options:

- Install Norton 2000 Standalone Application: Norton 2000 is the analysis program that checks your computer and computer data for year 2000 issues. See "Introducing Norton 2000" on page 13.
- Install Norton 2000 BIOS Fix: The BIOS Fix is a device driver that you can install to compensate for real-time clock and BIOS year 2000 date problems. Running Norton 2000 BIOS Test tells you if you need to install Norton 2000 BIOS Fix. This setup option is not available on systems running Windows NT. See "BIOS Test and BIOS Fix" on page 83.
- Install Norton 2000 SQL Server Database Client: Norton 2000 Database is a SQL Server database application that collates, tracks, and reports year 2000 issue data generated by Norton 2000 for your entire enterprise. See Appendix C, "Norton 2000 Database," on page 99.
- Install Norton System Center With Norton 2000: Norton System Center is an application that enables distribution of software across networks to facilitate Norton 2000 remote network execution and Norton 2000 Database collection. This option also installs Norton 2000 extensions for use with Norton System Center. See ADMIN.HTM in the ADMIN folder on the Norton 2000 Corporate Edition 2.0 installation CD.
- Browse CD: This selection opens a window in which you can view the contents of the installation CD.
- View Administrator Overview: This option launches ADMIN.HTM which provides more information about using Norton System Center and Norton 2000 for remote network execution.
- Exit: This option closes the setup program.

# Running Setup on Windows 95/98/NT

1. Start Windows. Close all Windows applications.
2. Insert the Norton 2000 CD into your CD-ROM drive.
3. Setup starts automatically and guides you through the Norton 2000 installation.

If Setup does not start automatically:

1. Double-click the My Computer icon.
2. Double-click the icon for your CD-ROM drive.
3. Double-click NCDSTART.EXE.
4. The Setup program guides you through the Norton 2000 installation.

# Running Setup on Windows 3.1 or 3.11

1. Start Windows. Close all Windows applications.
2. Insert the Norton 2000 CD into your CD-ROM drive.
3. In Program Manager, select Run from the File menu.
4. Type E:\SETUP16.EXE in the command line. (Or change "E" to the correct drive letter for your CD-ROM drive.) Press Enter.
5. The Setup program guides you through the Norton 2000 installation.

## Installing OLE support for Windows 3.1 or 3.11 systems

Norton 2000 uses Windows Object Linking and Embedding (OLE) support. Most systems have OLE already installed because it is used by many programs, including Microsoft Office.

If you don't know if OLE is installed on your system, simply install it when you install Norton 2000. Setup will ensure that more recent files are not overwritten. Alternatively, you can install OLE after you have installed Norton 2000 by running the Microsoft OLE Setup in the Norton 2000 Corporate Edition program group.

# Customizing setup

Norton 2000 provides a utility with which you can create a customized installation to include additional files, manipulate folders or files, and display user information. This customization utility is described in Appendix D, "Norton 2000 customized installation," on page 135.

CHAPTER 2

# Introducing Norton 2000

Norton 2000 is an award-winning analysis tool that locates and reports year 2000 data and processing problems in the desktop environment. The year 2000 problem is a result of the use of 2-digit year dates to represent 4-digit year dates in programs, applications, and utilities. For example, the date 08/15/97 implies the year 1997 to most people. However, 08/15/05 might as easily mean 2005, if it refers to a retirement date, or 1905, if it refers to a date of birth.

The use of year abbreviations requires a program processing a date with a 2-digit year to infer the actual 4-digit year value, and make appropriate assumptions. With the approaching turn of the century, computers that maintain years as two digits may not recognize that the year 2000 is greater than the year 1999.

Date arithmetic in spreadsheets, databases, and other date-sensitive applications may be incorrectly handled. As well, computer hardware can malfunction when dealing with dates in the year 2000 and beyond. Norton 2000 is designed to locate and report such date issues. Added functionality now enables you to use Norton 2000 to locate and expand two-digit years in Microsoft Excel spreadsheets.

## What's new

Norton 2000 Corporate Edition version 2.0 has many usability enhancements, performance improvements, and important new features, including:

- Norton 2000 Fix Assistant, which guides you through expanding two-digit year dates to four-digit years in MS Excel spreadsheet files.

- The ability to scan compressed files on local and floppy disk drives.
- The ability to sort the Data File Scan output in the log window by issue severity.
- Updated Norton 2000 Database application which provides data collection and enhanced reporting capabilities. A Database Migration utility assists with importing data from versions 1.0 and 1.01 of the Norton 2000 Database. As well, Norton 2000 comes with a Windows NT data import service to assist with data collection.

# About Norton 2000

Norton 2000 locates and reports year 2000 data and processing problems in the desktop environment through the use of scanners specifically designed to scan your operating system for year 2000 date rollover problems, your environment for year 2000 non-compliant applications, and your data files for year 2000 date issues.

Norton 2000 accomplishes a complete year 2000 readiness analysis in the following ways:

- Performs a System Date Test which checks your BIOS and operating system, and generates a concise report on year 2000 date rollover capability.
- Performs an Application Scan which inventories your applications and provides a detailed report of applications with known year 2000 issues.
- Performs a Data File Scan which locates and scans data files for date problems resulting from the year being expressed in 2-digit rather than 4-digit format, assigns a year 2000 risk severity to each issue, and generates a report.
- Optionally, generates color-coded and annotated duplicates of Microsoft Excel spreadsheets that highlight and explain year 2000 problem cells.

Norton 2000 is useful for estimating the size, level of risk, and impact of year 2000 problems. It helps resolve and, in some cases, repair your desktop year 2000 problems to assure you that your computer will run at the turn of the century.

Norton 2000 also comes with BIOS Test which tests your real-time clock and BIOS for hardware year 2000 problems and provides a report with recommendations for correcting any problems found. BIOS Fix can be installed to provide a solution for systems with clocks that are unable to function correctly in the year 2000. BIOS Fix is not necessary for systems running Windows NT. For more information, see "BIOS Test and BIOS Fix" on page 83.

## Checking the date hardware and software

The real-time clock and BIOS (Basic Input/Output System) form a date management system that provides low-level support to the computer's operating system, supplying date and time information used by applications and the operating system.

Your BIOS may not correctly manage the rollover of the century and may even set the century to 19 rather than 20, causing some date-sensitive applications to operate incorrectly. The Norton 2000 BIOS Test detects these problems and Norton 2000 BIOS Fix provides a solution for most computers. See "BIOS Test and BIOS Fix" on page 83 for more information.

In addition, the Norton 2000 System Date Test provides information about year 2000 status and problems which may be in the date management system on your computer. This test is used to verify that your operating system can support the date rollover into the year 2000.

## Checking application date support

Applications installed on your computer may have year 2000 date support issues. It is important to know what year 2000 problems may be present in your applications and what you can do to resolve these problems.

Norton 2000 inventories the applications on your computer and compares the application inventory against its knowledge base, providing information on year 2000 non-compliant applications and recommendations for correction.

## Checking dates in application data files

A powerful Norton 2000 feature is its ability to scan data files produced by the applications on your computer and create comprehensive reports on year 2000 issues.

Norton 2000 recognizes database and spreadsheet data files and identifies year 2000 date issues. For those files which are not recognized by the database or spreadsheet scanners, Norton 2000 uses its unformatted file scanner to locate potential date issues. Norton 2000 can scan Visual Basic source files, Visual Basic embedded in database and spreadsheet files, and data files in a compressed archive.

## Database scanner

Norton 2000 scans for year 2000 problems in the following database applications:

- Microsoft Access, version 2.0 and greater
- Paradox, version 3.0 and greater
- Xbase files, including most versions of FoxPro, dBase III and dBase IV, and Clipper

Norton 2000 recognizes and scans most common database formats for the following issues:

- Internal dates: Dates that are held in a native database format which do not have 2-digit year ambiguity. These dates may still be unsafe because they may have been constrained by a data entry form which limited them to 2-digit years when they were first entered.
- Text dates: Dates that must be interpreted each time they are used with date calculations. Text dates may have a 2-digit year ambiguity.
- Microsoft Access input mask limits in forms, reports, queries, and tables: Input masks may restrict date input to an ambiguous 2-digit year format, or simply not enforce a 4-digit year format.
- Microsoft Access output format limits in forms, reports, queries, and tables: Output formats may specify an ambiguous 2-digit year.

Norton 2000 also optionally examines Visual Basic source code embedded in Microsoft Access databases and indicates date-related computations and variables.

## Spreadsheet scanner

Norton 2000 scans for year 2000 problems in most versions of the following spreadsheet applications:

- Microsoft Excel, version 3.0 and greater

- Lotus 1-2-3, all versions
- Quattro Pro, all versions

Spreadsheets perform significant calculations that can be affected by the year 2000 problem. Norton 2000 recognizes and scans common spreadsheet files for both problematic dates and date-related calculations. Norton 2000 identifies instances of year 2000 date ambiguity, indicating how and where the data is used, and what those problems are.

Spreadsheet vendors have attempted to address the year 2000 problem through selective interpretation of 2-digit years by a process termed "date windowing." For example, 2-digit years from 00 to 29 may be interpreted as the years from 2000 to 2029, while two-digit years from 30 to 99 may be interpreted as the years from 1930 to 1999. The ranges of years, 1930 to 1999 and 2000 to 2029 are the "windows." The years that are in each window differ from one spreadsheet program to another, and even from one version to another. For example, some 2-digit years in dates in a Microsoft Excel 95 spreadsheet are interpreted differently by Microsoft Excel 97.

Because this condition changes the basic date conversion assumption, it is possible for a correctly working spreadsheet to cease working when the spreadsheet application is upgraded from one version to the next. Norton 2000 is aware of these differences and has the ability to detect and report on these situations.

Norton 2000 also optionally examines Visual Basic source code and macros embedded in Microsoft Excel spreadsheets and reports date-related computations and variables.

## Unformatted file scanner

Norton 2000 can examine almost any file as an unformatted file. Files not recognized by Norton 2000 as database or spreadsheet files are examined with an unformatted file scanner, which identifies dates with 2-digit years as well as dates with 4-digit years.

If a file consists entirely of printable text, date occurrences are reported in terms of the line on which they were found. If a file has binary characters, dates are reported in terms of the character offset from the start of the file. Certain files, such as compressed files, may obscure the text and prevent accurate analysis with the unformatted text scanner.

## Source file scanner

Norton 2000 can examine Visual Basic source files in addition to examining Visual Basic embedded within Microsoft Access databases and Microsoft Excel spreadsheets.

Visual Basic source is scanned for:

- Date-related functions and procedures
- Date-related variables
- Date computations
- Date formats
- Date conversion operations
- The constants 1900 and 365/366

In addition, Norton 2000 can scan for variable names, comments, and function names that suggest that they refer to dates.

**Note:** Source code scanning is not enabled by default. See "Editing file name filters" on page 61.

## Compressed file scanner

Norton 2000 recognizes industry-standard compressed files on local, network, and floppy drives, and scans files in a compressed archive. Norton 2000 also recognizes multi-volume compressed archives. See "Compressed file scanning" on page 63 for more information.

CHAPTER 3

# Checking your computer with Norton 2000

Norton 2000 targets your computer, your applications, and your data to help you understand, locate, and find a solution for year 2000 problems.

**To start Norton 2000:**

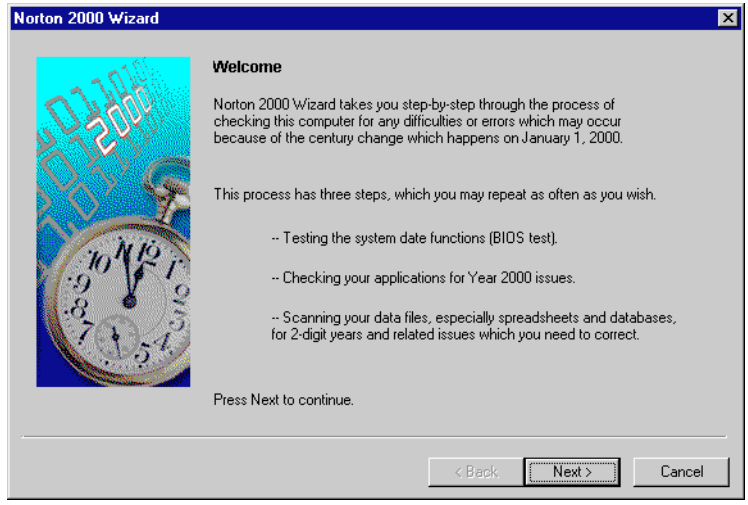
1. Click the Start button, then choose Programs > Norton 2000 Corporate Edition > Norton 2000 Corporate Edition.
2. The Norton 2000 Wizard appears.

## Norton 2000 Wizard

When you first start Norton 2000, the wizard guides you through three consecutive processes to analyze and locate year 2000 issues:

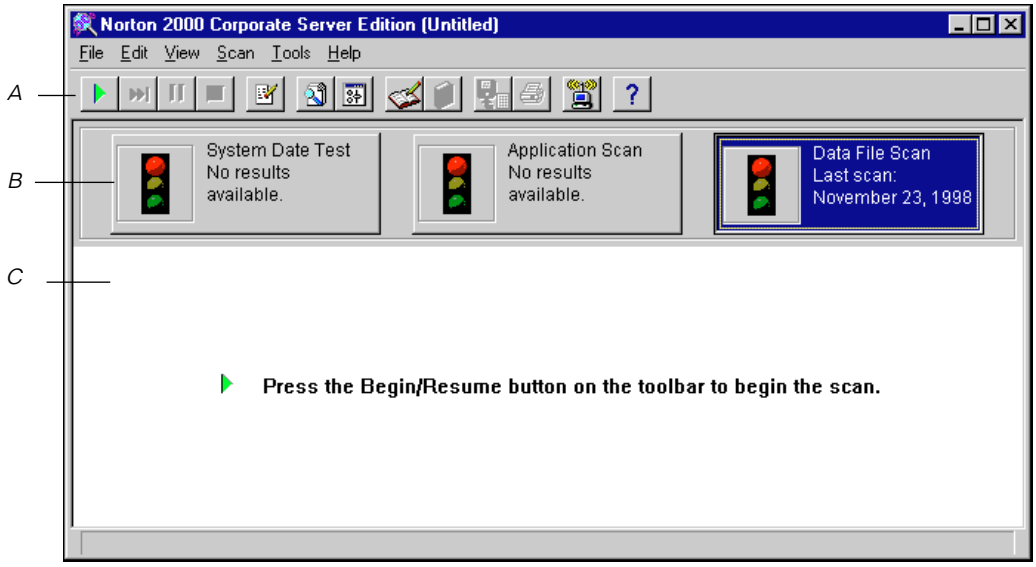
- System Date Test: Tests your computer's capability to support dates in the year 2000.
- Application Scan: Scans and inventories your applications for year 2000 compliance.

- Data File Scan: Scans your data files and provides a detailed report outlining any date issues found.



# Norton 2000 main window

The following paragraphs describe the features and controls available in Norton 2000. This section also describes the basics of running the application.

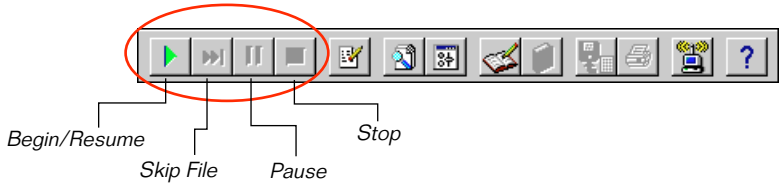



*A. Toolbar*

*B. Traffic Lights*

*C. Log Window*

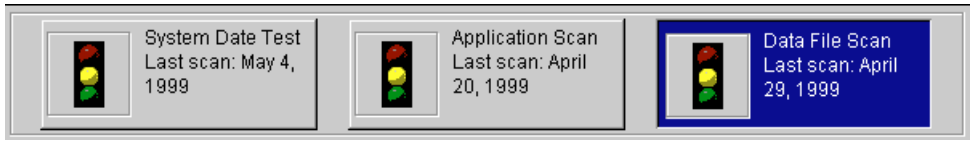
The toolbar has buttons for frequently used commands. The VCR-like controls at the left of the toolbar are used to start and control each of the processes.



Click a traffic light to go to one of three views:

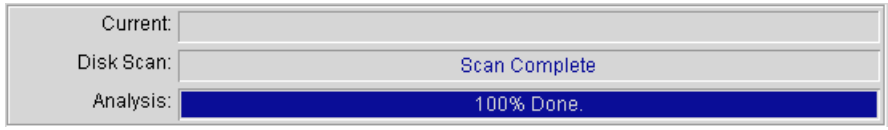
- System Date Test
- Application Scan
- Data File Scan

Each traffic light button shows the date of the last test or scan and the relative level of year 2000 risk that was identified. Green is low risk, yellow is medium risk, and red is high risk.

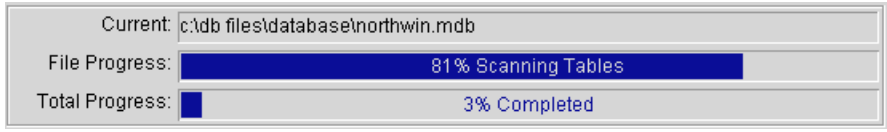



Norton 2000 also displays status gauges when either the Application Scan or the Data File Scan are running. The gauges give you an indication of the progress of the scan.

*Application Scan status gauge*




*Data File Scan status gauge*




# Using the Norton 2000 Help System

**To see the Help Topics or Index:**


Select Help Contents from the Help menu or click the Help icon on the main window toolbar. You can also get to the Topics window from any Help dialog.

**To get context-sensitive Help in a window**:

Press Shift+F1 or click the help icon in the top right corner of a dialog window. With the cursor in context-sensitive mode, click an object or control in the current dialog. A Help popup appears with a brief description of that control.

**To get Help for the current window:**

Click the Help button in the dialog. The Help system provides you with the Help window for the dialog.

**To get Help regarding a diagnostic message in the Log Window:**

Click the help icon next to a diagnostic message in the Log Window for more details regarding that message.

**The lightning bolt icon**

You can also get help by clicking the lightning bolt icon.

- System Date Test view: Opens the Regional Settings Properties dialog box.
- Application Scan view: Displays the Web site for the selected application using your active browser.
- Data File Scan view: Opens the file with the application that created it or displays a menu of options available such as, Open Original File, Open Annotated File, etc.

## Log Window

The Log Window displays the results of your selected process. You can print the contents of the Log Window for any process.

**To print the results:**

1. Choose Print from the File menu or click the Print button on the toolbar.
2. Select a Print Format option:
   - Expand All Groups prints the report information with all the issues expanded.
   - As Shown prints the Log Window exactly as displayed on your screen.
3. Optionally, select Print Setup to modify your page or printer settings.
4. Click OK to print.

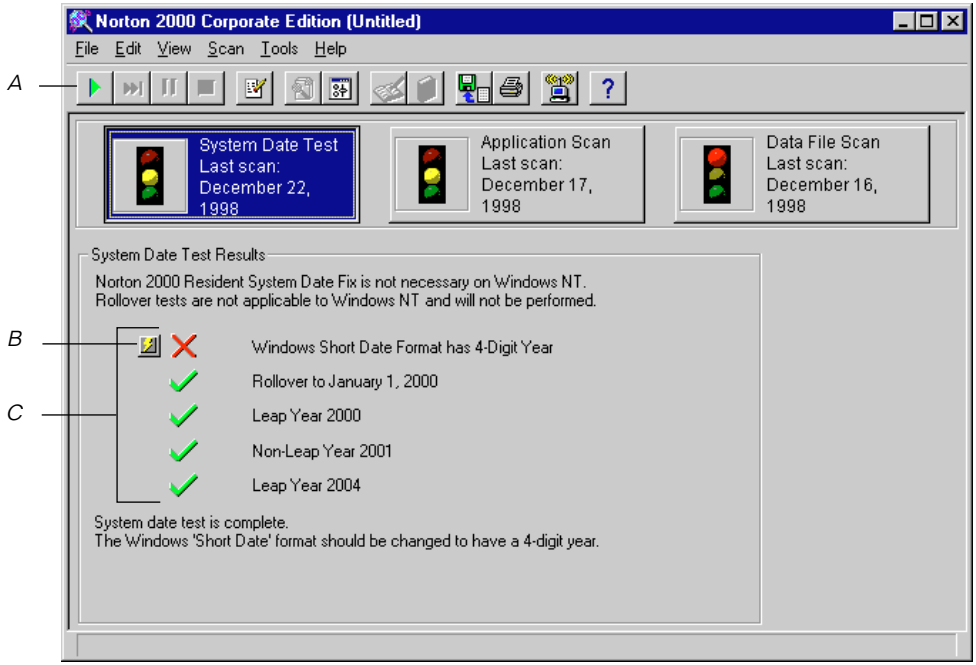
**Note:** When printing the System Date Test, the print options are not available. The results are sent directly to the printer. Use the Printer Setup command to set print options before selecting Print.

## System Date Test

The System Date Test tests your computer's capability to support dates in the year 2000.

### To run the System Date Test:

1. Click the System Date Test traffic light to select the System Date Test.
2. Click  to start the System Date Test.




*A. Click to start the System Date Test*

*B. Click to open the Windows Regional Settings Properties dialog box where you can change your Short Date format to M/d/yyyy*

*C. A red X indicates failure, and a green check indicates success for each date test*

The System Date Test gives a pass or fail for each test performed. See "System Date Test Results" on page 31.

**To save the results of the System Date Test:**

1. Choose Save Results from the File menu.
2. Choose a location and enter a file name in the Save Results dialog box. The results are written to the specified log file which is given a .blg extension.

**Note:** You can use a text editor such as Notepad or WordPad to open and print the log file. You cannot open the log file using Norton 2000.

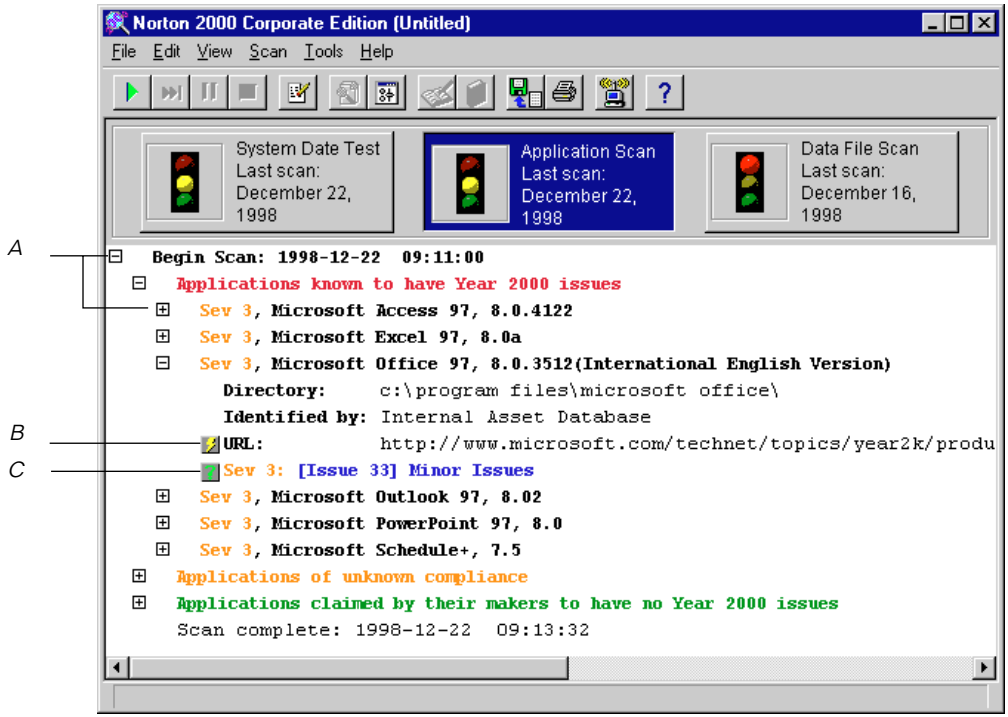
## Application Scan

The Application Scan checks and inventories your applications for year 2000 compliance.

**To run the Application Scan:**

1. Click the Application Scan traffic light to select the Application Scan.
2. Click  to start the Application Scan.

**Note:** The Application Scan may take several minutes, depending on the number of applications.




*A. Click to expand or collapse groups*

*B. Click to go to this Web site*

*C. Click to see a description of the issue*

The Application Scan displays information about all the applications it found. See "Application Scan results" on page 32.

When viewing the results of an application scan you can:

- Click ⊞ or ⊟ to expand or collapse entries.
- Click to see a description of the application issue.
- Click to visit a vendor's year 2000 Web site. This requires an Internet connection and a Web browser. This feature is not available for Windows 3.x and Windows NT 3.51 users.
- Right-click anywhere on an item to display a pop-up menu of options.

**Note:** You can also extend the application scanner knowledge base with your own information about applications. See the USERAPPS.DAT text file for more information.

**To save the results of the Application Scan:**

1. Choose Save Results from the File menu.
2. Choose a location and enter a file name in the Save Results dialog box. The results are written to the specified log file which is given a .alg extension.

**Note:** You can use a text editor such as Notepad or WordPad to open and print the log file. You cannot open the log file using Norton 2000.

## Data File Scan

The Data File Scan checks your data files for year 2000 date issues. The results provide a condensed or detailed report of the year 2000 issues found in addition to diagnostics and hints about understanding and resolving any year 2000 issues.

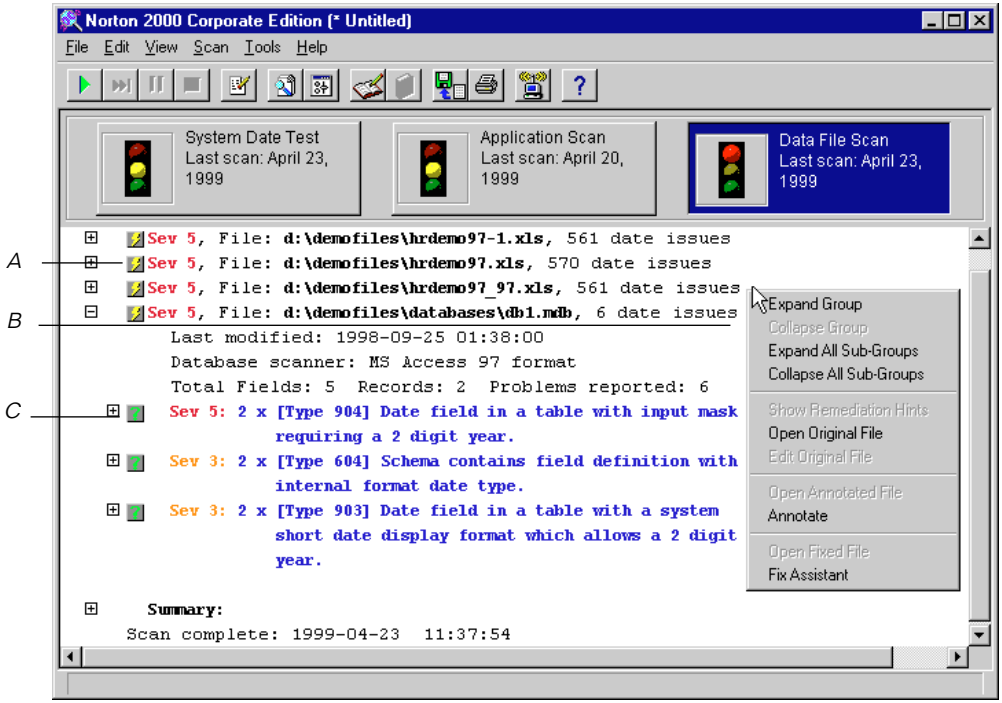
The data file scanner is preset to scan your local hard drives with the database, spreadsheet, and unformatted file scanners. You can modify the default settings using the commands available on the Edit menu. See "Customizing the Data File Scan" on page 47.

**To run the Data File Scan:**

1. Click the Data File Scan traffic light to select the Data File Scan.
2. Optionally, to save the results of the Data File Scan to a file, choose Begin Logging Results from the File menu before you begin the Data File Scan.
3. Click  to start the Data File Scan.

**Note:** The Data File Scan may take several minutes, depending on the number of files.

4. When the scan is complete, select Stop Logging Results from the File menu.




*A. Click to launch the file with its application*

*B. Right-click to display a pop-up menu of options*

*C. Click to see a description of the issue*

The Data File Scan displays information about date issues it found in the data files that are scanned. See "Data File Scan results" on page 34.

When viewing the results of a data file scan you can:

- Click ⊞ or ⊟ to expand or collapse entries.
- Click to see a description of the issue.
- Click to launch the file. If options are available, a submenu will appear.
- Right-click anywhere on the line to display a pop-up menu of options.

- Choose Sort from the View menu to sort the contents of the log window by issue severity. Once you sort the output you cannot revert to the previous order.

**Note:** The application that created the file must be installed on your system for the Open Original File option to be available on the pop-up menu.

If you did not use the Begin Logging Results command, you can still save the results of the Data File Scan once the scan is complete.

### To save the results of the Data File Scan:

1. Choose Save Results from the File menu.
2. Choose a location and enter a file name in the Save Results dialog box. The results are written to the specified log file which is given a .log extension.

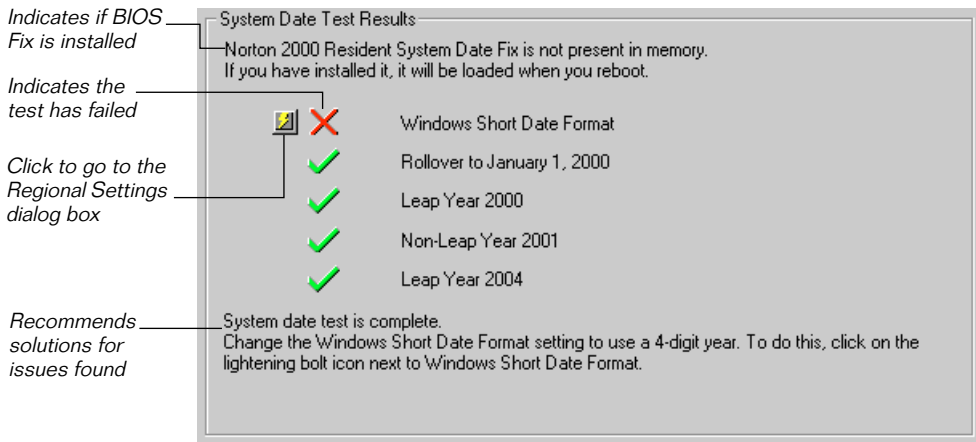
**Note:** You can use a text editor such as Notepad or WordPad to open and print the log file. You cannot open the log file using Norton 2000.

C H A P T E R 4

# Interpreting results

Norton 2000 reports the results of its tests and scans in various formats. This chapter explains the results and reports produced by Norton 2000.

## System Date Test Results




The System Date Test performs the following tests:

- Windows Short Date Format: Checks the Short date style used in your Control Panel Regional Settings (found on the Date tab). If the Short date style is set to the 2-digit year format, the test fails and an "X" appears next to the test.
- Rollover to January 1, 2000, Leap Year 2000, Non-Leap Year 2001, and Leap Year 2004: Resets your clock from the operating system level and verifies that each date listed rolls over to the correct date. If each instance of the test passes, a check appears next to the item on the Log Window. If the date fails to roll over correctly, BIOS Fix should be installed. These tests are not performed on Windows NT systems.

Running the System Date Test also confirms if BIOS Fix is installed and that it is operational. See "BIOS Test and BIOS Fix" on page 83.

**To change your short date format:**

1. Click the Start button, choose Settings, then Control Panel.
2. Double-click the Regional Settings icon.
3. Select the Date tab.
4. In the Short Date Style list, choose a date format with a 4-digit year ("M/d/yyyy," for example).

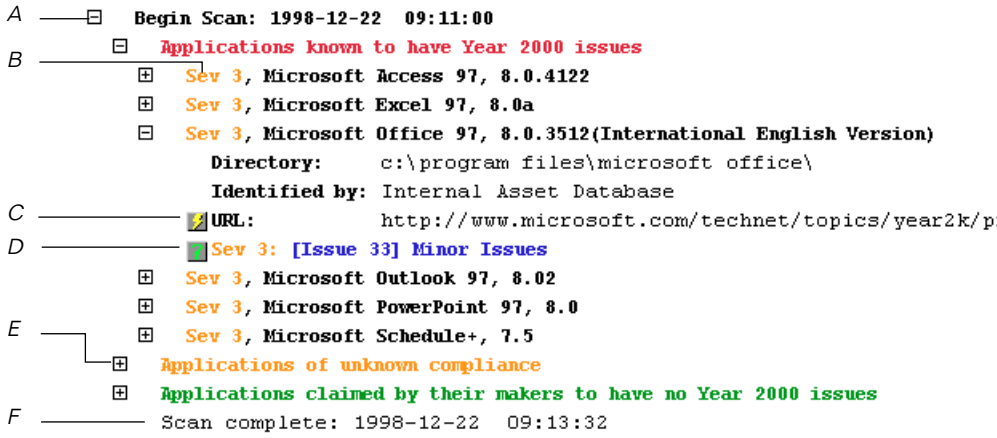
**Note:** Changing the short date may affect the display of dates in many applications.

# Application Scan results

The results from the Application Scan are classified as one of three types:

- Applications known to have year 2000 issues
- Applications of unknown compliance

- Applications claimed by their makers to have no year 2000 issues




*A. Start time*

*B. Maximum severity issue for each application*

*C. Click to go to the Website for that application*

*D. Click for more information on this issue*

*E. Lists applications in categories*

*F. Finish time*

When viewing the results of an application scan you can:

- Click ⊞ or ⊟ to expand or collapse entries.
- Click to see a description of the application issue.
- Click to visit a vendor's year 2000 Website. This requires an Internet connection and a Web browser.
- Right-click anywhere on an item to display a pop-up menu of options.

Norton 2000 uses severity levels to classify application issues.

| | |
|---|---|
| **<no severity>** | No known issues. |
| **Severity 1** | Known application, unknown date issue. The application has been identified, but no compliance information is currently available. |
| **Severity 2** | Unknown application, unknown date issue. The item has not been identified but the application scanner is able to |

recognize the item as a potential application. No compliance information is available.

**Severity 3** Minor date issue. This group includes applications that are known to have a date issue where a workaround to resolve the problem exists (for example, changing a setting on the menu, setting an input mask to only accept 4-digit dates, or having to use 4-digit dates, exclusively). Also included are applications which have a non-critical aspect of the program not working properly (for example, dates are printed with formatting errors or dates are shown ambiguously with 2-digits, but still sort correctly).

**Severity 4** Major date issues. The application has a date issue with no easy workaround or some critical aspect of the program does not work properly (for example, a sort operates incorrectly or 2-digit dates are recorded wrong internally).

**Severity 5** Critical date issue, unusable. A major function of the program does not operate correctly after 1999. The program does not accept any current dates or may not return correct results. Essentially, the product must be replaced.

# Data File Scan results

Norton 2000 allows you to select the type of results you see by selecting either the Condensed or Detailed Report Format in the Settings dialog box.

- The Detailed Report Format provides a comprehensive listing of issues and context. See "Detailed report format" on page 39.
- The Condensed Report Format indicates whether problems exist and some examples of those problems, but with minimal detail. See "Condensed report format" on page 36.

**To change the report format:**

1. Click the Data File Scan traffic light to select Data File Scan.
2. Choose Settings from the Edit menu.
3. Click the General Settings button and choose the format in the Report Format section.
4. Click OK. Run the Data File Scan.

When you are viewing the results of a Data File Scan you can:

- Click ⊞ or ⊟ to expand or collapse entries.
- Click  to see a description of the issue.
- Click  to launch the file. If options are available, a submenu will appear.
- Right-click anywhere on the line for a pop-up menu of options.
- Choose Sort from the View menu to sort the contents of the log window by issue severity. Once you sort the output you cannot revert to the previous order.

To help differentiate the types of year 2000-related problems that can be encountered in data files, Norton 2000 classifies issues found by severity.

**<no severity>** No issues detected.

**Severity 1** Use of a date value that is likely not a potential problem (for example, a 4-digit text year in a database or an internal date in a spreadsheet displayed as a 4-digit year).

**Severity 2** Use of a date value or date function that is likely not a potential problem but carries some small risk (for example, a date-related operation in a spreadsheet that refers to an internal date constant).

**Severity 3** Use of a date that indicates a potential problem (for example, a 2-digit text date in a spreadsheet, an internal date field in a database [since the input forms for this field may be restricted to two digits], or any unformatted file containing a large number of dates with 2-digit years).

**Severity 4** Use of a date that indicates a high likelihood of a problem (for example, a spreadsheet date function that uses text dates with 2-digit years).

**Severity 5** Use of a date that almost certainly is a year 2000 problem (for example, database date fields composed of 2-digit text dates or spreadsheet date calculations that change value with a software upgrade).

See Appendix E, "Diagnostics," on page 139 for a complete listing of all data file scanning issues.

# Condensed report format

The condensed report format is ideal for initial assessment of problem severity and extent, and for setting remediation strategy. This report format lists only those files which have errors as defined by the Report Issues Severity Level defined in the Settings dialog box for each file type.

## Database condensed report format

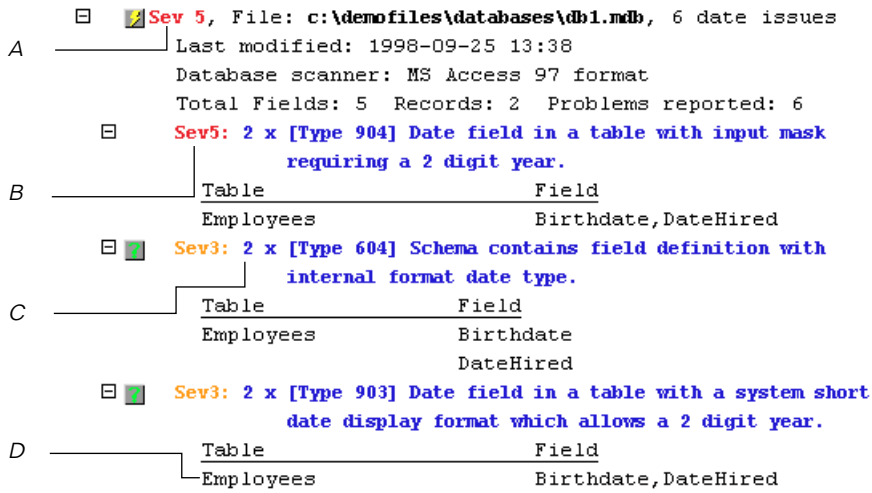
The database scanner looks for both text dates and internal dates within the data of the database.

Text dates can be unsafe 2-digit or safe 4-digit years. These dates are reported and include information about the tables, fields, and record numbers within which they were found.

Internal dates are reported and include information about the tables and fields within which they were found. The following example shows the Employees Table that contains two date fields (Birthdate and DateHired) and displays a selection of the physical records which contain internal date format data.

For Microsoft Access, date issues in tables, queries, forms, reports, and macros are reported.

The report also includes a summary of the date-related issues in embedded Visual Basic modules if the Process Embedded Visual Basic option is checked in the Database Settings dialog box.




*A. The highest severity issue found for this file*

*B. The severity level of each issue*

*C. The number of instances of each issue*

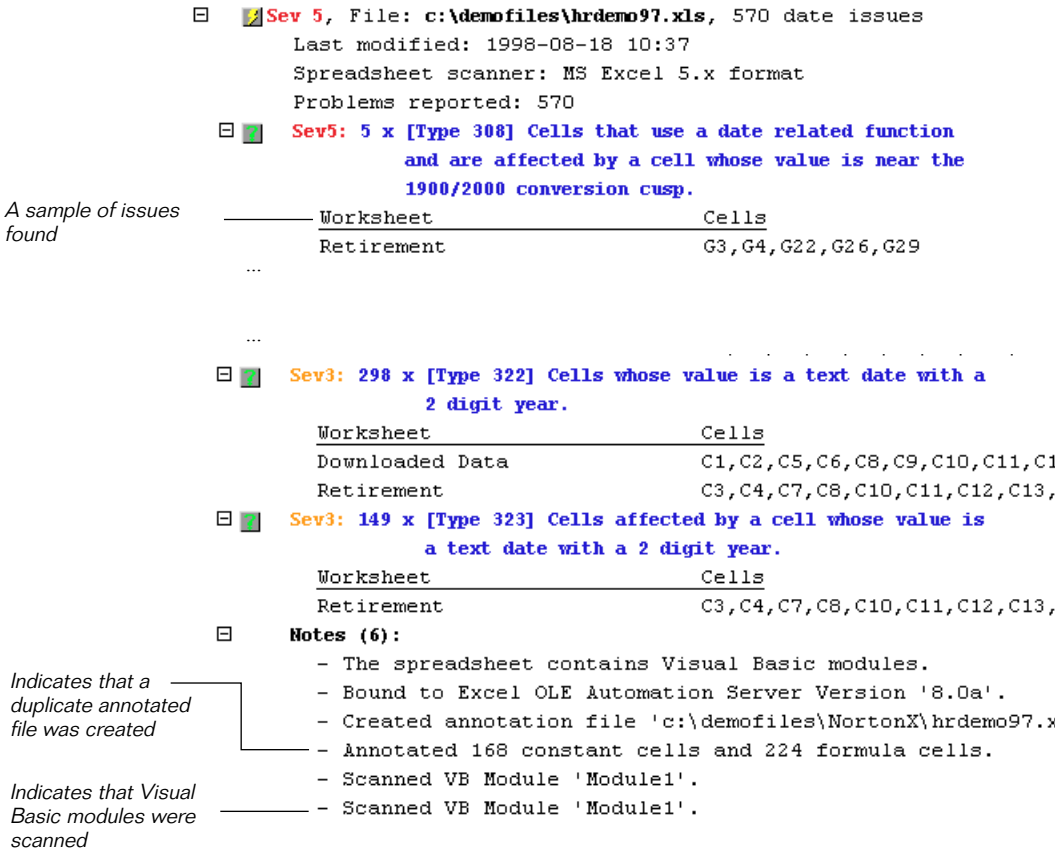
*D. A sample of issues found*

## Spreadsheet condensed report format

The spreadsheet condensed report indicates the date issue severity and cause for cells reported, with an abbreviated listing of the affected worksheets and cells.

The report also includes a summary of the date-related issues in embedded Visual Basic modules if the Process Embedded Visual Basic option is checked in the Spreadsheet Settings dialog box.

The following example displays the results of scanning a single Microsoft Excel spreadsheet and shows a portion of the 570 issues found.




*A sample of issues found*

*Indicates that a duplicate annotated file was created*

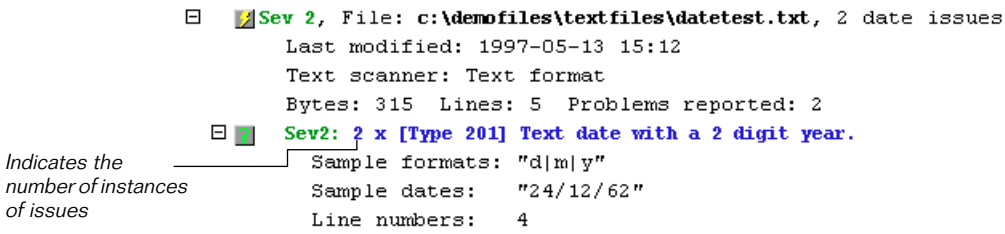
*Indicates that Visual Basic modules were scanned*

## Unformatted file condensed report format

The unformatted file scanner looks for dates throughout all data it scans. It finds multiple date matches within a single line or record, and may interpret certain numeric strings as dates.

The condensed report locates dates in terms of lines for text files or in terms of character offset from the beginning of the file for binary files which contain non-printing characters.

The condensed report format indicates a sample of the date formats matched and an example of a date matched by that format. If it finds more matches than fit on a single line, the line ends in an ellipsis (...).

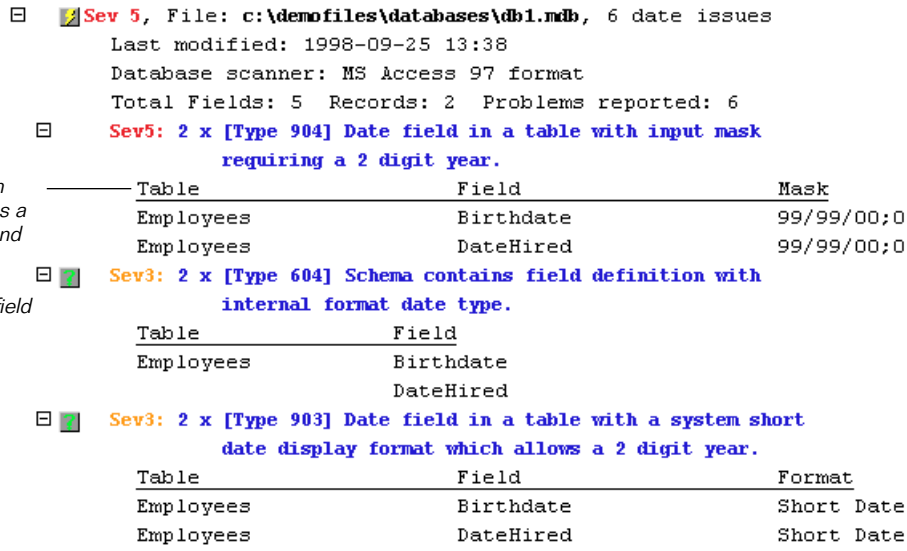



# Detailed report format

## Database detailed report format

The database detailed report displays all identified dates, one per line, with a field name, record number, and the date formats matched. The database file scanned for the example below is the same file used for the example provided for the condensed report.

The report also includes a summary of the date-related issues in embedded Visual Basic modules if the Process Embedded Visual Basic option is checked in the Database Settings dialog box.




*Displays each issue found as a single entry and provides the input mask used for the field*

## Spreadsheet detailed report format

The spreadsheet detailed report displays all identified date-related cells, one per line, with cell contents and the date formats matched.

**Note:** When you scan spreadsheets you can also create copies of the spreadsheets with color-coded cells indicating year 2000 issues. See "Color-coded Excel spreadsheets" on page 41.

If multiple problems have been attributed to a cell, it may be displayed in multiple severity categories.

**Note:** There may be two date formats within a single cell: the format that matches the text that was typed in the cell, and the format that is used to display cell contents. Be careful to distinguish between the two in the report.

Macros are identified in reports using the following syntax:

```
macro worksheet:macroname (for example,
MacroSheet:MyMacro)
```

The following example shows a Severity 5 issue taken from the detailed report of the same spreadsheet shown in the condensed report example. Each issue is displayed on a single line with detailed information about that cell's contents and formula.

```
Sev5: 5 x [Type 308] Cells that use a date related function
          and are affected by a cell whose value is near the
          1900/2000 conversion cusp.
Worksheet                    Cell     Root Cell and Formula
Retirement                   G3       {Retirement!E3} =(YEAR(DATEVALUE(E3))-\
                             G4       {Retirement!E4} =(YEAR(DATEVALUE(E4))-\
                             G22      {Retirement!E22} =(YEAR(DATEVALUE(E22))
                             G26      {Retirement!E26} =(YEAR(DATEVALUE(E26))
                             G29      {Retirement!E29} =(YEAR(DATEVALUE(E29))
```

## Unformatted file detailed report format

The detailed report indicates locations of problems in the same terms as the condensed report, but exhaustively lists all the problems being reported, one per listing line.

```
Sev 2, File: c:\demofiles\textfiles\datetest.txt, 2 date issues
    Last modified: 1997-05-13 15:12
    Text scanner: Text format
    Bytes: 315  Lines: 5  Problems reported: 2
  Sev2: 2 x [Type 201] Text date with a 2 digit year.
    Line          Format          Value
    4             d|m|y           24/12/62
    4             d|m|y           15/5/62
```

*Displays each issue on a single line*

*Displays the date format used*

# Color-coded Excel spreadsheets

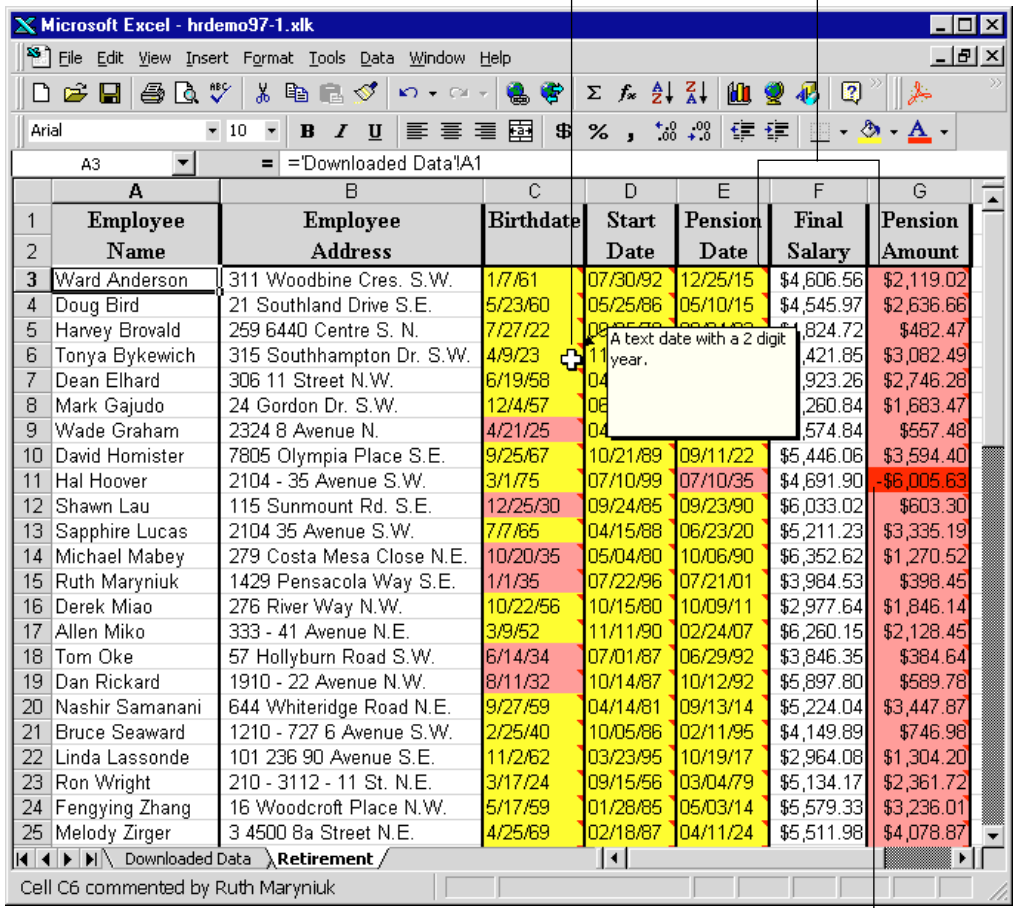
Color coding spreadsheets makes it easier to find and fix spreadsheet problems through cell coloring and annotating of Microsoft Excel spreadsheets.

If Enable Excel Severity Color Coding is checked in the Spreadsheet Settings dialog box, the spreadsheet scanner duplicates Microsoft Excel spreadsheets that contain date issues, colors the cells that have reportable severity issues, and saves the color-coded file to a NortonX subfolder in the same location as the original file, or to another location specified in the Annotation Folder dialog box. The copied spreadsheet is saved with a .xlk extension. On 16-bit systems, the extension is .xls.

Each cell is also annotated with a Microsoft Excel Comment that explains the year 2000 issue detected. In the color-coded spreadsheet, a small red triangle in the upper right corner of a cell indicates that there is a comment attached. Place the mouse pointer over the annotated cell to display the comment.

*Hold the mouse pointer over a cell to see the annotations*

*Cells colored by severity level*




| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Employee Name | Employee Address | Birthdate | Start Date | Pension Date | Final Salary | Pension Amount |
| 3 | Ward Anderson | 311 Woodbine Cres. S.W. | 1/7/61 | 07/30/92 | 12/25/15 | $4,606.56 | $2,119.02 |
| 4 | Doug Bird | 21 Southland Drive S.E. | 5/23/60 | 05/25/86 | 05/10/15 | $4,545.97 | $2,636.66 |
| 5 | Harvey Brovald | 259 6440 Centre S. N. | 7/27/22 | | | ,824.72 | $482.47 |
| 6 | Tonya Bykewich | 315 Southhampton Dr. S.W. | 4/9/23 | 11 | | ,421.85 | $3,082.49 |
| 7 | Dean Elhard | 306 11 Street N.W. | 6/19/58 | 04 | | ,923.26 | $2,746.28 |
| 8 | Mark Gajudo | 24 Gordon Dr. S.W. | 12/4/57 | 06 | | ,260.84 | $1,683.47 |
| 9 | Wade Graham | 2324 8 Avenue N. | 4/21/25 | 04 | | ,574.84 | $557.48 |
| 10 | David Homister | 7805 Olympia Place S.E. | 9/25/67 | 10/21/89 | 09/11/22 | $5,446.06 | $3,594.40 |
| 11 | Hal Hoover | 2104 - 35 Avenue S.W. | 3/1/75 | 07/10/99 | 07/10/35 | $4,691.90 | -$6,005.63 |
| 12 | Shawn Lau | 115 Sunmount Rd. S.E. | 12/25/30 | 09/24/85 | 09/23/90 | $6,033.02 | $603.30 |
| 13 | Sapphire Lucas | 2104 35 Avenue S.W. | 7/7/65 | 04/15/88 | 06/23/20 | $5,211.23 | $3,335.19 |
| 14 | Michael Mabey | 279 Costa Mesa Close N.E. | 10/20/35 | 05/04/80 | 10/06/90 | $6,352.62 | $1,270.52 |
| 15 | Ruth Maryniuk | 1429 Pensacola Way S.E. | 1/1/35 | 07/22/96 | 07/21/01 | $3,984.53 | $398.45 |
| 16 | Derek Miao | 276 River Way N.W. | 10/22/56 | 10/15/80 | 10/09/11 | $2,977.64 | $1,846.14 |
| 17 | Allen Miko | 333 - 41 Avenue N.E. | 3/9/52 | 11/11/90 | 02/24/07 | $6,260.15 | $2,128.45 |
| 18 | Tom Oke | 57 Hollyburn Road S.W. | 6/14/34 | 07/01/87 | 06/29/92 | $3,846.35 | $384.64 |
| 19 | Dan Rickard | 1910 - 22 Avenue N.W. | 8/11/32 | 10/14/87 | 10/12/92 | $5,897.80 | $589.78 |
| 20 | Nashir Samanani | 644 Whiteridge Road N.E. | 9/27/59 | 04/14/81 | 09/13/14 | $5,224.04 | $3,447.87 |
| 21 | Bruce Seaward | 1210 - 727 6 Avenue S.W. | 2/25/40 | 10/05/86 | 02/11/95 | $4,149.89 | $746.98 |
| 22 | Linda Lassonde | 101 236 90 Avenue S.E. | 11/2/62 | 03/23/95 | 10/19/17 | $2,964.08 | $1,304.20 |
| 23 | Ron Wright | 210 - 3112 - 11 St. N.E. | 3/17/24 | 09/15/56 | 03/04/79 | $5,134.17 | $2,361.72 |
| 24 | Fengying Zhang | 16 Woodcroft Place N.W. | 5/17/59 | 01/28/85 | 05/03/14 | $5,579.33 | $3,236.01 |
| 25 | Melody Zirger | 3 4500 8a Street N.E. | 4/25/69 | 02/18/87 | 04/11/24 | $5,511.98 | $4,078.87 |

*The negative pension value in cell G11 is a result of a calculation on an incorrect date field.*

By default, Norton 2000 color codes spreadsheet cells using the following colors:

- Severity 1 issues = Blue
- Severity 2 issues = Green
- Severity 3 issues = Yellow
- Severity 4 issues = Orange
- Severity 5 issues = Red

Norton 2000 needs Microsoft Excel version 5 or later to color code and annotate Microsoft Excel spreadsheets.

## Extended log files

When you scan spreadsheets you can also create extended log files. Extended log files are created in a NortonX folder in the same location as the original file, or in the location specified in the Annotation Folder dialog box. The extended log file name matches the spreadsheet file and it is given a .xlg extension.

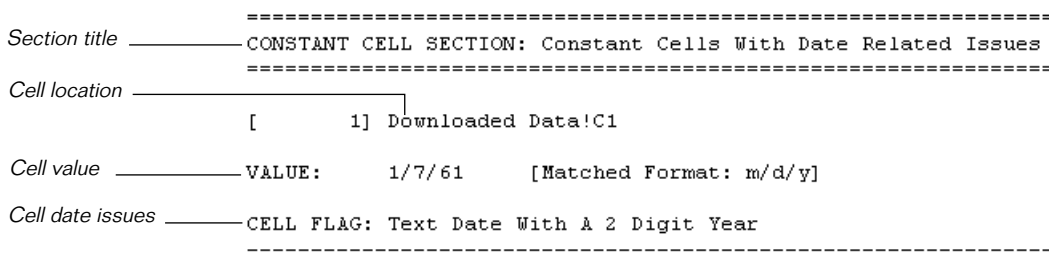
The extended log file content is determined by the options selected in the Extended Log Options Selection dialog box. The three sections in the extended log file are:

- Constant Cells With Date Issues
- Formula Cells
- Charts With Date Issues

### Constant cells

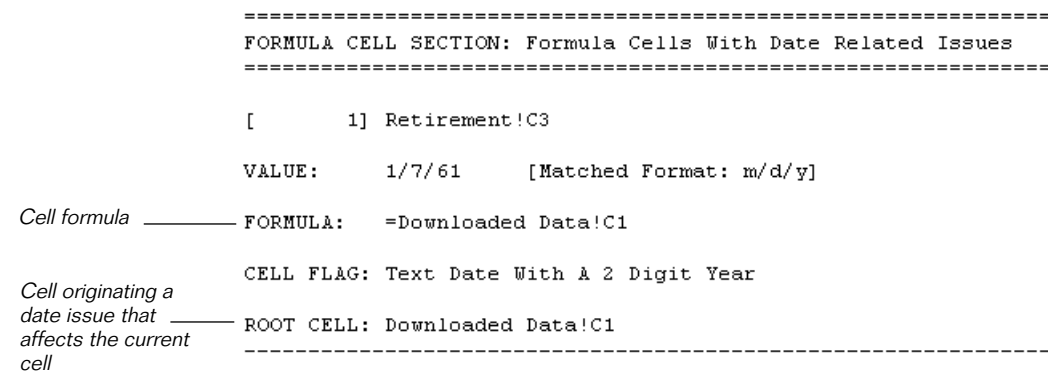
Constant cells are cells without a formula. For example, a cell containing the number 2 is constant, while a cell with the contents of =A4+A3 is a formula cell. Note that both examples could display the same value. The

following example shows one constant cell reported in the extended log file.




## Formula cells

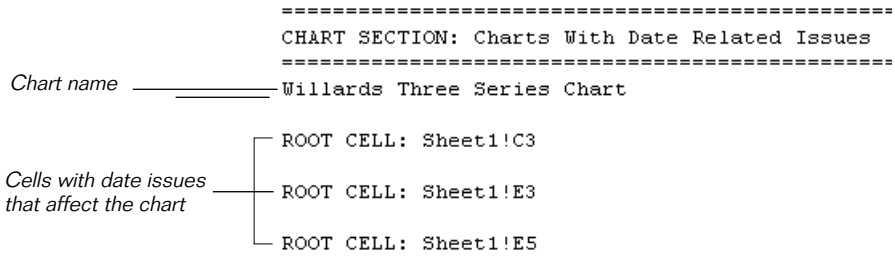
Formula cells reference other cells, but may themselves have constants within a formula. For example, =(today()-DATEVALUE("04/12/88"))/365. The following example shows one formula cell reported in the extended log file.




## Charts

Charts use the cells within a spreadsheet as their source of data to be charted. These cells may be affected by date issues and, therefore, the

charts as well. The following example shows a chart section reported in the extended log file.



C H A P T E R 5

# Customizing the Data File Scan

The Norton 2000 data file scanner can be customized to locate specific year 2000 issues. Norton 2000 preserves options and settings in "profiles" which can be saved and reloaded at a later time. You can modify Norton 2000 options and settings to do the following:

- Select files to be scanned by:
  - their location in your file system,
  - their file name (including or excluding files by name), and
  - application type.
- Provide condensed or detailed reports for Data File Scans.
- Scan for date issues in Visual Basic source code embedded in Microsoft Access and Microsoft Excel files.
- Scan files in compressed archives without extracting them from the archive.
- Color-code and annotate Microsoft Excel spreadsheets to pinpoint year 2000 issues.
- Customize severity levels for data file scanning issues.

## Working with profiles

A profile is a file that holds Norton 2000 file selection criteria and configurations for the database, spreadsheet, unformatted file, and source file scanners. You can save your file selection criteria and scanner settings to a profile. The profile can be opened at a later date by Norton 2000 and used to define the configuration settings to perform its year 2000 analysis. This ensures the same files are scanned with the same settings, allowing you to monitor your remediation progress consistently.

Profiles are useful for organizations that want to distribute a predefined set of file selections and scanning options to individuals who would like to scan their data, but are unable to understand the configuration options available or the complexities of the data that must be scanned for year 2000 issues. Customized data file scan settings are saved in a profile and then distributed for use throughout an organization to ensure that uniform Norton 2000 analysis is performed by all individuals in the organization.

Creating a profile is a critical step in N2K Agent deployment. See "Remote network execution" on page 91 for more information on deploying the N2K Agent.

**Note:** ODBC DSN selections are not saved in a profile.

You can start a new profile, open an existing profile, or modify a profile to define which files to scan and what information you would like to obtain.

**To create a new profile:**

1. Click the Data File Scan traffic light to select Data File Scan.
2. Choose Save Profile As from the File menu.
3. Type a new profile name in the Save As dialog box, select a location, and click Save.
4. Modify any file selection or scanner options available using the Edit menu commands.
5. Choose Save Profile from the File menu to save your modifications.

**To use an existing profile:**

1. Click the Data File Scan traffic light to select Data File Scan.
2. Choose Open Profile from the File menu.
3. Select the profile from the Open dialog box. Click Open. The profile configuration options replace your existing profile and you can now begin scanning.

# Selecting files to scan

By default, Norton 2000 scans all local drives and produces a condensed report. This is good for a quick evaluation of the status of a computer, but detailed analysis requires a more precise specification of the files to be scanned.

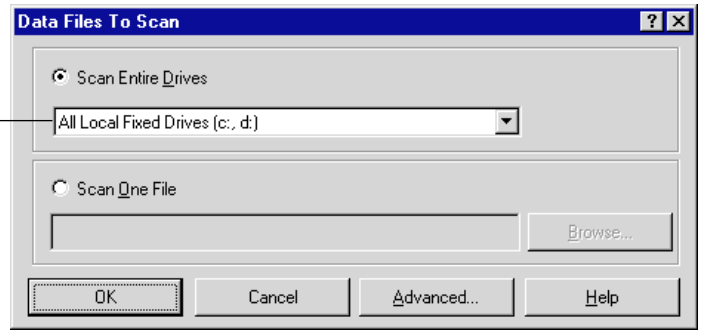
There are three methods of selecting the files to scan.

- Simple file selection allows you to select entire drives or a single file to scan.
- Advanced file selection allows you to select drives, folders, and files to scan or to exclude from the scan.
- File selection rules allow you to create detailed rules for file selection. See "Editing file selection rules" on page 69.

## Simple file selection

The Data Files To Scan dialog box provides an easy way to select drives to scan. This is sufficient for most data file scanning.

1 Select Data Files To Scan from the Edit menu, or click  on the toolbar.




*Select the drive(s) to scan*

2 In the Data Files To Scan dialog box, select one of two options:

- Scan Entire Drives scans all your local hard drives or a single drive listed in the drive selection list.
- Scan One File scans only the file specified in the file selection box.

**Caution:** Making a selection in this dialog cancels all selections made in the Advanced File Selection dialog box.

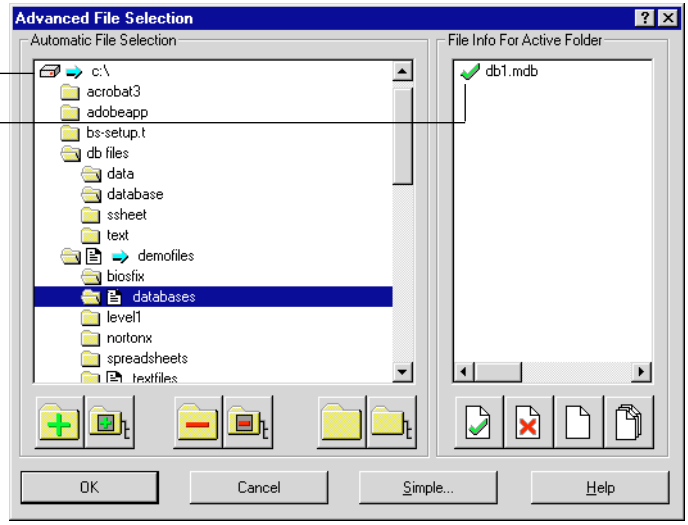
3 Click Advanced to go to the Advanced File Selection dialog box.

**Note:** Norton 2000 remembers the last method of file selection you used. The Data Files To Scan command displays the file selection dialog box that you last used.

## Advanced file selection

The Advanced File Selection dialog box provides finer control over what drives and folders are scanned than is provided by the Data Files To Scan dialog box.

*Symbols show files that are included and excluded*




This dialog box allows you to include or exclude files by file name or by location on a drive or in a folder.

Use the folder buttons on the left side to include, exclude, and reset entire drives and folders.

Use the file buttons on the right side to include, exclude, and reset individual files or groups of files.

When you include or exclude a drive or folder, all the files on that drive or in that folder are included or excluded unless a different setting is made at a lower level in the tree, or on particular files in that tree.

File selection symbols indicate what files and folders are selected and how they are selected. The symbols used in this dialog box are described below and in the Help system.

## Drive and folder symbols

Double-click these icons to expand or contract the tree display.

 A removable drive.

 A local hard drive.

 A network drive.

 A closed folder. Double-click the folder to open or close it.

 An open folder. You do not need to open a folder to select it.

## File selection symbols

File selection symbols indicate the status of a file:

 The file is included and will be scanned regardless of any other selection rules applied to a folder containing this file.

 The file is excluded and will not be scanned regardless of any other selection rules applied to a folder containing this file.

 The file is included by file selection rules inherited from a folder that contains this file and will be scanned.

 The file is excluded by file selection rules inherited from a folder which contains this file and will not be scanned.

blank The file will not be scanned.

### *Selection rule symbols*

Selection rule symbols indicate the selection rules applied to a drive or folder.


The drive or folder contains a subfolder that has a folder or file with a rule applied. Open the drive or folder to determine which subfolders have rules applied.


The drive or folder contains a file with a rule applied. Open the drive or folder to determine which files have rules applied. A rule applied to a file overrides an automatic file selection rule.


Only the drive or folder and its files are included. Any subfolders and their contents are not included.


The drive or folder and all its subfolders and files are included.


The folder is included as a result of a file selection rule inherited from a higher level folder. You will see a  in the hierarchy at the point the rule is applied.


Only the drive or folder and its files are excluded. Any subfolders and their contents are not excluded.


The drive or folder and all its subfolders and files are excluded.


The folder is excluded as a result of file selection rules inherited from a higher level folder. You will see a  in the hierarchy at the point the rule is applied.

blank The folder is not included. Files in the folder are not scanned.

## Selecting ODBC data sources

ODBC (Open Database Connectivity) is a method many programs use to access a database. Norton 2000 can scan user, system, and file DSNs (Data Source Names).

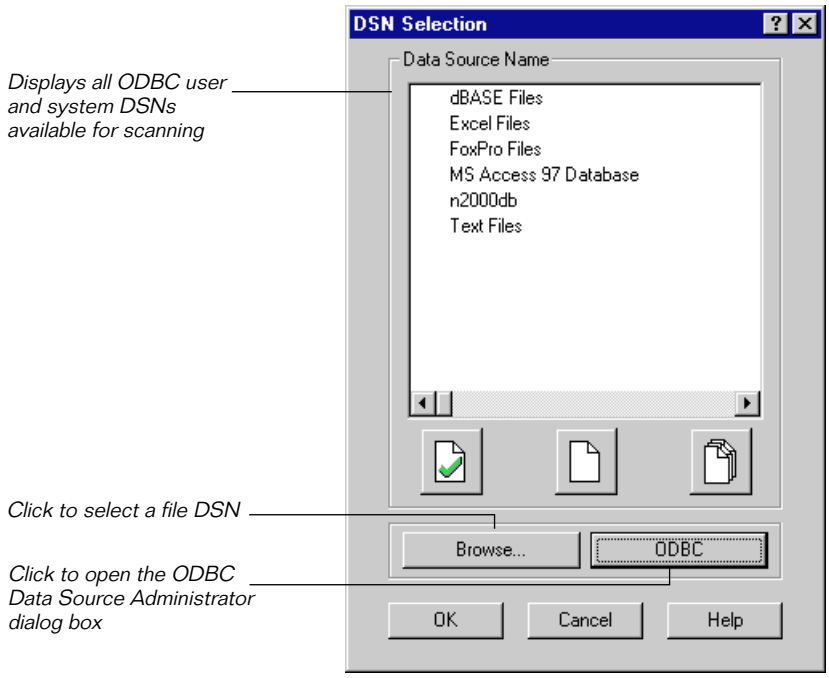
**To select ODBC data sources for scanning:**

1. Click the Data File Scan traffic light to select Data File Scan.
2. Choose ODBC DSNs To Scan from the Edit menu.

3 The DSN Selection dialog box appears.

4 Select a DSN from the list and use the buttons below the Data Source Name list to include, exclude, or reset the selected DSN. When you include a DSN, you may be prompted for a Login ID and password. To add a file DSN, click Browse. To open the ODBC Data Source Administrator, click ODBC.

5 Click OK.




**Note:** Only user and system DSNs are displayed in the Data Source Name list.

# Setting Norton 2000 scanning options

The Settings dialog box has five views that allow you to modify the Data File Scan settings:

- General Settings
- Database Settings

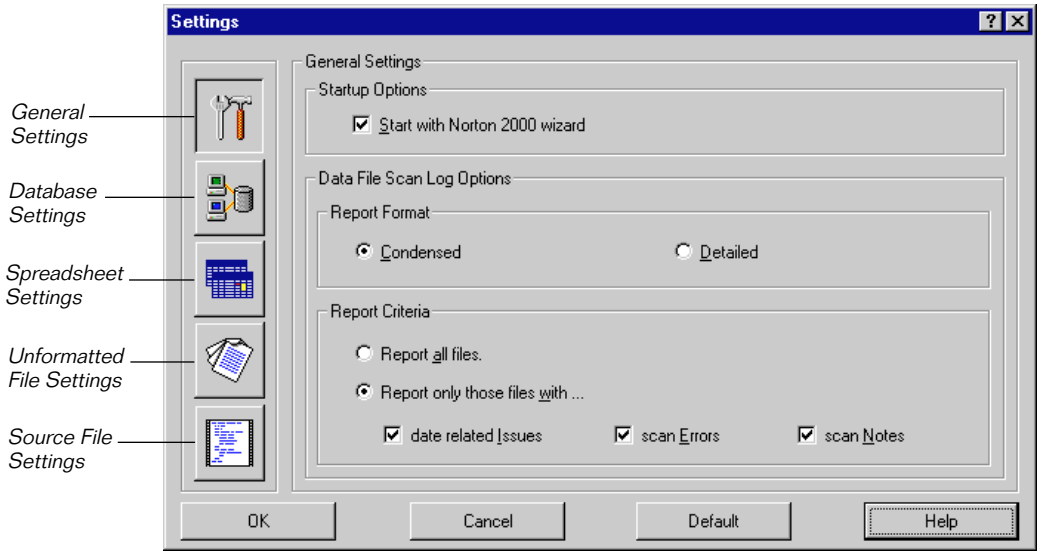
- Spreadsheet Settings
- Unformatted File Settings
- Source File Settings

**To open the Settings dialog:**

- Choose Settings from the Edit menu.

## General Settings

General Settings control the way Norton 2000 operates.




- Uncheck Start With Norton 2000 Wizard to open the Norton 2000 main window.
- Select either Condensed or Detailed for the report format. See "Data File Scan results" on page 34 for a description of the report formats.

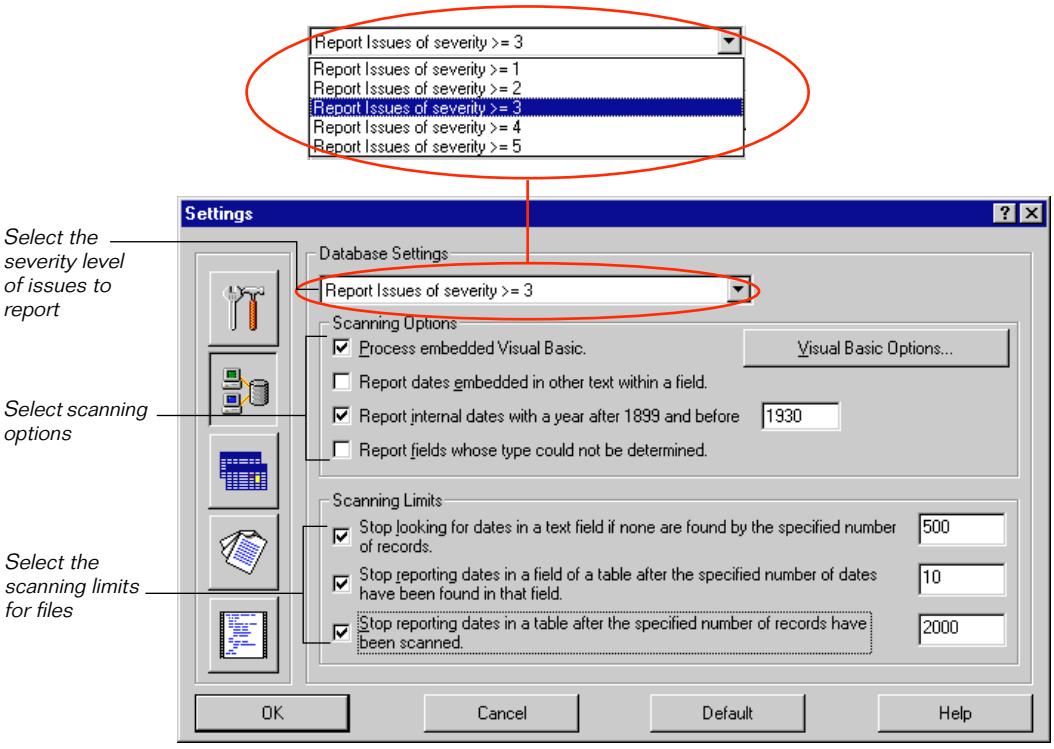
In the Report Criteria section, select either:

- Report All Files to report on all files scanned regardless of errors or issues found.
- Report Only Those Files With:
  - Date-Related Issues to report files if date-related issues are found.

- Scan Errors to report files if scan errors are found.
- Scan Notes to report files if scan notes are found.

## Database Settings

Database Settings control the way Norton 2000 scans database files.




Norton 2000 classifies all issues found according to severity. A severity 1 is no risk, information only, and severity 5 is high. See "Data File Scan results" on page 34 for more information on severities.

- Select a severity level to report from the drop-down Report Issues list. Severity 1 indicates low risk and severity 5 indicates high risk.
- Check Process Embedded Visual Basic to scan Visual Basic source code in your Microsoft Access database files.
- Check Report Dates Embedded In Other Text Within A Field to locate dates embedded in text in database records.

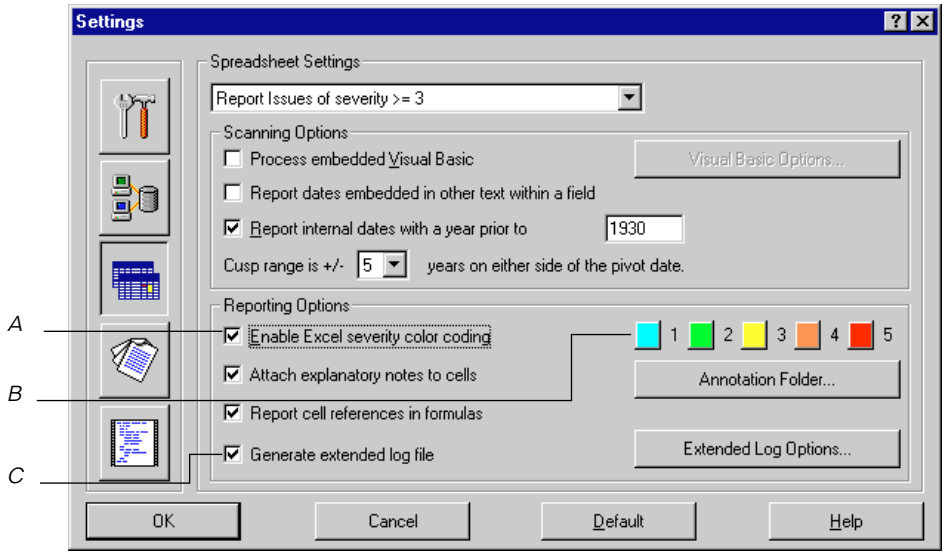
  By default, Norton 2000 reports all internal dates prior to 1930 as old dates. You can change this date, or uncheck this option if you do not

want old dates reported. Use this option to locate dates that were entered with 2-digit years and incorrectly converted by the application's windowing feature. For example, a date entered as 1/5/20 could be a birth date or it could be a retirement date. The application may have interpreted this date, using automatic date windowing, as 1920. If, however, this date is a retirement date year, the date may be incorrect and need correcting.

- Check Report Fields Whose Type Could Not Be Determined to set the database scanner to report fields whose data type could not be determined by the Database Scanner. These issues are reported in the notes section of the log window as controls or fields with unknown types.
- You can tell the database scanner to stop scanning records or fields after a specified number of dates have been found by selecting and modifying the default Scanning Limits.

## Spreadsheet Settings

Spreadsheet Settings control the way Norton 2000 scans spreadsheet files.




*A. Select to duplicate and color-code Microsoft Excel files that have year 2000 issues*

*B. Colors used to color-code Microsoft Excel files*

*C. Creates an extended log file for all spreadsheets with issues*

- Select a severity level for reporting from the Report Issues list. Severity 1 indicates low risk and severity 5 indicates high risk.
- Select Process Embedded Visual Basic to scan Visual Basic in your Microsoft Excel spreadsheet files.

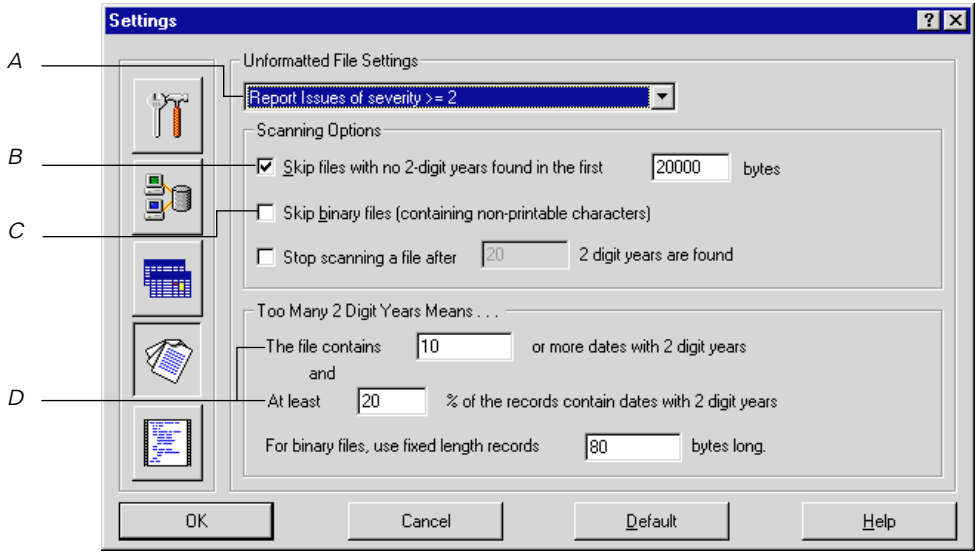
  By default, Norton 2000 locates all internal dates prior to 1930 and reports them as a old dates. You can change this date or uncheck this option if you do not want old dates reported.

  The cusp range defines the number of years before and after the cusp date for the application which created the file. Dates within this range are noted. If the cusp range is set to zero, cusp dates are not examined and flagged.
- Select Report Dates Embedded In Other Text Within A Field to enable the Spreadsheet Scanner to report cells which reference other cells that have date issues. A cell which references another cell with a date issue may not necessarily have a year 2000 issue itself.
- By default, Norton 2000 locates all internal dates prior to 1930 and reports them as an old date. Modify this date by entering a new date or deselect this option if you do not want old dates reported.
- Set the number of years in the Cusp Range Is =/- Years On Either Side Of The Pivot Date field to enable the Spreadsheet Scanner to flag dates found within the specified cusp range (default value is set to 5). The cusp range defines the number of years before and after the cusp date for the application (and version) which created the file. If the cusp range is set to zero, cusp dates are not examined and flagged.
- Check Enable Excel Severity Color Coding to duplicate and color code spreadsheet files that contain date issues. Norton 2000 color codes the cells according to the color legend in the dialog box. The duplicate spreadsheet is placed in *a* NortonX subfolder in the folder holding the original file or in a folder of your choice. See "Color-coded Excel spreadsheets" on page 41.
- Click a color next to the severity to customize the color used to indicate that severity.
- Check Attach Explanatory Notes To Cells to include an explanatory note for each color-coded cell in the duplicate Microsoft Excel spreadsheet. This option is only available if Enable Excel Severity Color Coding is enabled.
- Click Annotation Folder to change where the annotated files are placed.

- Check Report Cell References In Formulas to enable the spreadsheet scanner to report cells that have direct or indirect references to cells with date issues. Selecting this option may cause performance penalties when scanning large spreadsheets with many cell references.
- Check Generate Extended Log File to create an extended log file for each spreadsheet with date issues. Log files are placed in the Annotation Folder. Click Extended Log Options to set the options for what is reported in the extended log file.

## Unformatted File Settings

Unformatted File Settings control the way Norton 2000 scans files that it does not recognize as database or spreadsheet files.




*A. Select a severity level for reporting*

*B. Uncheck this option to always scan the entire file*

*C. Check to skip scanning binary files with non-printable characters*

*D. Define what too many 2-digit years means*

- Select a severity level for reporting from the Report Issues list. Severity 1 indicates low risk and severity 5 indicates high risk.
- By default, Norton 2000 stops checking a file if it does not locate a date after scanning the first 20,000 bytes of the file. If you want

text files scanned completely, uncheck this option. You can also change the number of bytes to scan.

- To skip scanning files that contain non-printable characters, check Skip Binary Files.
- To prevent filling your log with repetitive information, the unformatted file scanner will stop after it finds a specified number of problems. Check Stop Scanning A File After to tell the unformatted file scanner to stop scanning a file when the specified number of 2-digit dates have been found in the file.
- You can also specify the defect date threshold by entering values in the Too Many 2 Digit Years Means section.

## Source File Settings

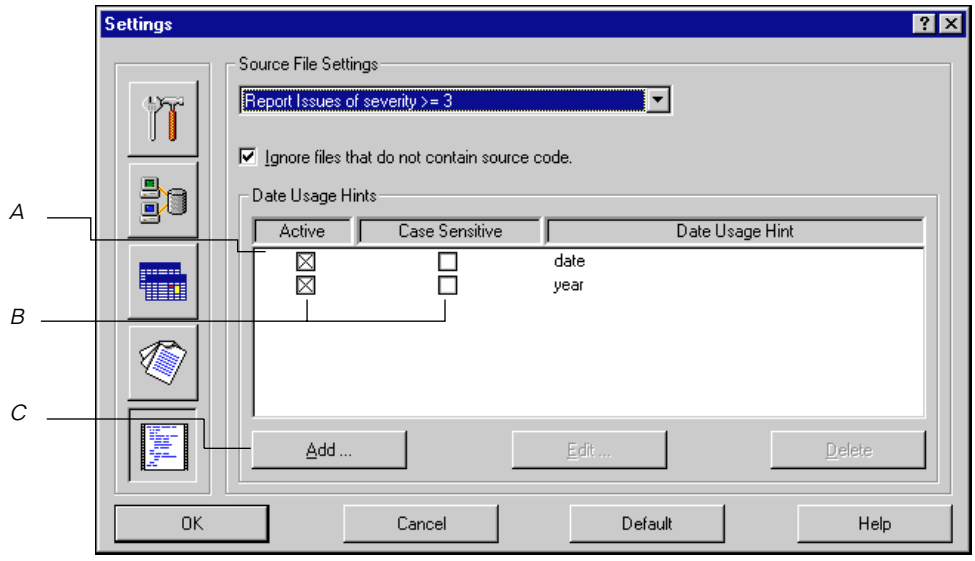
Source File Settings control the way Norton 2000 scans Visual Basic source files.

Source file scanning is off by default. You must enable source code scanning before the settings on this dialog will work.

**To enable source file scanning:**

1. Click the Data File Scan traffic light to select Data File Scan.
2. Choose Data File Name Filters from the Edit menu. The Edit File Name Filters dialog appears.
3. Click the VB Source button on the Include (left) side of the dialog box.

**4** Click OK.




*A. Displays the strings that the source file scanner searches for within variables and function names*

*B. Click to toggle*

*C. Click to add a new date usage hint*

- Select a severity level for reporting from the drop-down Report Issues list. Severity 1 indicates low risk and severity 5 indicates high risk.
- You can ignore files which have a source file extension but do not contain source code. Check this option so that these files are not noted in the log.
- Date Usage Hints are strings that the scanner should recognize as possibly implying a date. For example, a variable named "birthday" may well contain a date value. You can add additional hints and you can edit and delete existing hints.

# Editing file name filters

File name filters determine what types of data files are scanned. File name filters are applied in two ways:

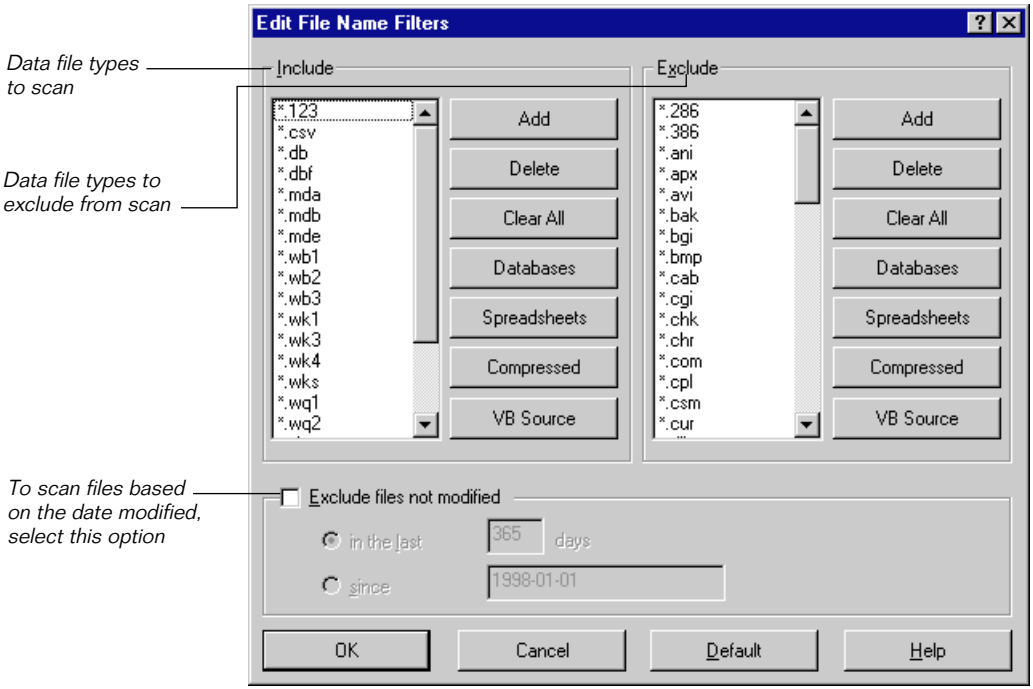
- If you use simple or advanced file selection, the file name filters you set with the Select Data File Name Filters command apply to all folders being scanned.
- If you create file selection rules using the Edit File Selection Rules command, file name filters are attached to each rule you create.

**To edit file name filters that apply to all folders:**

1. Click the Data File Scan traffic light to select Data File Scan.
2. Choose Data File Name Filters from the Edit menu.

> **Caution:** If you have created file selection rules, using the Data File Name Filters command will change all the file name filters in your rules to the new settings. You probably should change file name filters from the Edit File Selection Rule dialog box instead of using this command. See "Editing file selection rules" on page 69.

**3** The Edit File Name Filters dialog appears.




The Include list shows file types that are included in the Data File Scan. The Exclude list shows file types that are excluded from scanning.

---

**Note:** The Exclude list only applies to file types that have been included by a rule that is applied to a folder that is higher in the tree. If, for example, the file name filters in a rule that applies to "C:\My Documents" include "*.dbf" files, then adding "*.dbf" files to the exclude list in the file name filters in a rule that applies to "C:\My Documents\Archives" will prevent "*.dbf" files that are in the "C:\My Documents\Archives" folder from being scanned. See "Editing file selection rules" on page 69.

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In the Edit File Name Filters dialog box you can:

- Click Add or Delete to add or delete file name filters from either the Include or Exclude lists.
- Click Clear All to remove all filters from a list.
- Add a predefined list of spreadsheet, database, Visual Basic, or compressed file types to either the Include or Exclude lists by

clicking the appropriate button. Adding a file type to one list removes it from the other list.

- Click the left Compressed button to enable compressed file scanning. See "Compressed file scanning" on page 63 for more information on compressed file scanning.
- Click the left VB Source button to enable Visual Basic source file scanning.
- Check Exclude Files Not Modified to scan only files modified either within a specified number of days, or after a specified date. The date in the Since field must be in the form yyyy-mm-dd.
- Click Default to return all settings to the default values.

**Note:** Visual Basic source file scanning and compressed scanning are not enabled by default.

## Compressed file scanning

Norton 2000 scans industry-standard compressed files on local, network, and floppy drives. Norton 2000 recognizes multi-volume compressed files, prompting you to insert the correct disk from the set of floppies used for the compressed archive.

Norton 2000 recognizes many types of compression types, including Shrunk, Reduced1, Reduced2, Reduced3, Reduced4, Imploded, Tokenized, and Deflated.

If a compressed file in an archive is password protected, the file is skipped by the scanners and reported to the Log Window as a password-protected file. If the Enable Excel Severity Color Coding or Generate Extended Log File options are enabled in the Spreadsheet Settings dialog box, the spreadsheet files in an archive are not annotated and color-coded and extended log files are not created.

Norton 2000 scans files in compressed archives using the appropriate scanner for each file type and reports issues in those files as it normally would. The filename for each file in an archive is printed in blue to the Log Window so that it can quickly be identified as part of a compressed archive.

Norton 2000 does not recognize self-extracting compressed files when the file extension is .EXE. However, if the file extension is changed to .ZIP, the file can be recognized and scanned accordingly.

Compressed file scanning is not enabled by default. To enable scanning of compressed files, include the file extensions mapped to the compressed file scanner in the Edit File Name Filters dialog box. See "Editing file name filters" on page 61 for more information.

CHAPTER 6

# Advanced configuration

You can configure the Norton 2000 Data File Scan in the following ways.:

- Add or change date formats recognized by Norton 2000
- Change issue severity classifications
- Change file selection rules
- Map file extensions to scanners

## Editing date formats

Norton 2000 matches dates in data files according to date formats. The date formats that Norton 2000 recognizes can be modified for each scanner using the Edit Date Formats dialog box.

Date formats are built using the following symbols and characters to represent elements of a date.

| | |
|---|---|
| y | 2-digit value ranging from 00 to 99 |
| Y | 2-digit value ranging from 90 to 99 |
| 4 | 4-digit value ranging from 1800 to 2199 |
| m | 1- or 2-digit value ranging from 1 to 12 |
| mm | 2-digit value ranging from 01 to 12 |
| M | a full or abbreviated month name |
| d | 1- or 2-digit value ranging from 1 to 31 |
| dd | 2-digit value ranging from 01 to 31 |

| | |
|---|---|
| D | A full or abbreviated day name |
| T | Time, of the forms:<br>#:##<br>##:##<br>#:##:##<br>##:##:## |
| \| | One of the locale-specific date separators (- or / for English). Multiple separator instances must match the first separator found. |
| ? | Any single character |
| # | Any single digit |
| "..." | Characters enclosed in quotes are literals |
| space | A single space matches up to 5 characters of white space — spaces or tabs |
| \ | The next character is taken literally without its possible format implication. For example, \# matches a single # character. |

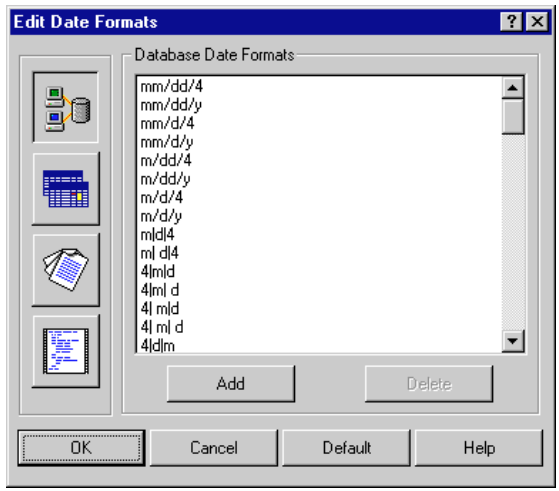
Any other character is a literal character which must be matched in the string being searched

**Note:** Spreadsheet scanning with numeric-only formats without separators (mdy#) will match values in numeric fields (calculated values or numbers which are not text strings) without a fractional part (for example, the format ##mdd4 would match the value 121121988, but not 121121988.5).

Here are some date formats and examples of the dates they match:

| | |
|---|---|
| m/d/y | 2/15/98 |
| m\|y\|y | 2/15/98 or 2-15-98 |
| M d, 4 | February 15, 1998 |
| d-M-y | 15-Feb-98 |

You can add or change the date formats for each data file scanner.




**To add a date format to a scanner:**

1. Click the Data File Scan traffic light to select Data File Scan.
2. Choose Advanced, then Edit Date Formats from the Edit menu.
3. In the Edit Data Formats dialog box, select the scanner to which you would like to add a date format.
4. Highlight the date format.

   **Note:** The order of date formats is significant. Only the first match is reported.

5. Click Add.
6. In the Add Format dialog box, type a new format using any of the date format elements and click OK.

The new format displays in the Date Formats list. The selected scanner will use the new format, in addition to the default formats, to search for dates in selected data files.

To delete a date format, select a format and click Delete. To return a selected scanner's date formats list to its default values, click Default.

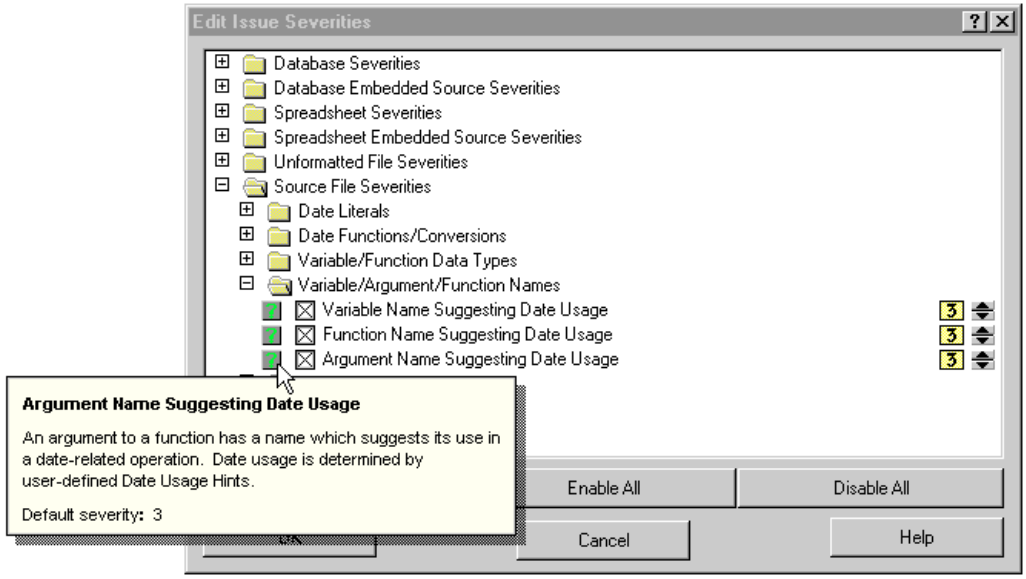
# Changing issue severities

Norton 2000 has established a severity level for each date issue that it recognizes. While extensive research was done to establish the default severity levels for each issue, they may not meet your particular needs. The Edit Issue Severities dialog box provides a way to change the severity of each issue.

### To change issue severities:

1 Click the Data File Scan traffic light to select Data File Scan.

2 Choose Advanced, then Edit Issue Severities from the Edit menu.




3 The Edit Issue Severities dialog appears.

In the Edit Issue Severities dialog you can:

- Click ⊞ or ⊟ to expand or collapse the groups of issues.
- Click ? to see a description of the issue.
- Use the spin control ( ⇕ ) next to each issue to change the severity.
- Clear the checkbox so Norton 2000 will not report this issue.

**Note:** The severity levels are preset to values based on extensive research and testing. Modifying these predetermined severity levels can provide inconsistent reporting of severities. We recommend running a few scans to evaluate the results before changing the default severity levels.

# Editing file selection rules

Norton 2000 allows the specification of detailed file selection rules to control the folders and files that are scanned. These rules define the files that are to be scanned by the data file scanner. A file selection rule can apply to a specific folder and can specify exact file names to include or exclude and wildcard file names (*.xls, for example) to include or exclude.

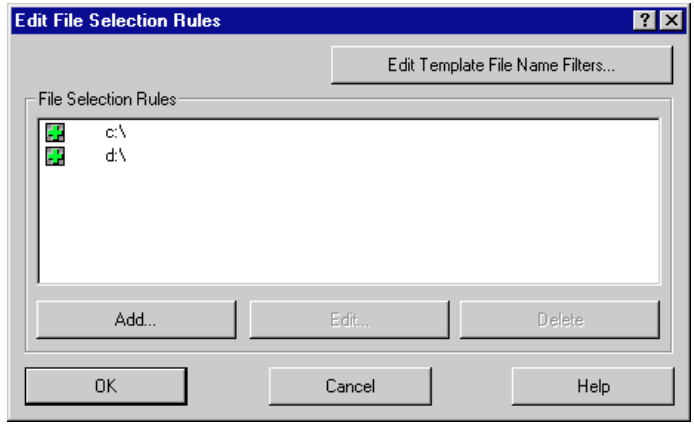
The easiest way to create file selection rules is with the Advanced File Selection dialog box see "Advanced file selection" on page 50. However, the Edit File Selection Rules dialog box, described here, offers a different way to select files that has two advantages.

- You don't need to be working on the computer for which you are specifying rules. This is important for enterprise-wide deployment.
- You can specify different file name filters for each folder in the rule list.

The Edit File Selection Rules dialog box allows you to view, edit, and extend the file selection rules that are in effect.

### To edit file selection rules:

1. Click the Data File Scan traffic light to select Data File Scan.
2. Choose Advanced, then Edit File Selection Rules from the Edit menu.
3. The Edit File Selection Rules dialog box appears.




In the Edit File Selection Rules dialog box you can:

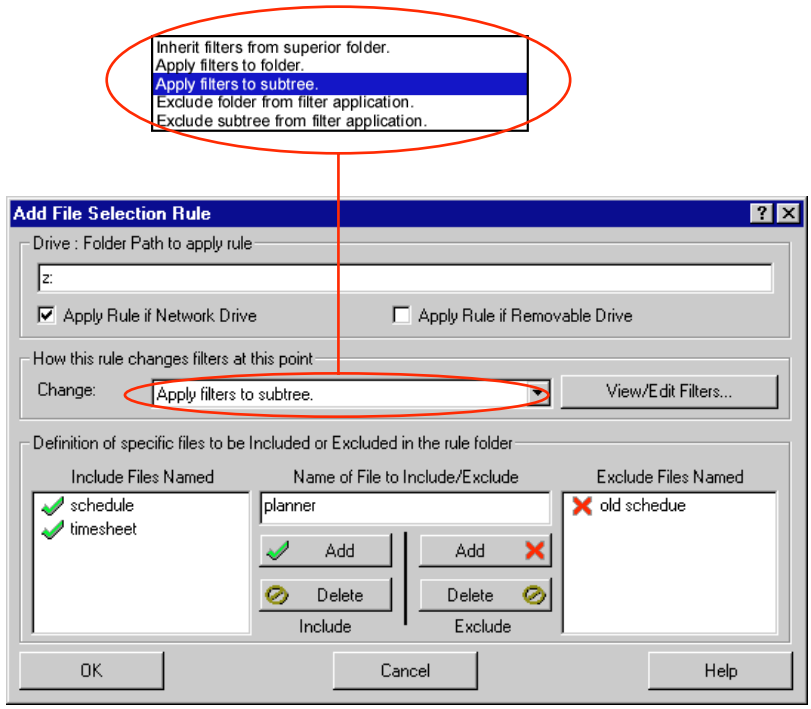
- Click Add to add a new rule. The Add File Selection Rule dialog box appears.
- Highlight an existing rule and click Edit to change a rule. The Edit File Selection Rule dialog box appears.
- Click Edit Template File Name Filters to modify the default filter that is applied when you create a new rule. The Template File Filters dialog appears. See "Editing file name filters" on page 61.

  **Note:** The changed file name filter is not automatically applied to any rule. Instead, it is applied as the default filter when new rules are added.

- Highlight an existing rule and click Delete to remove a rule.

# Adding and editing file selection rules

The Edit File Selection Rule dialog box allows you to create and edit a file selection rule.




- If you are adding a rule, type the path to the folder to which it will apply in the Drive: Folder Path To Apply Rule box.
- If the rule is to be applied to network drives, select Apply Rule If Network Drive.
- If the rule is to be applied to removable drives, select Apply Rule If Removable Drive.
- Select an option in the How This Rule Changes Filters At This Point list.
- If the Change option is Apply Filters To Folder or Apply Filters To Subtree, click View/Edit Filters to specify the filter for this rule. See "Editing file name filters" on page 61.
- Type a file name into the Name Of File To Include/Exclude text field and click the left Add button to include this file.

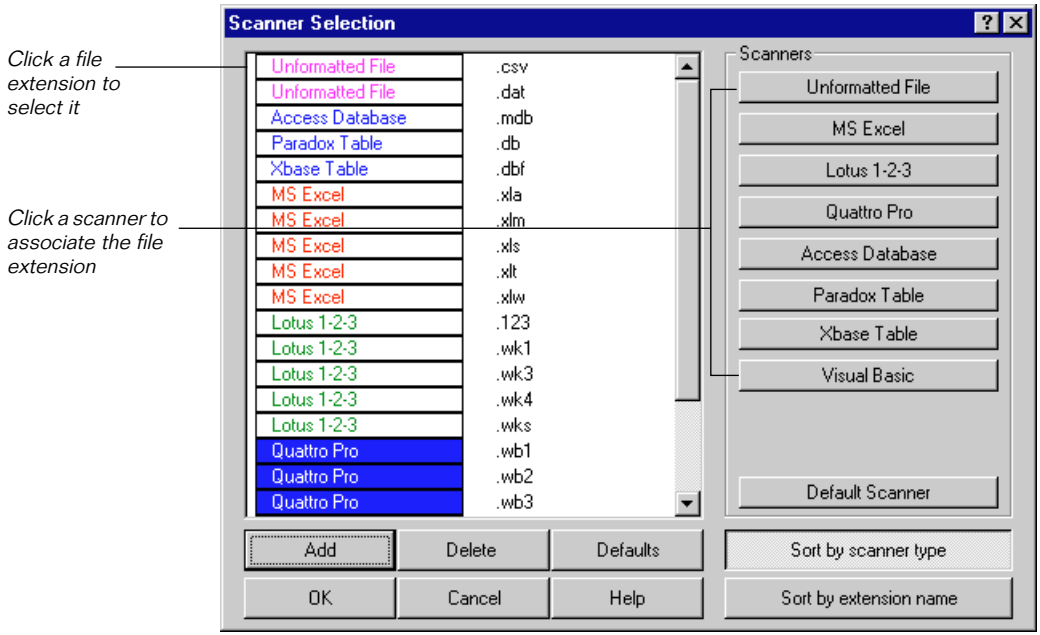
- Type a file name into the Name Of File To Include/Exclude text field and click the right Add button to exclude this file.
- Highlight a file name and click the corresponding Delete button to remove it from the list.

# Mapping extensions to scanners

The Scanner Selection dialog box allows you to specify additional file extensions for any of the defined scanners. For example, the Microsoft Excel Spreadsheet scanner recognizes files with extensions of .xla, .xlm, .xls, .xlt, and .xlw. If you have created worksheets with a unique file extension such as .abc, you can add this extension to the list and map it to the Microsoft Excel Spreadsheet scanner.

**To map extensions:**

1. Click the Data File Scan traffic light to select Data File Scan.
2. Choose Advanced, then Map Extensions To Scanner from the Edit menu.
3. The Scanner Selection dialog appears.



In the Scanner Selection dialog box you can:

- Click Add to add a new extension. New extensions are automatically mapped to the unformatted file scanner.
- Select one or more file extensions and click the button for the scanner to which you wish to map them.

**Note:** If you assign a file extension which is by default mapped to another scanner, a warning is displayed. In most cases you are allowed to override the default mappings.

- Select one or more file extensions and click Default Scanner to re-map them to the default scanner.
- Click Default to map all extensions to their default scanners.
- Select one or more file extensions and click Delete to remove them.

CHAPTER 7

# Norton 2000 Fix Assistant

Norton 2000 provides an easy method to correct common 2-digit year date issues in your Microsoft Excel spreadsheet files.

**To start Norton 2000 Fix Assistant:**

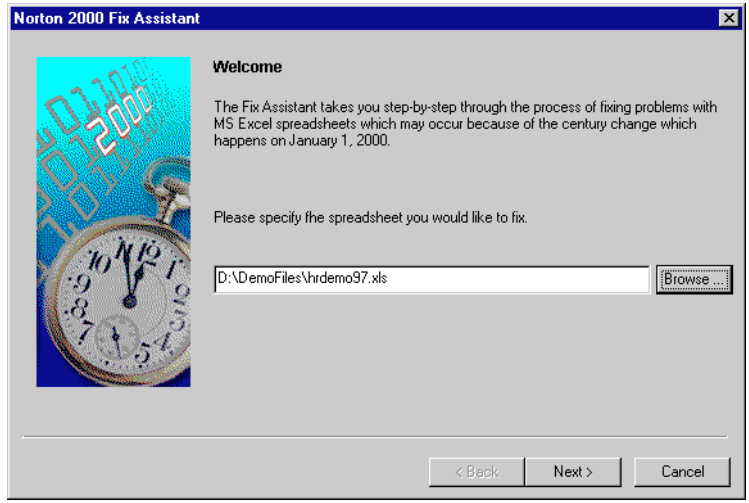
1. From the File menu, choose Norton 2000 Fix Assistant. You can also right-click a file name in the Data File Scan view and select Fix Assistant from the pop-up menu.
2. Follow the instructions on each page of the Fix Assistant wizard.

**Note:** When you are done making your corrections to a spreadsheet, review your file to verify correctness. Make sure your changes have not caused adverse side effects in your spreadsheet. We recommend that you do not overwrite your original file until you are certain that the file you are replacing it with does not have any erroneous data.

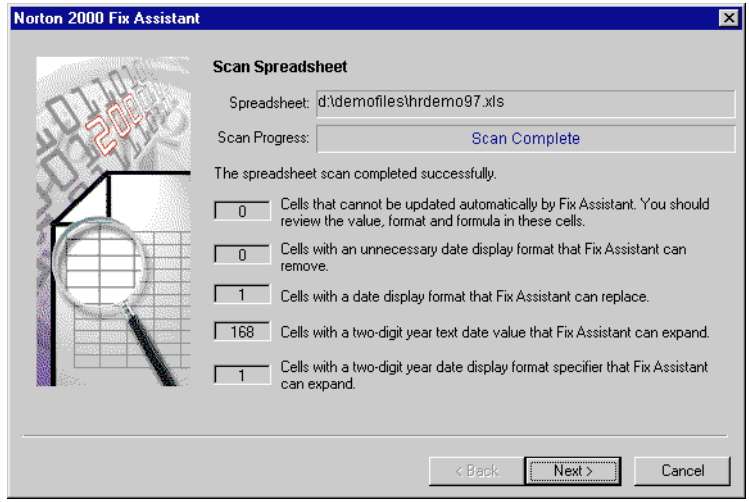
## Using the Norton 2000 Fix Assistant

The following steps describe the basic selections in the Norton 2000 Fix Assistant windows:

1. Select a Microsoft Excel spreadsheet in the Norton 2000 Fix Assistant Welcome page. Type a complete path and file name for the file you want to correct or click the Browse button to select the file from the Windows Open dialog box.

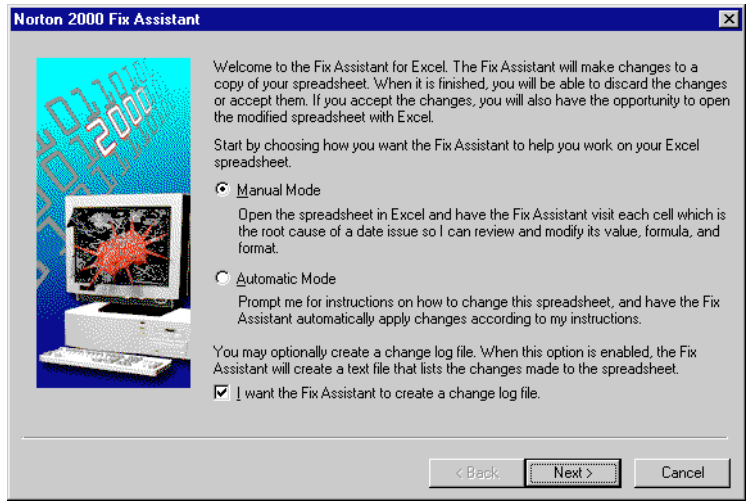



**2** Norton 2000 Fix Assistant scans the file using predefined scanner options to determine if there are date issues in the file. If Norton 2000 Fix Assistant finds no issues in the selected file, the window displays a different message and the Cancel button becomes a Finish button. Click Finish to exit. Otherwise, click Next to continue.

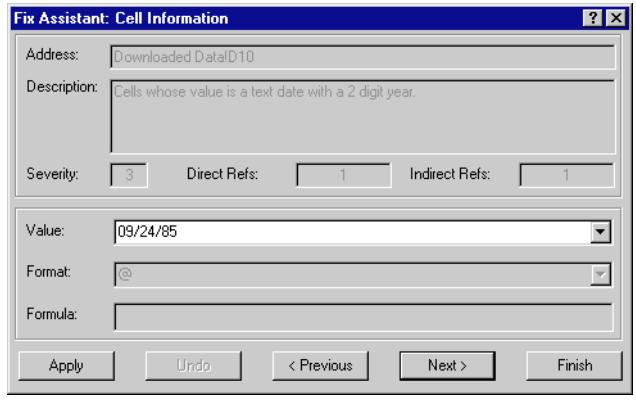



**3** Select how you want to fix your file. If you select Manual Mode, see step 5. If you select Automatic Mode, see step 4.

Select I Want The Fix Assistant To Create A Change Log File if you would like a text log file created listing all your changes. The path of the log file will appear on the Finish page when the Norton 2000 Fix Assistant has finished correcting the spreadsheet.

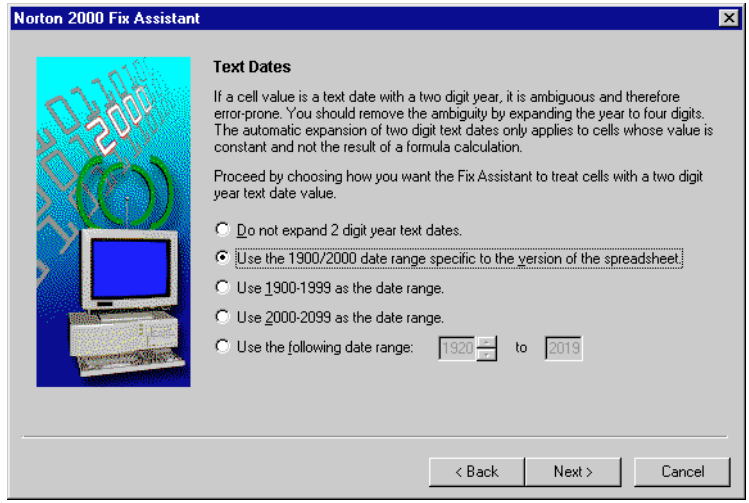



**4** If you selected Manual Mode in step 3, the Fix Assistant displays the spreadsheet and for each date issue found, prompts you to specify the corrected value in the Fix Assistant Cell Information dialog box. You can select a suggested value from the Value drop-down list or enter a new value if the correct value is not provided. Use the Next and Previous buttons to navigate the cells in your spreadsheet. When you are done, click Finish. The Fix Assistant ignores any remaining cells in your spreadsheet and displays the Finish page.



**5** If you selected Automatic Mode in step 3, the Text Dates page prompts you for instructions on how to correct date issues that it finds in this file. The following table describes how each option corrects date issues. These options only apply to cells whose value is not the result of a formula calculation.

| Selecting this option | Corrects date issues as follows |
|---|---|
| Do Not Expand Two-Digit Year Text Dates | Does not expand cells with a 2-digit year text date value. |
| Use The 1900/2000 Date Range Specific To The Spreadsheet Version | Determines the version of the Microsoft Excel spreadsheet and expands 2-digit dates according to the cusp date defined by that version. |
| Use 1900-1999 As The Date Range | Expands all 2-digit years by adding the prefix 19 to each 2-digit year. |
| Use 2000-2099 As The Date Range | Expands all 2-digit years by adding the prefix 20 to each 2-digit year. |
| Use The Following Date Range | Expands all 2-digit years so that the expanded year falls within the specified range. For example, if the date range is set to 1920 to 2019, 2-digit years from 00 to 19 are expanded to 2000 to 2019, respectively; 2-digit years from 20 to 99 are expanded to 1920 to 1999, respectively. |

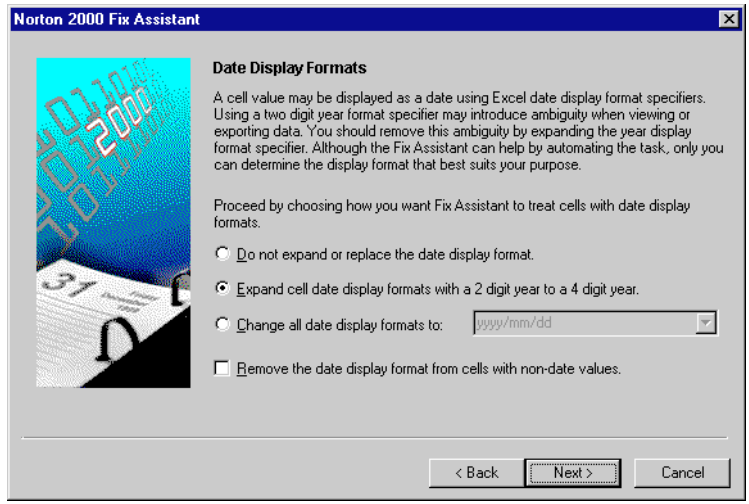



6 In the Date Display Formats page, select how you would like the Norton 2000 Fix Assistant to handle date display formats. The following table describes how each option will change the display format in your spreadsheet.

| Selecting this option | Corrects date display formats as follows |
|---|---|
| Do Not Expand Or Replace The Date Display Format | Does not change any date display formats. |
| Expand The Cell Date Display Formats With A Two-Digit Year To A Four-Digit Year | Expands all 2-digit year date display formats to a 4-digit year format. |
| Change All Date Display Formats To | Expands all 2-digit year date display formats to a 4-digit year format that you specify. Type a format in the field or select a format from the drop-down list. |

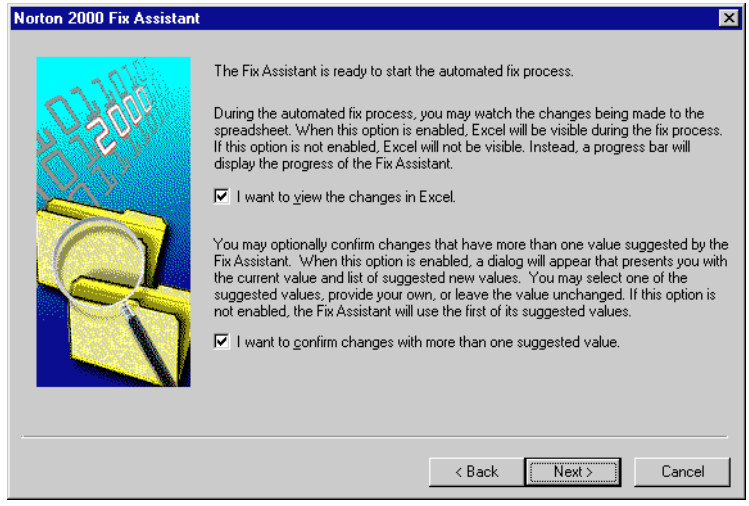
Click Remove The Date Display Format From Cells With Non-Date Values to remove date formatting from all non-blank cells that have

no date values. The date display format is replaced by the Microsoft Excel General format.

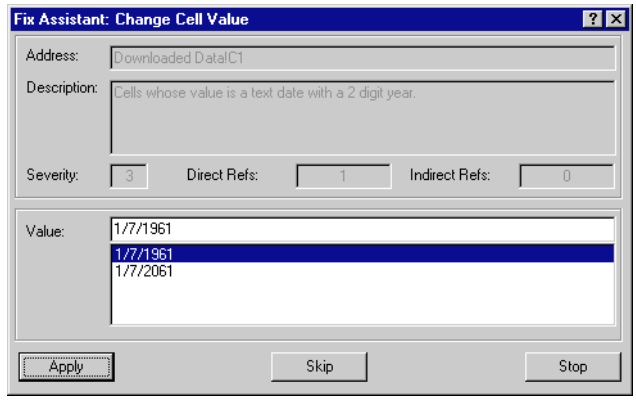



7 Select View The Changes In Excel to have Norton 2000 Fix Assistant open the spreadsheet so that you can watch as changes are automatically corrected. This option may require more time to process the file.

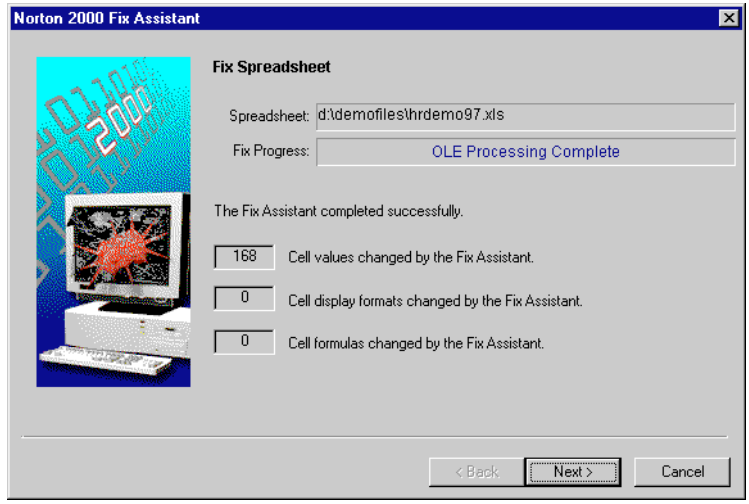
Select Confirm Changes With More Than One Suggested Value if you want to confirm changes that have two or more possible values. Otherwise, the first suggested value will be used as the replacement value.



**8** If you selected Confirm Changes With More Than One Suggested Value in step 7, Norton 2000 Fix Assistant displays the Fix Assistant: Change Cell Value dialog box for each cell that has more than one value associated with it. You can select the correct date value to apply to each cell by selecting one of the values displayed, or click the Skip button to ignore the cell.

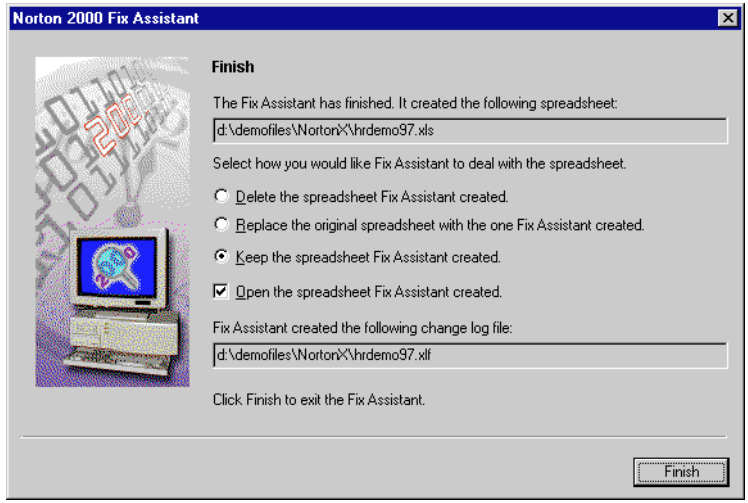



**9** When Norton 2000 Fix Assistant completes, it indicates whether it completed successfully and lists the statistics for the changed cells in the spreadsheet.




**10** The Norton 2000 Fix Assistant Finish window prompts you to select from several options. The fixed file is placed in a NortonX folder in the same location as your original file. The file is given the same name as your original file and saved in the same

application version as the original file's version. If you requested a log file, the location for the log file is given. The log file is given the same name as your original file with a .xlf file name extension.




Review the spreadsheet created by Norton 2000 Fix Assistant to verify the correctness of the date changes and that those changes have not caused adverse side effects to your spreadsheet data. Use the Replace The Original Spreadsheet With The Spreadsheet Created By The Fix Assistant option only if you are certain that erroneous data is not present in the spreadsheet created by Norton 2000 Fix Assistant.

CHAPTER 8

# BIOS Test and BIOS Fix

## BIOS Test

Norton 2000 BIOS Test is a “date-safe” test that checks whether your computer system’s real-time clock and BIOS are able to produce accurate dates as the clock rolls over from December 31, 1999 to January 1, 2000. Norton 2000 BIOS Test also evaluates the ability of the BIOS to manage year 2000 dates after a system reboot.

Norton 2000 BIOS Test is “date-safe” because it does not access the computer’s hard drives or network data, and does not endanger date-sensitive software or software licenses. See “Manual testing versus using Norton 2000 BIOS Test” on page 84.

Norton 2000 BIOS Test produces an easy-to-understand report of its results. The possible outcomes are:

- No action is needed. The computer’s real-time clock and BIOS fully support year 2000 dates.
- You should install Norton 2000 BIOS Fix software to protect the computer against the change of date at the end of 1999, or to support system rebooting after December 31, 1999. BIOS Fix is required to compensate for deficiencies in the real-time clock or BIOS.
- You should replace the computer’s BIOS with a later version because the BIOS is incapable of supporting a date in the year 2000 and this situation cannot be fixed by software.

BIOS Test can only be performed from a BIOS Test disk created by Norton 2000. BIOS Test is operating system-independent and performs additional tests beyond the Norton 2000 System Date Test which only tests the

operating system's date handling characteristics. See "System Date Test" on page 24.

Norton 2000 BIOS Test can be run on any computer that is compatible with the BIOS specifications set by IBM in 1984. This includes, but is not limited to, all computers that can run MS-DOS, Windows 3.x, or Windows 9x straight out of the box. BIOS Test results may indicate that there are problems that can be fixed by installing BIOS Fix.

**Note:** Windows NT operating systems are able to correct the real-time clock and BIOS year 2000 problems that BIOS Fix corrects for systems running MS-DOS, Windows 3.x, or Windows 9x. Therefore, Norton 2000 BIOS Fix is not necessary for IBM-compatible systems that run Windows NT. You should, however, run BIOS Test to ensure that your system's BIOS should not be replaced. If BIOS Test reports that your BIOS should be replaced, Windows NT is probably not able to correct the problem. See "BIOS which cannot be corrected using BIOS Fix" on page 87 for more information.

## Manual testing versus using Norton 2000 BIOS Test

One way to test reboot date characteristics across the December 1999 to January 2000 date rollover is to set the clock on the computer, turn off the machine while the century rolls over, and check the advance into the year 2000.

There are some dangers to doing this:

- Invalid dates may appear in the file system even if you boot from a normal DOS floppy disk because the DOS system can access the hard drives.
- Certain software licenses are date sensitive and may become invalid when the license manager "sees" dates beyond the end of the registered period. Restoration of the license may require correspondence with the vendor.
- Date sensitive software (such as calendar managers) may delete or archive current data.

These problems can be avoided by using Norton 2000 BIOS Test. It is a safe, easy way to verify that a reboot operation is compliant with the year 2000.

## Creating a BIOS Test disk

To create a BIOS test disk, start with a blank, formatted diskette.

**Note:** You cannot make a BIOS Test disk on a computer running Windows NT because the access control does not allow you to write the boot sector.

**To make a BIOS test disk:**

1. Choose Make BIOS Test Boot Disk from the Tools menu.
2. Follow the on-screen instructions.

## Running BIOS Test

BIOS Test executes from a single diskette that must remain write-enabled.

**To perform Norton 2000 BIOS Test:**

1. Insert the BIOS Test disk into the A: drive. This drive must be the boot drive.
2. Shut down your computer and reboot with the BIOS Test disk in the boot drive.
3. BIOS Test evaluates the operation of both the real-time clock and the BIOS management of dates, and provides a report with its recommendation.
4. When BIOS Test has completed its testing and reporting, remove the BIOS Test disk and reboot the computer.

# BIOS Fix

BIOS Fix is a device driver that compensates for real-time clock (RTC) or BIOS date management deficiencies for dates in the year 2000 and after. BIOS Fix can be used with MS-DOS, Windows 3.x, and Windows 9x, but not Windows NT which has the built-in capability to correct real-time clock or BIOS problems. There is no need to have a version of BIOS Fix for Windows NT. However, you should run BIOS Test to ensure that your system's BIOS does not need to be replaced. See "BIOS which cannot be corrected using BIOS Fix" on page 87.

Many real-time clocks and BIOS cannot correctly handle the century rollover from December 31, 1999 to January 1, 2000. In most cases, installing Norton 2000 BIOS Fix corrects this problem and ensures that year 2000 system dates will be correctly set. BIOS Fix will correct the clock upon reboot and during operation of the computer. See "BIOS which cannot be corrected using BIOS Fix" on page 87 for information on computers that cannot be corrected.

## Installing BIOS Fix

BIOS Fix is installed using the Setup program on the Norton 2000 CD. If you did not install BIOS Fix when you installed Norton 2000, run the setup program from the installation CD.

BIOS Fix is loaded as the first line in your CONFIG.SYS file. The command line provided by the installation invokes BIOSFIX.SYS with these parameters:

```
+R +T
```

The installation program provides you with the ability to specify Time of Day (T) and Real-Time Clock tick (R) corrections.

### Setting BIOS Fix parameters

BIOS Fix operation is governed by two command-line parameters. These parameters are R and T and are turned on or off with the use of a plus (+) or minus (-) sign:

+R Requests that references to the real-time clock be monitored. This is the default setting to ensure that the date will be corrected prior to any use.

-R Requests that the real-time clock monitoring not be used to correct an erroneous system date.

+T Requests that the clock is monitored through a standard clock tick interrupt which occurs many times a second. This is the default setting to ensure that a date change will be immediately seen and corrected.

-T Requests that the periodic clock tick not be used to monitor and correct an erroneous system date.

## BIOS Fix operation

BIOS Fix is initiated at the beginning of CONFIG.SYS, installing a device driver that monitors the real-time clock and BIOS date functions. This driver will immediately correct an erroneous century rollover. If the computer is off during the critical period, BIOS Fix will correct the system date immediately after reboot.

## BIOS which cannot be corrected using BIOS Fix

If the BIOS can support a year 2000 date, BIOS Fix will correct erroneous dates. However, certain BIOS simply assume the century is 19, and cannot handle a date with a century of 20. We recommend that you run Norton 2000 BIOS Test to determine if the BIOS can support a century 20 date, or if the BIOS must be replaced.

**Note:** If your BIOS must be replaced, contact the manufacturer of your computer.

APPENDIX A

# Keeping Norton 2000 up to date

## Introducing LiveUpdate

Symantec LiveUpdate technology makes it easy to keep Norton 2000 up-to-date. LiveUpdate uses your computer's modem or Internet connection to download updates directly from Symantec.

Run LiveUpdate once a month to see if updates to Norton 2000 are available.

---

**Tip:** If you have an Internet connection, you can keep all your software applications and hardware drivers up-to-date with LiveUpdate Pro, a new program available from Norton Web Services.

---

**To update Norton 2000:**

1. Click  on the toolbar.
2. Follow the on-screen instructions.

---

**Note:** Updating Norton 2000 requires a modem or Internet connection. LiveUpdate Pro requires an Internet connection and a subscription to Norton Web Services.

---

To subscribe to Norton Web Services, visit our website at:

http://www.nortonweb.com

APPENDIX B

# Remote network execution

## N2K Agent

N2K Agent is a command-line executable that allows you to remotely execute Norton 2000 in a network environment and perform an organization-wide computer data inventory. See ADMIN.HTM in the ADMIN folder on the Norton 2000 Corporate Edition 2.0 installation CD for more information about Norton System Center and remote network execution.

N2K Agent operation is determined by the contents of the .era profile supplied to it. The profile is created by Norton 2000. See "Working with profiles" on page 47.

N2K Agent output is written to the Log File Path specified in the command line or to standard output if no Log File Path is specified.

When N2K Agent runs to completion, it returns a result code indicating the maximum file severity encountered during the scan (between 1 and 5) before exiting normally. If N2K Agent encounters an error during operation, it exits prematurely and returns a negative value indicating the type of error it encountered. See "N2K Agent error codes" on page 95 for explanations of the values returned.

### N2K Agent command-line syntax

Control arguments can be specified with either "/" or "-" and either upper or lower case letters can be used. Following are some example uses of the N2K Agent:

- Perform a Data File Scan using default scanning options. Save the output to a specified log file.

  ```
  n2kagent /X /L [Log File Path]
  ```

- Perform an Application Scan and save the output to a specified log file.

  ```
  n2kagent /A /L [Log File Path]
  ```

- Perform a System Date Test and save the results to a specified log file.

  ```
  n2kagent /B /L [Log File Path]
  ```

- Perform a Data File Scan with specified scanning parameters (from a .era profile) and save the results to log file with a name based on the machine name.

  ```
  n2kagent [Profile File Path] /X /D [Log File Directory]
  ```

- Perform a Data File Scan with specified parameters, save the results to a specified log file, and warn you if a significant date issue is detected.

  ```
  n2kagent [Profile File Path] /X /L [Log File Path] /S
  [Severity Limit]
  ```

- Perform a full series of tests and save the results to a condensed export file for use by an enterprise database and save the data scan results to an associated log file. See ADMIN.HTM in the ADMIN folder on the Norton 2000 Corporate Edition 2.0 installation CD for more information about Norton System Center and enterprise database data collection.

  ```
  n2kagent /A /B /X /E [Export File Path]
  ```

## Control arguments

All control arguments are optional; however, many are related or mutually exclusive. Please read the descriptions below carefully.

[Profile File Path]is the full path name, accessible to the target system on which N2K Agent is running, to locate the .era profile defining the scanning options. If this path name is not present, the default scanning options will be used. A .era profile can only be created with the Norton 2000 Corporate Edition product.

| | |
|---|---|
| /A | initiates an Application Scan. This control argument cannot appear with either /B or /X unless the command line also includes /E. |
| /B | initiates a System Date Test. This control argument cannot appear with either /A or /X unless the command line also includes /E. |

| | |
|---|---|
| /C [CSV File Path] | indicates the name of a Comma Separated Values file to receive a comma delimited log output, suitable for import into a database or spreadsheet, or to an enterprise data collection application. The CSV file contains information about data file scans. |
| /D [Log File Directory] | is the full path name of the folder where N2K Agent creates a log file with the machine name of the workstation on which N2K Agent is running. This argument is used to place log file sets into a common folder, identified by their workstation of origin. If the /M control argument is not provided and N2K Agent cannot find or use the Windows host name to form a file name, it posts a dialog requesting a machine name from the user at the workstation. This machine name is then retained for future runs. /D cannot be used with either /L or /E. |
| /E [Export File Path] | indicates the full path name of a file to receive a multi-record type comma delimited output, suitable for import into a database application, such as Norton 2000 Database. A log file of data scan results (if /X is specified) is produced in the same folder as the export file, with the same name but with an extension of .log. The use of this control argument allows combinations of /A, /B, and /X to appear on the same command line. Otherwise, these three control arguments are mutually exclusive. /D and /L cannot be used in with the /E control argument. |
| /I | indicates that N2K Agent generates a STATUS.INI file in the same folder as N2K Agent. The file contains status information about the last run and any execution warning or error messages that are generated. You must use this parameter for files created for use with Norton System Center. See ADMIN.HTM in the ADMIN folder on the Norton 2000 Corporate Edition 2.0 installation CD for more information about Norton System Center and remote network execution. |

| | |
|---|---|
| /L [Log File Path] | is the full path name (accessible to the target system on which N2K Agent is running) to place the Log File output. This output contains the results of the Application Scan, the System Date Test, or the Data File Scan. If this argument is used, neither the /D argument nor /E argument can be present on the command line. |
| /M [Machine Name] | indicates the machine name that is to be stored in the export file or used to name the log file with the /D control argument. |
| /N | indicates that N2K Agent is to run silently without even a minimized window on the target machine. This argument cannot be used with the /B or /S control arguments. |
| /R [Restart File Path] | indicates the full path name of a checkpoint file that N2K Agent can use to restart the Data File Scan if it is aborted or interrupted during operation. During the course of a Data File Scan, N2K Agent writes progress information to the restart file. This file is deleted after the entire scan has been completed. If the restart file contains data when N2K Agent starts, it continues from the point of last interruption. If the Data File Scan is interrupted on the same file more than twice, the offending file is noted in the log and skipped. |
| /S [Severity Limit] | indicates a lower severity reporting limit. If this severity is exceeded, N2K Agent displays a dialog box at the end of the run that requires a response. This may be undesirable in unattended operation. |
| /U [User Name] | indicates the user name that is to be stored in the export file. Use of this control argument without /E has no effect. |
| /X | initiates a Data File Scan. This control argument cannot appear with either /A or /B unless the command line also includes /E. /X is assumed if the command line does not have a /A, /B, or /X control argument. |

If you have spaces in parameters or path names, you must enclose the parameter or path name in double-quotes. For example,

```
   "c:\Norton 2000\N2KAgent.exe" "c:\Tests\full scan.era" /L
"c:\log out"
```

Also, only one results control argument (for example, /L, /D, or /E) can be specified at a time. If no control arguments is used, the output log file is written to Standard Output (STDOUT).

For each control described above that takes a file pathname as its argument (that is, [Project File Path], /C, /D, /E, /L and /R), you can use the following argument substitutions:

- %u substitutes the username
- %m substitutes the machine name
- %t substitutes the temporary directory name

**Note:** These arguments must be typed in lowercase u, m, or t.

## N2K Agent error codes

When N2K Agent encounters a problem, it exits and returns an error code. Typically this information appears in the log, but if the problem is associated with generating a log file you may only see a code (which is accessible in the ERRORLEVEL variable, and accessible with the IF statement in batch processing).

The codes returned are (the ERRORLEVEL value is in parentheses):

-1 (255) LOGFILE EXPECTED
A Log File Path name was not specified for the /L argument.

-2 (254) BAD CONTROL ARG
An invalid control argument was specified.

-3 (253) MULTIPLE PROJECTS
Multiple .era profile files were specified.

-4 (252) PROJECT EXPECTED
A .era profile file specification was not specified.

-5 (251) MULTIPLE LOGFILES
The log file name was specified more than once (for example,

both the /L argument and /D argument specified on the command line).

-6 (250) INITIALIZATION FAILED
The program could not initialize. This could indicate that the demonstration period has expired.

-7 (249) NO COMPUTER NAME
A valid computer name was not specified for the /D argument.

-8 (248) EXPIRED
No longer used.

-9 (247) CONVERSION
An invalid numeric value was specified that could not be interpreted by the /S argument.

-10 (246) RANGE
The value specified in the /S parameter is outside the range of 1 through 5.

-11 (245) MULTIPLE CSVFILES
The /C argument was specified more than once.

-12 (244) CSVFILE EXPECTED
A CSV file name was not specified for the /C argument.

-13 (243) SEVERITY EXPECTED
A severity value (1 to 5) was not specified for the /S argument.

-14 (242) LOGDIR EXPECTED
A folder path name was not specified for the /D argument.

-15 (241) NO VOLUME INFO
Information about the disk volume for the specified path name of the /D argument could not be obtained to determine if it could support long file names for the log files.

-16 (240) MULTIPLE CKPFILES
The /R argument was specified more than once.

-17 (239) CKPFILE EXPECTED
A checkpoint file path name was not specified for the /R argument.

-18 (238) SIGNAL
A signal was encountered during execution with the /N argument. (If the /N argument is not supplied, N2K Agent does not trap signals and allows Windows to display a dialog indicating the error (for example, Access Violation).)

-19 (237) USER STOP
N2K Agent execution was stopped by the user.

-26 (230) CAN'T OPEN LOG
N2K Agent was unable to open the output log file.

-27 (229) MULTIPLE USER NAMES
More then one use of the /U control argument was encountered.

-28 (228) USER NAME EXPECTED
The user name after the /U control argument was not supplied.

-29 (227) MULTIPLE MACHINE NAMES
More then one use of the /M control argument was encountered.

-30 (226) MACHINE NAME EXPECTED
The machine name after the /M control argument was not supplied.

-31 (225) CAN'T OPEN EXPORT FILE
N2K Agent was unable to open the specified export file.

## ERRORLEVEL

The ERRORLEVEL command variable is set from the return code of an executing program. This variable represents the unsigned 8-bit value of the error code returned, and can be checked with the IF command. For example:

```
IF ERRORLEVEL 244 echo No CSV path supplied
```

Batch commands do not work with 16-bit windows because N2K Agent is a windows program and cannot be directly launched in a DOS batch file.

A P P E N D I X

# Norton 2000 Database

Norton 2000 Database assists you in identifying data and software year 2000 problems across your entire enterprise by evaluating the progress your organization is making towards complete year 2000 compliance.

Norton 2000 Database works in tandem with Norton 2000, which scans your system's files and stores the results for each computer into a separate log or export file. Norton 2000 Database collates these files and imports them into a central database. Norton 2000 Database makes it easy for you to query the database and generate reports, so you can identify specific year 2000 problems or get an organizational view of your progress in resolving any issues.

Norton 2000 Database includes a utility named Norton 2000 Data Import Service which enables you to import your export files automatically into your database. See "Automatic import using Data Import Service" on page 109 for more information on setting up, configuring and running the service.

Additionally, Norton 2000 Database Migration Wizard helps you to migrate data from your previous Norton 2000 Database to the new database. See "Norton 2000 Database Migration Wizard" on page 111 for more information on migrating your data.

## Configuring Norton 2000 Database

To set up and configure Norton 2000 Database you will need to complete the following procedures:

- Install Norton 2000 Database
- Install Norton 2000 Data Import Service (optional)
- Install Norton 2000 Database Migration Wizard (optional)

- Configure Norton 2000
- Configure Microsoft SQL Server

## Norton 2000 Database system requirements

To use Norton 2000 Database you must have the following software installed:

- Microsoft SQL Server 6.5 or 7.0
- Windows 95, Windows 98, or Windows NT Server 4.0
- Microsoft SQL Server ODBC Driver 3.50 or later

**Note:** Windows NT Server 4.0 with SP3 is required to run Microsoft SQL Server 6.5 and Windows NT Server 4.0 with SP4 is required to run Microsoft SQL Server 7.0.

## Installing Norton 2000 Database

**To install Norton 2000 Database:**

1. Start Windows. Close all Windows applications.
2. Insert the Norton 2000 CD into your CD-ROM drive.
3. Setup starts automatically. Choose the Norton 2000 SQL Server Database Client option.
4. In the next installation screen, choose one or more of the following installation options:
   - Norton 2000 Database Client
   - Norton 2000 Data Import Service
   - Norton 2000 Database Migration Wizard
   - Norton 2000 Database SQL Scripts

   **Note:** Certain installation options may not be available on all platforms.
5. The setup program will guide you through the installation of the components you selected.

**If Setup does not start automatically:**

1. Double-click the My Computer icon.
2. Double-click the icon for your CD-ROM drive.
3. Double-click NCDSTART.EXE.
4. Choose the Norton 2000 SQL Server Database Client option.
5. In the next installation screen, choose one or more of the following installation options:
   - Norton 2000 Database Client
   - Norton 2000 Data Import Service
   - Norton 2000 Database Migration Wizard
   - Norton 2000 Database SQL Scripts

## Configuring Microsoft SQL Server 6.5

To configure Microsoft SQL Server 6.5 for use with Norton 2000 Database, follow the instructions in this section. If you are using Microsoft SQL Server 7.0, see "Configuring Microsoft SQL Server 7.0" on page 105.

**Note:** We recommend that Microsoft SQL Server configuration be performed by a Database Administrator.

**To create a Microsoft SQL Server 6.5 connection:**

1. Connect to SQL Server Database Server.
2. Launch SQL Service Manager.
3. From the Server drop-down list, select the name of the server that will hold the database.
4. Choose MSSQLServer from the Services drop-down list.
5. Click the green traffic light to activate a SQL server connection.

**To create a Norton 2000 Database device:**

1. From your Windows desktop, click the Start button and choose Programs > Microsoft SQL Server 6.5 > SQL Enterprise Manager.
2. In the Microsoft SQL Enterprise Manager - [Register Server] dialog box, click Servers to register the server on which you want to create the database. Choose the appropriate name from the

drop-down menu. Select Use Standard Security and type a Login ID. Click Register to continue.

**Note:** Registering the SQL Server host machine only needs to be done once.

3. In the Microsoft SQL Enterprise Manager - [Server Manager] dialog box, choose the name of the server on which you want to create the database.
4. Select Database Devices from the Manage menu.
5. In the Manage Database Devices dialog box, click the New Device button on the toolbar.
6. In the New Database Device dialog box, type `N2000DB` in the Name field.
7. Select the drive on which the database device will be created from the Location drop-down list.
8. Type an appropriate size in the Size field. Because the size of the database depends on the size of your organization and the scan frequency, the size can vary. For large organizations, we recommend at least 500 MB.
9. Click Create Now. A message box appears indicating whether the database device was successfully created.
10. Click OK to close the message box.
11. Close the Manage Database Devices dialog box.

### To create the Norton 2000 Database:

1. In the Microsoft SQL Enterprise Manager - [Server Manger] dialog box, choose Databases from the Manage menu.
2. In the Manage Databases dialog box, click the New Database button on the toolbar.
3. In the New Database dialog box, type `N2000DB` in the Name field.
4. Select N2000DB from the Data Device drop-down list.
5. Select <new> from the Log Device drop-down list.
6. In the New Database Device dialog box, type `N2000DBLOG` in the name field.
7. Select the drive where the log for the database will be stored from the Location drop-down list. We recommend that you store the log on a different physical drive from the drive on which the data is

stored. This will preempt loss of data in the event of a complete drive failure.

8. Type a size for the log in the Size field. Generally the size of the log should be related in some proportion to the size of the database. For large organizations, we recommend at least 500 MB.
9. Click Create Now. A message box appears indicating whether the database was successfully created.
10. Click OK to close the message box.
11. In the New Database dialog box, click Create Now. It will take some time for the database to be created.
12. When the database has been successfully created, close the Manage Databases dialog box.

### To define the Norton 2000 Database:

The following steps create the tables that hold your data. Primary and foreign key definitions, constraints, and indexes are also created.

1. In the SQL Enterprise Manager dialog box, choose SQL Query Tool from the Tools menu.
2. Click the Query tab in the Query dialog box.
3. Select N2000DB from the DB drop-down list.
4. Click the Load SQL Script button on the toolbox to load the SQL script that will create the items described above.
5. From the Open File dialog box, open the folder on the drive in which you installed Norton 2000 Database and select the file named INSTALLDATABASE.SQL.
6. When the file has loaded into the Query dialog box, click the Execute Query button.
7. When the query completes (the Execute Query button turns green again), click the Results tab to view the results and ensure that no errors occurred during table creation.
8. Close the SQL Query Tool. Click Yes when asked to close the Results window.

### To confirm the Norton 2000 Database Schema:

1. In the Server Manager window of the SQL Server Enterprise Manager, navigate to the database through Databases > N2000DB > Objects > Tables.

2 Right-click the Tables folder. In the pop-up menu, choose Refresh.

3 Ensure the following Norton 2000 Database tables appear.

- tblApplications
- tblAssessmentProfiles
- tblBIOSResults
- tblBIOSTests
- tblComponentVersion
- tblConfig
- tblCPUTypes
- tblCustomerDefinedValues
- tblCustomerTypes
- tblDepartment
- tblDetectionTypes
- tblDiskTypes
- tblFile
- tblFileType
- tblLocations
- tblMachine
- tblMachineAppIssues
- tblMachineApplications
- tblMachineBIOSTests
- tblMachineCPU
- tblMachineDisk
- tblMachineNo
- tblRating
- tblScan
- tblSecurity
- tblSummary
- tblUser
- tblVersionInfo

The Norton 2000 Database is now ready to store data.

4 Close the SQL Server Enterprise Manager.

# Configuring Microsoft SQL Server 7.0

**To start Microsoft SQL Server 7.0:**

1. From your Windows desktop, click the Start button and choose Programs > Microsoft SQL Server 7.0 > Service Manager.
2. From the Server drop-down list, select the name of the server that will hold the database.
3. From the Services drop-down list, select MSSQLServer.
4. If the status of MSSQLServer is not running, click the Start/ Continue button to start the service.
5. Close the Service Manager.

For detailed information, see SQL Server 7.0 help files, Books Online.

**To register Microsoft SQL Server 7.0:**

1. From your Windows desktop, click the Start button and choose Programs > Microsoft SQL Server 7.0 > Enterprise Manager.
2. In the Console Root dialog box, choose Action and then New SQL Server Registration. The Register SQL Server Wizard starts.
3. Read the information in the Welcome screen. Click the Next button to continue.
4. In the Select A SQL Server dialog box, double-click the name of the server that will hold the database to move it to the Added Servers box. Click the Next button to continue.
5. In the Select An Authentication Mode dialog box, select a SQL Server authentication. Specific sites may have different security policies. If you do not know your site's authentication mode, contact your Database Administrator. Click the Next button to continue.
6. In the Select SQL Server Group dialog box, accept the defaults. Click the Next button to continue.
7. Click the Finish button to complete the registration. Review all messages in the Status box to ensure the server was successfully registered.

For detailed information, see SQL Server 7.0 help files, Books Online.

**To create the Norton 2000 Database using Microsoft SQL Server 7.0:**

1. In the SQL Server Enterprise Manager - [Console Root] window, expand the Microsoft SQL Server tree and the SQL Server Group tree.
2. Right-click the name of the server that will hold the database and choose Database from the New menu.
3. In the Database Properties dialog box, type `N2000DB` in the Name field.
4. Type an appropriate size in the Database Files - Initial Size field. Because the size of the database depends on the size of your organization and the scan frequency, the size can vary. For large organizations, we recommend at least 500 MB. It is also recommended that all organizations leave the Automatically Grow File selection checked. This allows SQL Server to manage the size of the database file. If you want to limit the database size, select Restrict Filegrowth and set an upper limit for the database file size.
5. Click the Transaction Log tab.
6. Select the location from the Transaction Log Files - Location field where the log for the database will be stored. We recommend that you store the log on a different physical drive from the drive on which the data is stored. This will preempt loss of data in the event of a complete drive failure.
7. Type a size for the log in the Transaction Log Files - Initial Size field. Generally this should be related in some proportion to the size of the database. For large organizations, we recommend at least 500 MB. It is also recommended that all organizations leave the Automatically Grow File selection checked. This allows SQL Server to manage the size of the transaction log. If you want to limit the size of the transaction log, select Restrict Filegrowth and set an upper bound for the transaction log size.
8. Click OK to create the database. It will take several minutes for the database to be created.

For detailed information, see SQL Server 7.0 help files, Books Online.

**To create the Norton 2000 Database Schema using Microsoft SQL Server 7.0:**

The following steps create the tables that hold your data. Views, stored procedures, a user and a role are also created.

1. In the Enterprise Manager Console Root window, choose Tools > SQL Server Query Analyzer. The Connect to SQL Server dialog box appears.
2. Select your SQL Server machine from the drop-down list and check the Start SQL Server If Stopped box. Type your login name and password in the entry fields and click OK. This starts the SQL Server Query Analyzer.
3. Select N2000DB from the DB drop-down list.
4. Click the Load SQL Script toolbar button to load the SQL script that will create the database schema.
5. From the Open Query File dialog box, open the folder on the drive in which you installed Norton 2000 Database and select the file named INSTALLDATABASE.SQL.
6. When the file has loaded into the Query dialog box, click the Execute Query toolbar button.
7. When the query completes (the Execute Query button turns green again), view the Results window and ensure that no errors occurred during database schema creation.
8. Close the SQL Server Query Analyzer.
9. Close the Enterprise Manager.

For detailed information, see SQL Server 7.0 help files, Books Online.

## Creating the ODBC Data Source Names (DSNs)

The following steps create the ODBC DSNs used to connect to the Norton 2000 Database.

**Note:** Microsoft has released numerous versions of the ODBC drivers, and your version may not exactly match the version described here. In general, if a setting is not specifically mentioned, use the default value.

1. From your Windows desktop, click the Start button, then select Settings > Control Panel.
2. Double-click ODBC Data Sources. The ODBC Data Source Administrator applet opens.
3. Click the System DSN tab.
4. Click Add.
5. In the Create New Data Source dialog box, select SQL Server from the list and click Finish. The Create A New Data Source To SQL Server Wizard opens.
6. Type `N2000DB` in the Name box. Select the SQL Server running Norton 2000 Database in the Server drop-down list. Click Next to continue.
7. Select an authentication mode. Select a SQL Server authentication. Specific sites may have different security policies. If you do not know your site's authentication mode, contact your Database Administrator. Type a Login ID and Password. Click the Next button to continue.
8. Check Change The Default Database To and select N2000DB from the drop-down list. Uncheck Create Temporary Stored Procedures if it is enabled. Click Next to continue.
9. Accept the default settings for the remaining page in the Wizard. Click Finish to continue.
10. The ODBC Microsoft SQL Server Setup dialog box appears.
11. Ensure that N2000DB is listed as the Data Source Name and the Database. Click Test Data Source.
12. Review the results in the SQL Server ODBC Data Source Test window to ensure the installation was successful. If the test failed, contact your Database Administrator. Click OK to close the window.
13. Click OK in the ODBC Microsoft SQL Server Setup dialog box.
14. Ensure N2000DB is listed under the System DSN tab in the ODBC Data Source Administrator applet.
15. Close the ODBC Data Source Administrator applet.
16. Close the Control Panel.

You are now ready to run Norton 2000 Database.

# Setting up Norton 2000

Before you begin using Norton 2000 Database, you may want to make some decisions regarding how Norton 2000 and N2K Agent will be used to create the files needed to populate your database.

There are two ways to enter data into Norton 2000 Database:

- Automatic: Uses Norton 2000 Data Import Service to automatically check a pre-defined location for export files (*.exp) created by N2K Agent.
- Manual: Sets up a staging directory and use the Import Data window to select the location from which to import selected log files (*.exp) created by Norton 2000 or export files created by N2K Agent.

**Note:** The preferred method for importing export files (*.exp) is the automatic method.

Refer to Appendix B for more information on setting up and running N2K Agent.

## Automatic import using Data Import Service

The Norton 2000 Data Import Service imports N2K Agent comma-separated values (CSV) files. These files are collated and imported into Norton 2000 Database from a staging directory on the same host as the Norton 2000 Data Import Service. The following steps outline the basic procedure for importing files:

1. Install Norton 2000 Data Import Service on the same server as Norton 2000 Database.

**Note:** We recommend that you install Norton 2000 Data Import Service on the same server as Norton 2000 Database. However, if you choose to install the import service on another server, you must consider the following: (1) a dedicated user account must be set up for the import service; (2) the account must have appropriate access permissions in the SQL Server Database; (3) the import service must be configured to use network shares specified using UNC pathnames; and (4) the network shares must allow read and write access to the import service user account. For a detailed discussion of the service configuration and network security, consult your Microsoft documentation.

2 Configure N2K Agent to store the results of the scan in a text file in a specific folder (for example, C:\N2KDataImport).

3 Configure Norton 2000 Data Import Service to monitor this folder and, when a new export file is created, import the export file into Norton 2000 Database.

Once configured and activated, Norton 2000 Data Import Service runs in the background at the times you specify in the configuration.

## Setting up Norton 2000 Data Import Service

Norton 2000 Data Import Service is designed to operate on a Windows NT server. Before you can configure the import service, you will need to complete the following setup procedures:

- Set up user accounts for the import service
- Specify the Norton 2000 Data Import Service account

### To set up user accounts:

Norton 2000 Data Import Service needs to operate under a Windows NT user account which has permission to use the ODBC data source, the "Log on as a service" advanced user right, and membership in the Administrators group on the machine where the import service runs. Users who run the service must also be members of the Power Users or Administrators NT groups. To configure or control the service, a user must be a member of the Administrators group.

1 From the NT desktop, click the Start button.

2 Choose Programs > Administrative Tools > User Manager.

3 In the User Manager window, select User > New User to add a new user.

4 Modify user account information using the Policies menu items.

After you have set up an appropriate account for running the Norton 2000 Data Import Service, you need to specify the account within NT.

**To specify the Norton 2000 Data Import Service account:**

1 From the NT desktop, click the Start button.

2 Choose Settings > Control Panel and double-click Services.

3 In the Services window, select N2000DBImport from the Service list. Click the Startup button.

4 In the Service window, select the Startup Type and specify the user account in the Log On As section.

5 Click OK to return to the Services window. Click Close to exit.

After you have set up Norton 2000 Data Import Service, configure it using the options available in the Norton 2000 Data Import Service Properties window.

---

**Note:** Where components of the application (for example, the Import Service and Database) will be run on different machines, the Input and Output folders should be specified using UNC pathnames. For example, \\MACHINE_NAME\SHARE_NAME

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- To start the service, click the Start/Continue button in the Control window.

## Norton 2000 Database Migration Wizard

Use the Norton 2000 Database Migration Wizard to guide you through the migration of data from version 1.0 of the Norton 2000 Database schema to version 2.0 of the Norton 2000 Database schema.

To perform the migration you must be a member of the Windows NT Administrators group and Norton 2000 Data Import Service must be installed and registered on the same machine where you perform the migration.

Start the Norton 2000 Database Migration Wizard and follow the instructions in the wizard windows.

## Manual import using Data Import

Although it is possible to import each log file into Norton 2000 Database individually, it is not necessary. Norton 2000 Database can import all files within a specific folder in one pass. Use the Data Import window in Norton 2000 Database to import the files from this target folder.

**Note:** The preferred method for importing export files (*.exp) is the automatic method. See "Automatic import using Data Import Service" on page 109.

The following procedures should be completed to create the target folders and set up Norton 2000 to save scan files to this location:

- Create a central target folder

  The first step is to create a single target folder at a single location on your network. It does not necessarily need to be installed on the same computer that Norton 2000 is installed on, however it must be accessible to all computers that you want to scan.

- Establish access privileges

  Once you have created the central target folder, set the following access privileges:

  - All computers to be scanned must have write privileges to the target folder.
  - The computer running Norton 2000 Database must have read privileges to the target folder.

- Create subfolders for each department

  Once you have created the target folder and assigned access privileges to it, create subfolders within the target folder. The names of the subfolders should correspond to the names of the departments within your organization. For example, if your target folder is identified as C:\SCANLOGS, and you have three departments (Administration, Sales, and Engineering), create three subfolders:

  - `C:\SCANLOGS\ADMINISTRATION`
  - `C:\SCANLOGS\SALES`
  - `C:\SCANLOGS\ENGINEERING`

  These subfolders must have the same access privileges as the main target folder.

- Configure Norton 2000 to save to the target folder

  Configure Norton 2000 to save the log files it generates into the appropriate folder, with the appropriate file name. For Norton 2000 Database to work effectively, you should:

  - Use the name of the computer for the name of the log file.
  - Save the log file in the subfolder corresponding to the name of the department.

See "Data File Scan" on page 27 for details on naming and saving log files.

# Using Norton 2000 Database

Once you have completed the configuration steps, Norton 2000 Database is ready to run.

**To start Norton 2000 Database:**

- Click the Start button, then choose Programs > Norton 2000 Corporate Edition> Norton 2000 Database

When the application first opens, the Norton 2000 Database Login dialog box appears. By default, the user ID is sa (lowercase) and the password is blank. The password is set by your Database Administrator. Type your user ID and password and click the Login button.

## Using Norton 2000 Database for the first time

Before you can begin to import data into Norton 2000 Database, your users, departments, and machines should be registered. You can register an individual user along with their department and machine in the Individual Register view of the Administration dialog box. For large organizations, the bulk register method can be used to complete your registration process for your entire organization. If you have not registered your users and machines, Norton 2000 Database will automatically register them in your database.

Instructions (and an example) for creating the Bulk Registration file can be found in the Register.txt file included on the Norton 2000 installation CD.

See "Administration" on page 132 for more information.

## Norton 2000 Database main window

You can access all the functionality from the Norton 2000 Database main window.

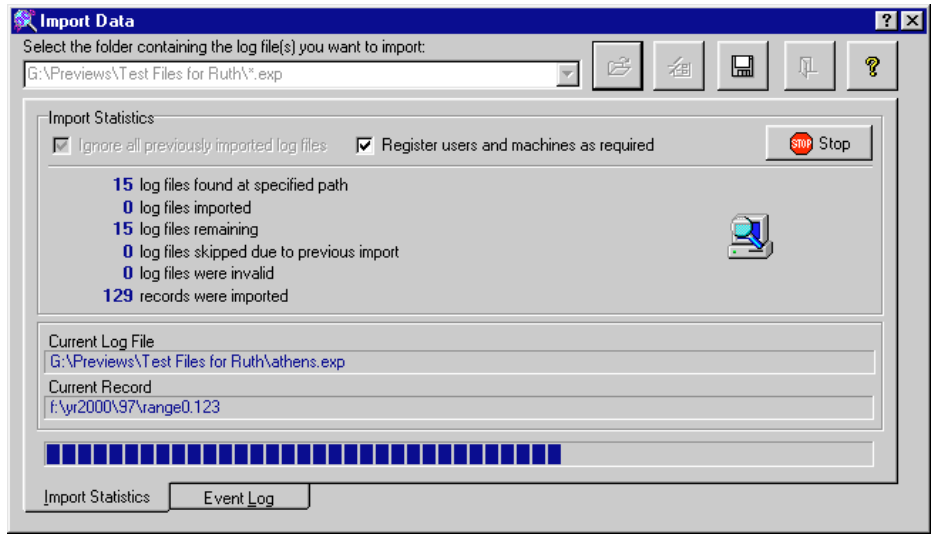

- File Details allows you to configure the information to include in the details report which shows the year 2000 compliance status of individual files on computers within your organization's network.
- File Summaries allows you to configure the information to include in the Summary chart which shows an overview of your organization's year 2000 compliance status.
- File Trends allows you to track your organization's progress towards complete year 2000 compliance over time through the use of the Trends chart.
- Machine Reports allows you to create four types of detailed reports of individual, department, or organization status: System Date Test Report, Application Scan Report, Maximum Severities Report, and Machine Details Report.
- Import Data enables you to import log files generated by Norton 2000 or export files generated by N2K Agent into Norton 2000 Database.
- Remove Data permits you to delete data from Norton 2000 Database.
- Administration enables you to register individual users or import a file to register many users. You can also modify default criticality

levels for departments, create new departments, modify department names, and transfer users between departments.

- Exit Program closes Norton 2000 Database.

## Importing data

The Import Data dialog box allows you to select a single file or multiple files for import and imports these files into your database. It also monitors the import process and provides statistics and status information on the files that were found.




**Note:** The preferred method for importing export files (*.exp) is the automatic method. See "Automatic import using Data Import Service" on page 109.

Norton 2000 Database provides several ways for you to specify which log files are to be imported. Type a full path and file name in the Select The Folder Containing The Log File(s) You Want To Import field.

Alternatively, you can browse for the file you wish to import by clicking the Find Log Files button. A standard Open File dialog box appears, enabling you to select the particular file you wish to import.

To select multiple files, type a full path and use the wildcard (for example, *.exp) naming convention to specify multiple files. You can also select a

folder location using the Find Log Files button and type a wildcard name in the Open dialog box. You can only import files with an EXP filename extension.

**Note:** Log files with a .log filename extension from an earlier version of Norton 2000 can also be imported by Norton 2000 Database.

For example, if you wanted to import all of the log files contained within the main target folder, "Scanlogs", on your C: drive, type:

```
C:\SCANLOGS\*.EXP
```

You can specify whether or not Norton 2000 Database should ignore any log files that have already been imported. Check the Skip All Previously Imported Log Files option. This can substantially speed up the import process.

**Note:** If the scan log file has not been updated since it was first imported, and if you select Skip Previously Imported Log Files, the results from that log file will not be re-imported into Norton 2000 Database.

Select Register Users And Machines As Required to automatically register users and machines during the import process if they are not registered in the database. Automatically registered users are assigned to a department named Unassigned. See "To transfer users:" on page 132 for instructions on transferring users to another department.

Once you have selected the files and import options, click the Import Data button to begin the import process. Monitor the progress of the import in the status area. The name of the current file and record are displayed above the import progress gauges. The status area is also updated with the numbers of files and records.

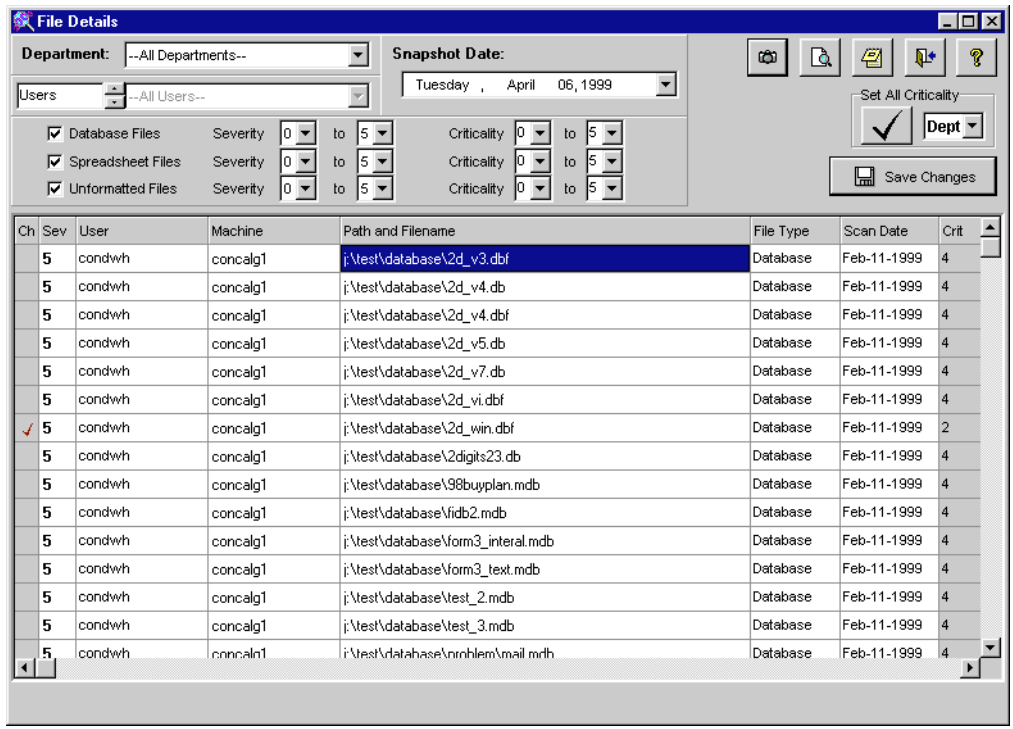
Click the Event Log tab to inspect the status of individual files. The status for a file can be OK, Skip, or Error. If a file status is Skip or Error, a description is provided in the Event table.

You can stop the import process at any time by clicking the Stop button or closing the window. If you close the Import Data dialog box during an import, a dialog box appears warning you that the import process is in progress.

**Note:** Like-named *.exp and *.log files are paired. For example, MyMachine.exp and MyMachine.log contain the same data, and only one of these files should be imported. If both files are imported, duplicate data will occur in the reports.

## File Details

The File Details dialog box enables you to examine the year 2000 compliance status of specific files by department, machine, or user within your organization.




### To create the File Details Report:

1. In the Norton 2000 Database main window, click the File Details button.
2. In the File Details dialog box, select a department or All Departments (entire organization) for which you want to create a report from the Department drop-down list.

3. Click the spin control to choose how you want to select data. Choose Machines or Users.
4. If you selected Machines, select a single machine or All Machines from the Machine drop-down list. If you selected Users, select a single user or All Users from the Users drop-down list. If you selected All Departments, you cannot select a single machine or user.
5. Type a date in the field or select a date from the Snapshot Date pop-up calendar. If no information was imported on the date selected, the application automatically searches for and displays the most recent information available.
6. Check one or more file types that you want included in your report: Database, Spreadsheet, or Unformatted Files.
7. Select the severity ranges for each file type that you want included.
8. Select the criticality range for the files that you want included. The criticality of the file is, by default, inherited from the department criticality.
9. Click the Results button to generate the report.

The File Details Report displays your selected criteria sorted in descending order. In the File Details Report, you can:

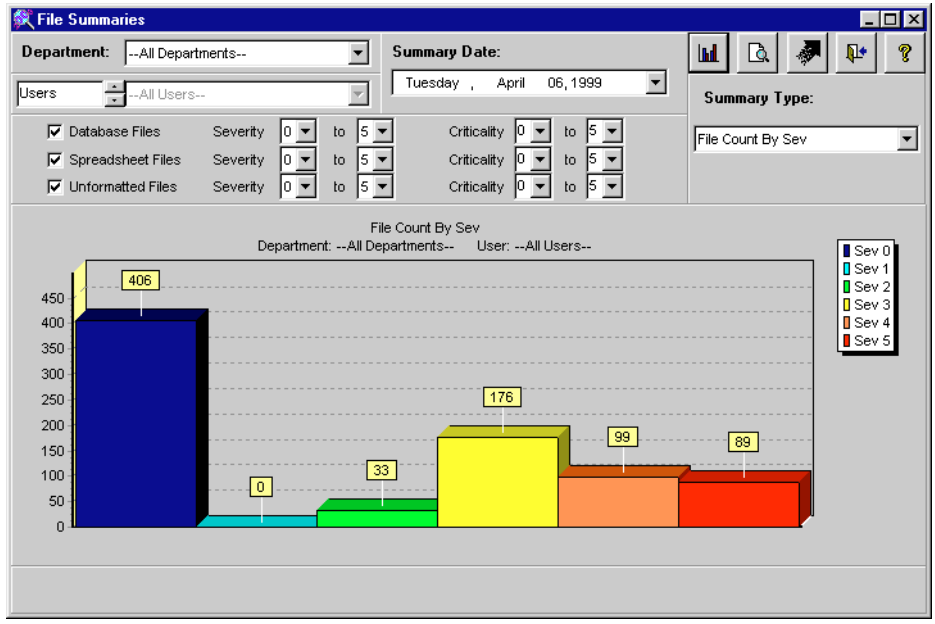
- View the log file for any one entry by right-clicking the entry in the report or selecting the entry and clicking the View Log File button
- Modify the criticality for one file. Click the Crit column for the entry and select the criticality from the drop-down list. A checkmark appears in the Ch column for that entry.
- Modify the criticality for all files. Select the criticality from the Set All Criticality drop-down list and click the checkmark button. Checkmarks appear in the Ch column for all entries.

**Note:** Setting the criticality to Dept changes the criticality for the department to its default value. See "To modify department criticality:" on page 133 for details on changing the default criticality for a department.

- Save file criticality changes to your database. Click the Save Changes button. Checkmarks in the Ch column disappear.
- Preview and print the report. Click the Print Preview button.
- Select the Print button in the preview window to print the report.

# File Summaries

The File Summaries dialog box enables you to examine the year 2000 compliance status of your entire organization by department, machine, or user within your organization.




**To create the File Summaries Chart:**

1. In the Norton 2000 Database main window, click the File Summaries button.
2. In the File Summaries dialog box, select a department or All Departments (entire organization) for which you want to create a chart from the Department drop-down list.
3. Click the spin control to choose how you want to select data. Choose Machines or Users.
4. If you selected Machines, select a single machine or All Machines from the Machine drop-down list. If you selected Users, select a single user or All Users from the Users drop-down list. If you selected All Departments, you cannot select a single machine or user.
5. Type a date in the field or select a date from the Summary Date pop-up calendar. If no information was imported on the date

selected, the application automatically searches for and displays the most recent information available.

6. Check one or more file types that you want included in your chart: Database, Spreadsheet, or Unformatted Files.
7. Select the severity ranges for each file type that you want included.
8. Select the criticality range for the files that you want included. The criticality of the file is, by default, inherited from the department criticality or it can be modified in the File Details Report.
9. Select a chart type from the Summary Type drop-down list. See "File Summary Chart types" on page 120.
10. Click the Populate button to draw the chart.

The File Summaries chart displays your selected criteria and labels it accordingly. After the File Summaries chart is drawn, you can

- Preview and print the chart. Click the Print Preview button. To print the chart select the Print button in the preview window.
- Copy the chart to your Windows clipboard and paste it into another application. See "Copying and pasting charts" on page 130.

**Note:** Norton 2000 Database is limited to displaying a maximum of 10 machines or departments per page.

## File Summary Chart types

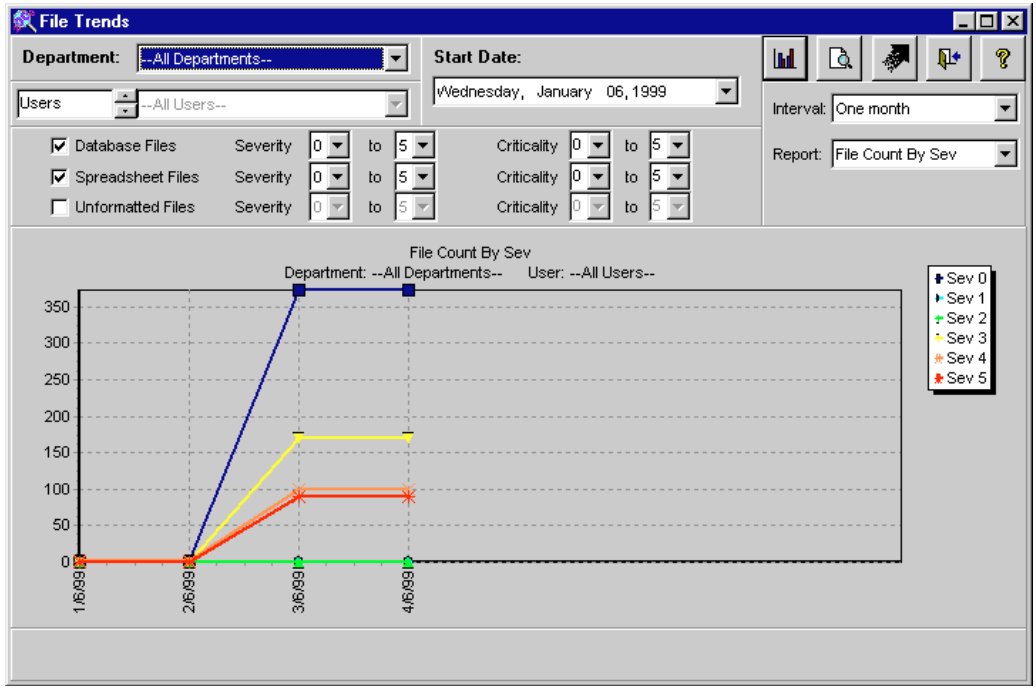
Select the type of summary chart you wish to display from the Summary Type drop-down list. Depending on your selection criteria, the following summary chart types can be created:

- **File Count By Sev**: Bar chart that tallies the total number of files assessed at each severity level.
- **File Distribution By Sev**: Pie chart that breaks down percentage of files assessed at each severity level.
- **File Count By Sev, File Type**: Bar chart that tallies files by severity for each file type (database, spreadsheet, unformatted).
- **File Count By File Type, Sev**: Bar chart that tallies files by file type for each severity level.
- **File Count By Sev, Dept**: Bar chart that tallies the number of files by severity level for each department.

- **File Count By Dept, Sev**: Bar chart that tallies the number of files in each department for each severity level.
- **File Count By Sev, Machine**: Bar chart that tallies the number of files by severity level for each machine.
- **File Count By Machine, Sev**: Bar chart that tallies the number of files in each machine for each severity level.
- **Max Sev By Dept, File Type**: Bar chart that displays the maximum severity level found in each file type for each department.
- **Max Sev By File Type, Dept**: Bar chart that displays the maximum severity level found in each department for each file type.
- **Max Sev By Dept**: Bar chart that displays the maximum severity level found for each department.
- **Max Sev By Machine, File Type**: Bar chart that displays the maximum severity level found in each file type for each machine.
- **Max Sev By File Type, Machine**: Bar chart that displays the maximum severity level found in each machine for each file type.
- **Max Sev By Machine**: Bar chart that displays the maximum severity level found for each machine.
- **File Count By Sev, User**: Bar chart that tallies the number of files by severity level for each user.
- **File Count By User, Sev**: Bar chart that tallies the number of files for each user for each severity level.
- **Max Sev By User, File Type**: Bar chart that displays the maximum severity level found in each file type for each user.
- **Max Sev By File Type, User**: Bar chart that displays the maximum severity level found for each user for each file type.
- **Max Sev By User**: Bar chart that displays the maximum severity level found for each user.

## File Trends

The File Trends dialog box enables you to examine the year 2000 compliance status over intervals of time for your entire organization or by department, machine, or user within your organization. Display this information by selecting a chart type from the Report drop-down list.




**To create the File Trends Chart:**

1. In the Norton 2000 Database main window, click the File Trends button.
2. In the File Trends dialog box, select a department or All Departments (entire organization) for which you want to create a chart from the Department drop-down list.
3. Click the spin control to choose how you want to select data. Choose either: Machines or Users.
4. If you selected Machines, select a single machine or All Machines from the Machine drop-down list. If you selected Users, select a single user or All Users from the Users drop-down list. If you selected All Departments, you cannot select a single machine or user.
5. Type a date in the field or select a date from the Start Date pop-up calendar. The application automatically collates and displays the information from the start date to the current date.

6 Check one or more file types that you want included in your chart: Database Files, Spreadsheet Files, or Unformatted Files.

7 Select the severity ranges for each file type that you want included.

8 Select the criticality range for the files that you want included. The criticality of the file is, by default, inherited from the department criticality or it can be modified in the File Details Report.

9 Select a time interval for the chart from the Interval drop-down list. The intervals available in the list vary with the Start Date selected. The Start Date must be one week prior to the current date in order for an interval of one week to appear in the Interval list.

---

**Note:** The Interval drop-down list allows you to specify the interval by which the data should be displayed: 1 week, 2 weeks, 1 month, 3 months, or 6 months. Longer time periods result in less-cluttered charts; shorter time periods give you a more precise picture of compliance trending within your organization.

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10 Select a Trends Chart type from the Report drop-down list. See "File Trend Chart types" on page 123.

11 Click the Populate button to graph your selections.

The File Trends Chart displays your selected criteria and labels it accordingly. After the File Trends chart is drawn, you can:

- Preview and print the chart. Click the Print Preview button. To print the chart, select the Print button in the preview window.
- Copy the chart to your Windows clipboard and paste it into another application. See "Copying and pasting charts" on page 130.

## File Trend Chart types

Depending on your selection criteria, the Report drop-down list allows you to select one of four different trend report types:

- **File Count By Sev**: Line chart of the total number of files within your organization at each severity level at each interval.
- **Max Dept Sev**: Line chart of the severity level of the least compliant files in each department at each interval.

- **Max Machine Sev**: Line chart of the severity level of the least compliant files stored in each computer at each interval.
- **Max User Sev**: Line chart of the severity level of the least-compliant files stored for each user at each interval.

## Machine Reports

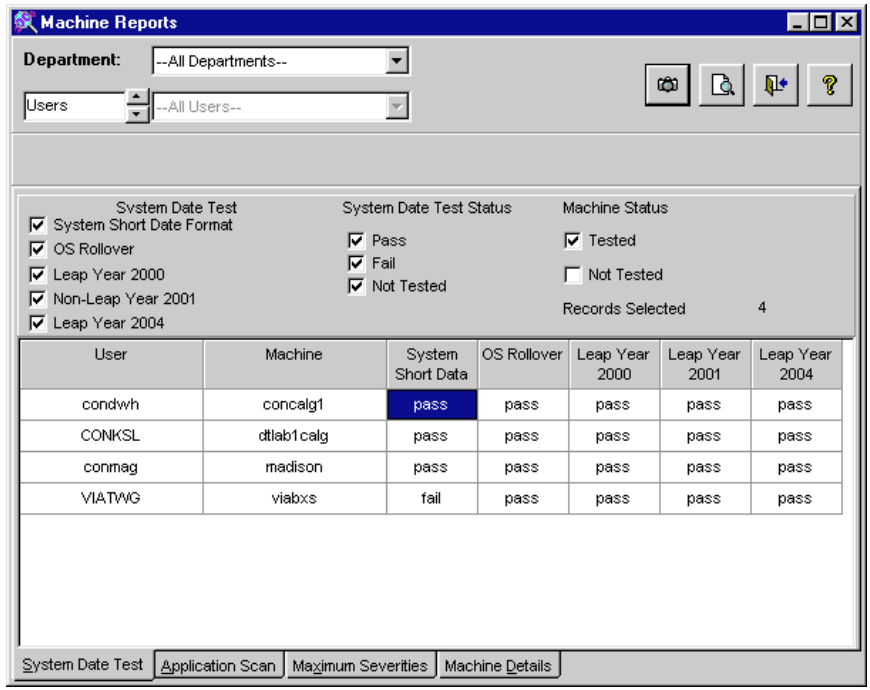
The Machine Reports dialog box enables you to examine the year 2000 compliance status of machines within your organization as well as system details of each computer scanned. You can view the status by departments, machines, or users.

The Machine Reports dialog box allows you to select the criteria to create four different reports:

- **System Date Test Report** displays the System Date Test status for tested computers.
- **Application Scan Report** displays an inventory of the applications found on each machine tested and the current year 2000 compliance status for those applications.
- **Maximum Severities Report** displays a summary of the existing severities for the System Date Test, Application Scan, Data File Scan and overall maximum severity for each computer tested.
- **Machine Details Report** displays hardware and disk usage statistics of each computer tested in your organization.

## System Date Test Report

The System Date Test dialog box enables you to examine the System Date Test status for computers within your organization.




### To create the System Date Test Report:

1. In the Norton 2000 Database main window, click the Machine Reports button.
2. In the Machine Reports dialog box, click the System Date Test tab (if it is not already selected) to go to the System Date Test view.
3. Select a department or All Departments (entire organization) from the Department drop-down list.
4. Click the spin control to choose how you want to select data. Choose Machines or Users.
5. If you selected Machines, select a single machine or All Machines from the Machine drop-down list. If you selected Users, select a single user or All Users from the Users drop-down list. If you selected All Departments, you cannot select a single machine or user.

6 Select from the following groups of options:

- System Date Test
- System Date Test Status
- Machine Status

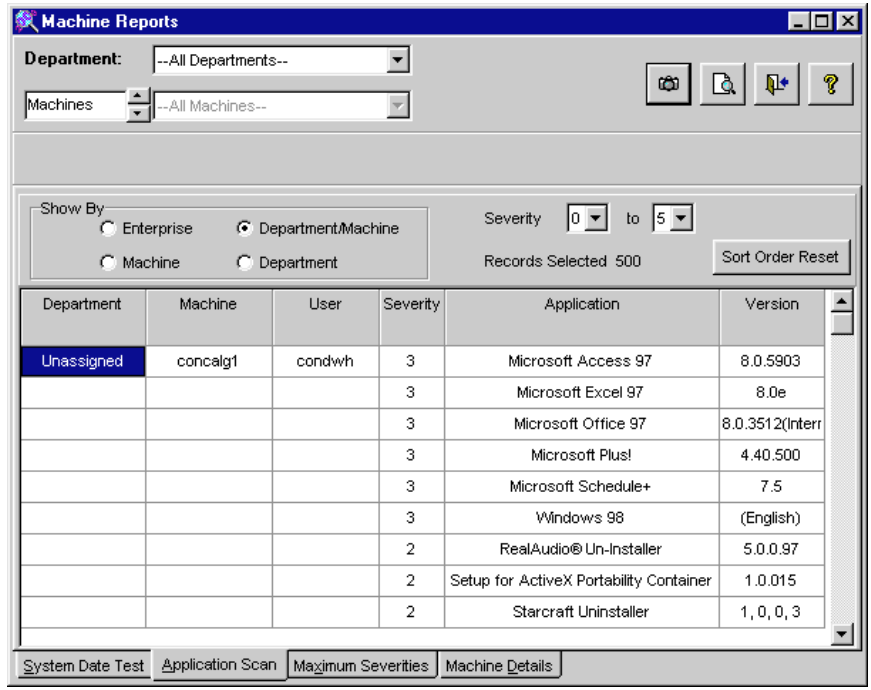
7 Click the Results button to generate the report.

The System Date Test displays your sorted criteria. In the System Data Test Report, you can:

- Preview and print the report. Click the Print Preview button. To print the report, select the Print button in the preview window.

## Application Scan Report

The Application Scan dialog box enables you to create an inventory of applications found on computers within your organization.



**To create the Application Scan Report:**

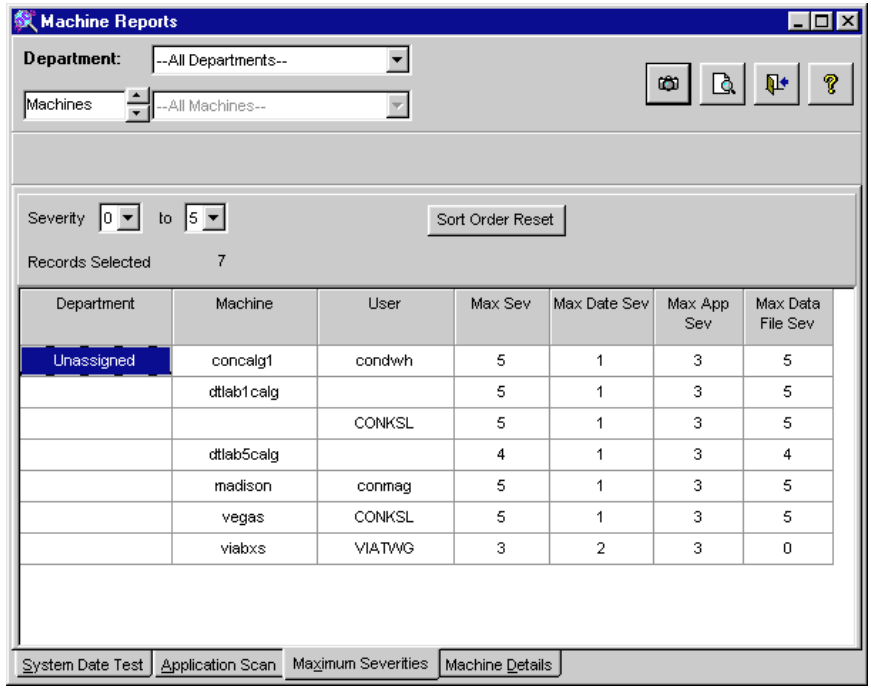
1. In the Norton 2000 Database main window, click the Machine Reports button.
2. In the Machine Reports dialog box, click the Application Scan tab to go to the Application Scan view.
3. Select a department or All Departments (entire organization) from the Department drop-down list.
4. Click the spin control to choose how you want to select data. Choose Machines or Users.
5. If you selected Machines, select a single machine or All Machines from the Machine drop-down list. If you selected Users, select a single user or All Users from the Users drop-down list. Note that if you selected All Departments, you cannot select a single machine or user.
6. Select the report headings and the severity levels to display in your report.
7. Click the Results button to generate the report.

The Application Scan Report displays your selected criteria and identifies the department, user, and machine name for each computer. In the Application Scan Report, you can:

- Preview and print the report. Click the Print Preview button. To print the report, select the Print button in the preview window.
- Change the sort sequence of the report by clicking any of the headings in the report. Click the Sort Order Reset button to return to the default sort sequence.

## Maximum Severities Report

The Maximum Severities dialog box enables you to create a summary report for the year 2000 compliance status for computers within your organization.




### To create the Maximum Severities Report:

1. In the Norton 2000 Database main window, click the Machine Reports button.
2. In the Machine Reports dialog box, click the Maximum Severities tab to go to the Maximum Severities view.
3. Select a department or All Departments (entire organization) from the Department drop-down list.
4. Click the spin control to choose how you want to select data. Choose Machines or Users.
5. If you selected Machines, select a single machine or All Machines from the Machine drop-down list. If you selected Users, select a single user or All Users from the Users drop-down list. If you selected All Departments, you cannot select a single machine or user.

6 Select the severity levels to display in your report.

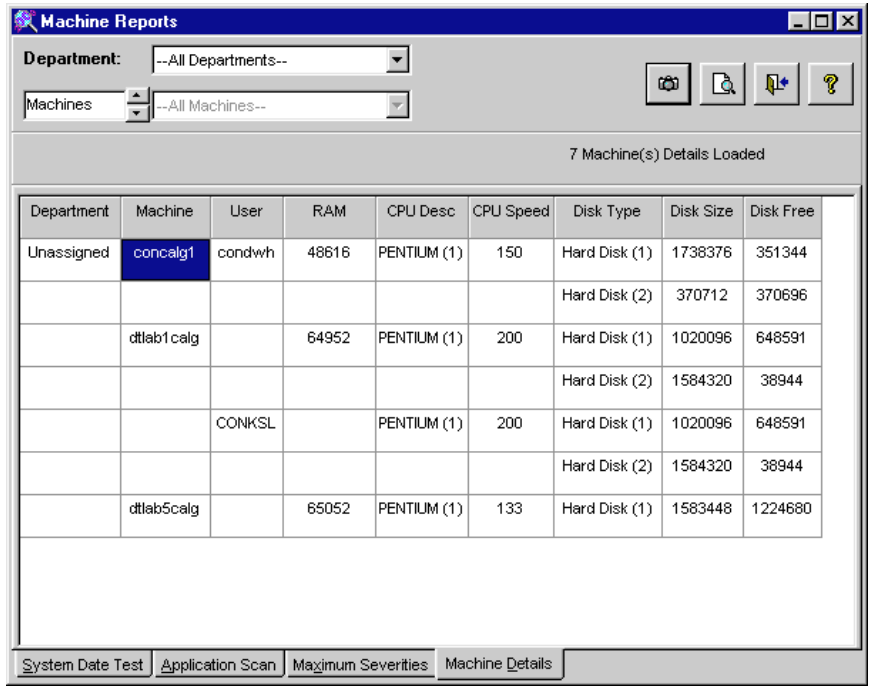
7 Click the Results button to generate the report.

The Maximum Severities Report displays your selected criteria and identifies the department, user, and machine name for each computer. In the Maximum Severities Report, you can

- Preview and print the report. Click the Print Preview button. To print the report, select the Print button in the preview window.
- Change the sort sequence of the report by clicking any of the headings in the report. Click the Sort Order Reset button to return to the default sort sequence.

## Machine Details Report

The Machine Details dialog box enables you to create a summary report listing the hardware and disk usage statistics for computers within your organization.



**To create the Machine Details Report:**

1. In the Norton 2000 Database main window, click the Machine Reports button.
2. In the Machine Reports dialog box, click the Machine Details tab to go to the Machine Details view.
3. Select a department or All Departments (entire organization) from the Department drop-down list.
4. Click the spin control to choose how you want to select data. Choose Machines or Users.
5. If you selected Machines, select a single machine or All Machines from the Machine drop-down list. If you selected Users, select a single user or All Users from the Users drop-down list. If you selected All Departments, you cannot select a single machine or user.
6. Click the Results button to generate the report.

The Machine Details Report displays your selected criteria and identifies the department, user and machine name for each computer. In the Machine Details Report, you can:

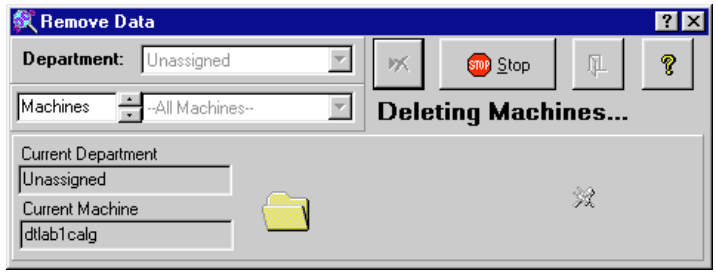
- Preview and print the report. Click the Print Preview button. To print the report, select the Print button in the preview window.

## Copying and pasting charts

Click the Copy To Clipboard button in either the File Summaries or File Trends dialog boxes to copy the visible chart to the Windows clipboard. Switch to an application that accepts bitmap images (such as Microsoft Word or Microsoft PowerPoint), and paste the image in the application using that application's Paste or Paste Special command.

## Removing data

You may need to remove unwanted or erroneously imported data from the database.




Norton 2000 Database allows you to remove data for a specific machine, a specific user, or an entire department.

**Caution:** Norton 2000 Database has no mechanism for recovering deleted data. Once data has been deleted, you can recover it by re-importing the files you deleted or by contacting your Database Administrator who maintains backups of the database to recover any deletions. Use the Remove Data command with caution.

**To remove data from your database:**

1. In the Norton 2000 Database main window, click the Remove Data button.
2. In the Remove Data dialog box, select the department or All Departments from the Department drop-down list.

**Caution:** Selecting All Departments deletes all data in your database.

3. Select a machine or All Machines from the Machine drop-down list.

**Note:** Deleting All Machines in a selected Department removes the department from your database.

4. Click the Delete Data button. The status area displays details of the data being deleted

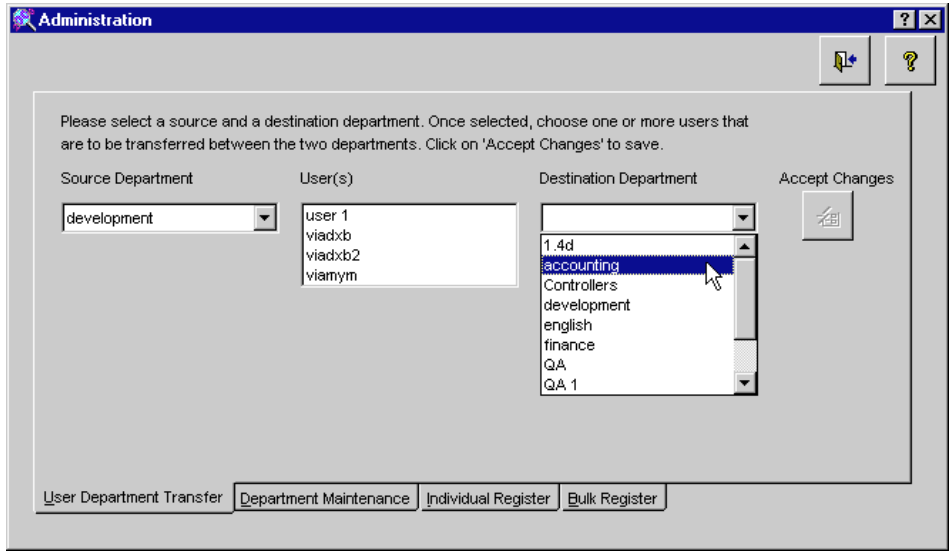
# Administration

The Administration dialog box can be used to:

- Transfer users from one department to a new department
- Create new departments
- Modify a department criticality
- Modify a department name
- Register users in your database, either individually or in bulk

**To transfer users:**

1. In the Norton 2000 Database main window, click Administration. The Administration dialog box appears.
2. Click the User Department Transfer tab at the bottom of the screen.




3. Select a department from the Source Department drop-down list.
4. Select a user from the list. You can Shift-click or Control-click to select multiple users.
5. Select the department to which you want to transfer the user from the Destination Department drop-down list.
6. Click Accept Changes to change the information in the database.

**To create a new department:**

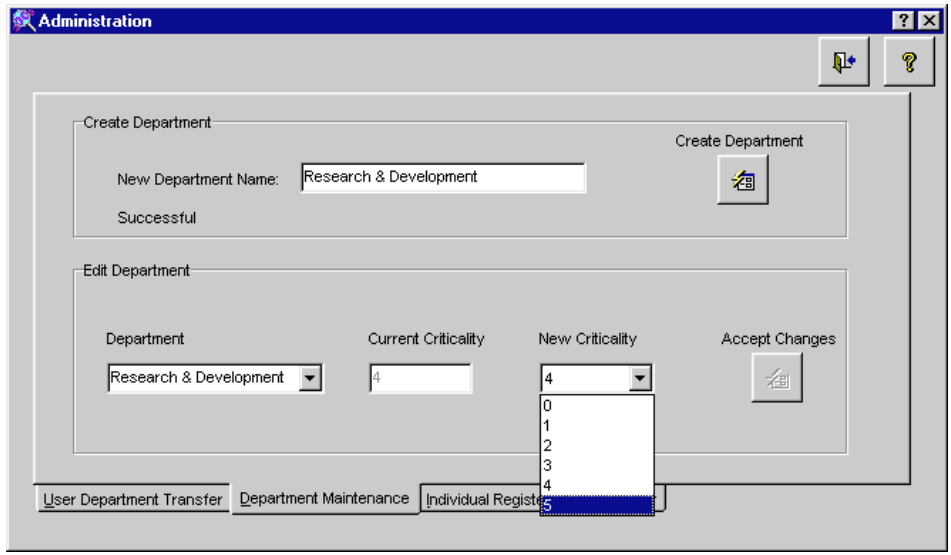
1. In the Norton 2000 Database main window, click Administration. The Administration dialog box appears.
2. Click the Department Maintenance tab at the bottom of the screen.
3. Type a department name in the New Department Name field.
4. Click Create Department to add the department to the database.

**To modify a department name:**

1. In the Norton 2000 Database main window, click Administration. The Administration dialog box appears.
2. Click the Department Maintenance tab at the bottom of the screen.
3. Select a department from the drop-down list.
4. Change the department name and click Accept Changes.

**To modify department criticality:**

1. In the Norton 2000 Database main window, click Administration. The Administration dialog box appears.
2. Click the Department Maintenance tab at the bottom of the screen.




3. Select a Department from the drop-down list.
4. Select a New Criticality and click Accept Changes. The default criticality for the department is changed in your database.

**Note:** If you modified the criticality for individual files in a department and subsequently changed the default criticality for that department to be the same criticality as for the specific files, the link for that file to the department remains severed. You must select the file and change the criticality to Dept to re-establish the severed link.

### To register one user:

1. In the Norton 2000 Database main window, click Administration. The Administration dialog box appears.
2. Click the Individual Register tab at the bottom of the screen.
3. Type the information for the user in the fields and click Enter Configuration.

### To register several users:

1. In the Norton 2000 Database main window, click Administration. The Administration dialog box appears.
2. Click the Bulk Register tab at the bottom of the screen.
3. Type the full path and file name of the registration file and click Import. You can also click Locate File to locate the file you want in the Open dialog box. The file is read into the database and registers the users listed in the file.

**Note:** Instructions for creating the Bulk Registration file can be found in the Register.txt file included on the installation CD.

APPENDIX D

# Norton 2000 customized installation

## Introduction to customized installation

The standard Norton 2000 installation provides most of the features which you will need, but some sites may wish to perform additional customization of an installation to distribute support files, documentation, and other features unique to the organization. Norton 2000 provides an installation utility that is run after the standard installation completes. This utility provides execution of both standard Windows programs, and internal file and display management tools. Commands and their parameters are taken from a text file (CUSTOM.EDT) supplied with the Norton 2000 installation CD. Text substitution in command and parameter processing provides access to a number of the Norton 2000 installation variables, making it easy to use the information acquired from the installation dialog boxes with the user.

### Customization process

1. Add commands to the CUSTOM.EDT file on the Norton 2000 installation CD, potentially cutting a new CD-ROM with the original installation. The updated CUSTOM.EDT and the additional files are needed for the customization process. (You may also provide an InstallShield ISS control file and perform a silent install.)
2. The standard Norton 2000 installation is run, completing all installation tasks to the point of showing the Finish dialog box.
3. Prior to showing the Finish dialog box, the customization utility executes.

4 The utility reads the CUSTOM.EDT file and processes the commands.

5 When all commands are executed, the customized install is complete.

## Example of CUSTOM.EDT

```
// Sample "Custom.edt" file, and documentation
// This file is used to specify post-installation
// commands to be executed from an InstallShield base.
// Command lines are parsed from the file, with Keywords
// substituted with InstallShield System Variables, and
// the command lines are then executed.
//
// Comments are lines beginning with // (like on this line)
//
// For Example:
                  // #copy %SRCDIR%locate.dat %TARGETDIR%local.dat
                  // notepad.exe %TARGETDIR%readme.txt
       //
// Recognized Keywords for substitution:
//
                  // %COMMONFILES% Name of common files folder
                  // %FOLDER_DESKTOP% Name of desktop folder
                  // %FOLDER_STARTMENU% Name of Start folder
                  // %SRCDIR% Path to the source folder
                  // %SRCDISK% Name of the source disk
                  // %SUPPORTDIR% Path of the temp files folder
                  // %PROGRAMFILES% Name of Program Files folder
                  // %TARGETDIR% Name of Target folder
                  // %TARGETDISK% Name of Target disk
                  // %UTILS% Name of utility support
                  // %WINDIR% Name of Windows folder
                  // %WINDISK% Name of Windows disk
                  // %WINSYSDIR% Name of Windows System folder
                  // %WINSYSDISK% Name of Windows System disk
//
// External Commands - Any windows command.
//    If the command line is prefixed by an exclamation (!)
//    customization will not wait for command completion. If
//    it does not have a ! prefix, customization will wait for
             //  command completion.
//
// Internal Commands - Prefixed with #
//    copy source destination
//      Can use star names for source. If so, dest names
//      ignored, but the argument is still required.
//    del filea fileb filec ... filen
//      Can use star names for file specification.
```

```
//    infofile TextFilename Intro Title
//      Displays a file of text lines in an Information-like
//      dialog box with a Title, Heading and a scrollable
//      text list above an OK button.
//    message "body string" "caption string"
//      Displays a MessageBox with an OK button.
//    mkdir dira dirb dirc ... dirn
//      Create a directory.
//    showmsg "Message Text"
//      Shows a message during long-term processing. Message
//      display stays up until a new showmsg, an unshowmsg or
//      the end of finalization.
//    unshowmsg
//      Remove the showmsg.
//    xcopy source destination
//      Copy subtrees of files.
```

## Argument processing

Arguments should be enclosed in double quotes whenever there is a possibility of a delimiter within the argument. The customization utility will parse quoted arguments, but will NOT process escaped double quotes.

The customization utility parses the command lines substituting for keywords enclosed in percent signs (%). It does not process escaped percent signs. Percent signs will be removed from the command line, even if they occur within a quoted string, and keyword substitution will occur with quoted strings.

## Utility support

The UTIL keyword is available for text substitution in command processing. Typically it is used to reference a utility routine supplied by the site, and held in UTIL16.exe (for 16-bit installation) or UTIL32.exe (for 32-bit installation).

The UTIL keyword, and the differentiation of EXE names permits the same installation CUSTOM.EDT command file to be used for both 16-bit and 32-bit systems, and to permit InstallShield to correctly invoke the appropriate utility program.

A suggested format for the utility program is to accept the first argument as a command name, within the utility, with other command arguments providing additional information as needed.

## Location of files

CUSTOM.EDT, and any other files referenced by the SRCDIR variable, must be on the last disk image of the installation. If the installation is using diskette images (1.44 MB), other files may be difficult to place on the same media. However, files (including diskette images) can be placed on a CD-ROM or supplied from a file server where there is no limitation on diskette image size. You should minimize the hierarchy depth and length of filename needed to get to installation information since InstallShield starts with a 16-bit installation bootstrap, even on 32-bit systems.

A P P E N D I X

# Diagnostics

All Norton 2000 date file scanning issues are listed below in numerical order. You can locate a specific issue by its issue number which appears before the Message description. Issues are also grouped according to types. The following table shows how the issues have been grouped.

| Issue Number Range | Issue Type |
|---|---|
| 100 - 199 | General |
| 200 - 299 | Unformatted File Scanner |
| 300- 499 | Spreadsheet Scanner |
| 500 - 599 | Spreadsheet Charts |
| 600 - 699 | Database Scanner |
| 700 - 799 | Database Forms |
| 800 - 899 | Database Reports |
| 900 - 999 | Database Tables |
| 1000 - 1099 | Database Queries |
| 1100 - 1199 | Source File Scanner |

## Issues, causes and remediation hints

**Message:** 101 Implementation error.

**Cause:** The reporting system has detected an error in internal operations. Additional information may be provided about the cause.

**Correction:** Note all details of this message and report the error to Technical Support.

**Background:** The log reporting mechanisms cross-check internal operations. Cross-checking detected an error in a scanner and is reporting it.

---

**Message:** 102 Unable to access the file.

**Cause:** The Database Scanner was unable to access a Paradox or xBase file while trying to determine the file's size.

**Correction:** Verify that the file exists and that it is accessible by its normal application. Also ensure that the file and its application are both shut down.

**Background:** This message may be emitted by the Paradox or xBase scanners. Additional information will be added by the scanner to describe the situation during which the problem occurred.

---

**Message:** 103 Unable to open the file.

**Cause:** The application attempted to open a file to read it, or to open a file to write to it, but was unable to open it.

**Correction:** Ensure that the file is not open in another application. This message may indicate a sharing violation or some other situation which can be solved by rebooting the workstation. Ensure that the file can be opened by its application. If the problem persists, note the details of the problem and report it to Technical Support.

**Background:** There are a number of reasons that a file might not be able to be created or opened (for example, because of limited access, or because the file is already open in another application).

---

**Message:** 104 Unable to read the file.

**Cause:** The application encountered an error while reading a file.

**Correction:** This error may be caused by file access problems, or the file may have been deleted or modified while trying to access it. Ensure that the file is accessible by its application and is not being used by another application. If the problem persists, contact Technical Support.

---

**Message:** 105 OLE Problem.

**Cause:** The application uses Microsoft's Object Linking and Embedding (OLE) system to access certain applications and files. An error has been encountered while using OLE to perform such an access.

**Correction:** The error message provides more details about the specific situation during which the error occurred. Ensure that the file is not already open in an application. Ensure that the file is accessible by its application. If the problem persists, contact Technical Support.

**Background:** There are a variety of reasons a problem interfacing with OLE may occur. Typically, these situations are temporary and are result from problems with

the file or with file sharing. The first test which should be tried is whether the file's application (such as a spreadsheet program) can access the file.

---

**Message:** 106 The source scanner encountered a problem during the lexing phase.

**Cause:** The Visual Basic Source File Scanner encountered a problem during initialization or analysis of the source program. There may be a problem in the file being scanned.

**Correction:** Additional information is displayed to assist with locating the source code problem.

---

**Message:** 107 The source scanner encountered a problem during the parsing phase.

**Cause:** The Visual Basic Source File Scanner encountered a problem during initialization or analysis of the source program. There may be a problem in the file being scanned.

**Correction:** Additional information is displayed to assist with locating the source code problem.

---

**Message:** 108 Memory allocation failure.

**Cause:** A scanner has attempted an operation which could not be completed due to a lack of memory. Additional information is supplied to indicate the context of the problem.

**Correction:** Usually, this problem results from the consumption of all available physical and virtual memory. Break a very large scan down into smaller regions of the file system, and ensure that no other applications are competing for memory.

**Background:** There are a number of reasons that a scanner allocates memory and may fail to get the memory block it needs. Additional information associated with the error message provides context regarding the operation being performed. To reduce memory competition, reduce the number of applications running simultaneously. Additionally, Log Window information is stored in memory. Very large Log Window buffers compete for memory with internal scanning operations. Clear the Log Window often if memory is at a premium (clearing can only be done when a scan is not running).

---

**Message:** 109 Unexpected file format.

**Cause:** One of the scanners has been presented with a file which does not conform to the specified file format and cannot be scanned.

**Correction:** This may be indicative of a damaged file or a file being mapped to the wrong scanner by its file extension. Ensure that the file can be opened by its application. If the problem persists, contact Technical Support.

---

**Message:** 110 Skipping over open logfile.

**Cause:** The application does not scan its currently open Log File.

**Correction:** None.

**Background:** The scanner does not process the currently open log file. It is unproductive to scan the log file because it is currently being written to and does not contain year 2000 compliancy issues.

---

**Message:** 111 The scanning engine has been disabled.

**Cause:** The scanner has encountered a fatal error and has disabled itself. The preceding message indicates the reason the scanner disabled itself.

**Correction:** A fatal error can occur for a variety of reasons. If the message preceding this error is not sufficiently clear as to the cause, contact Technical Support.

---

**Message:** 112 Unable to access the folder.

**Cause:** This error occurs while scanning the file system applying file selection filters and indicates that the directory could not be accessed.

**Correction:** Ensure that this directory does not have any access restrictions.

---

**Message:** 113 Unable to connect to the DSN.

**Cause:** The ODBC scanner was unable to connect the specified Data Source Name.

**Correction:** Use the Control Panel applet for ODBC to check that a connection can be made to this DSN. If the problem persists contact local site support for further database connectivity information.

---

**Message:** 116 Encrypted data.

**Cause:** One of the data scanners has encountered an encrypted file. The application is unable to scan encrypted data files.

**Correction:** Create an unencrypted version of the file for scanning.

**Background:** Various database and spreadsheet applications permit you to protect data using encryption. Additional information specific to the occurrence of the encryption and whether the encryption is password protected or not may also be provided with this message.

---

**Message:** 117 Possible encrypted data.

**Cause:** This message is associated with an xBase database which appears to be encrypted according to header information.

**Correction:** Because the file may simply have an erroneous header file, it is still scanned as an xBase file. Additional messages will indicate whether the file has been successfully scanned, or whether the user may have to unencrypt the file for scanning.

**Background:** The Database Scanner found a header in an xBase database that indicates that the data may be encrypted, but it is possible that the flag is erroneous as a result of different possible versions of the header. The Database Scanner continues to scan this database. If the file cannot be scanned, additional messages indicate the problems found.This message, in association with the inability to scan the database, is an indication that the file is either encrypted, or is an invalid xBase database.

---

**Message:** 118 Unsupported version.

**Cause:** A scanner has detected a file type which is not directly supported at this time.

**Correction:** This file is scanned by the Unformatted File Scanner.

**Message:** 119 Unable to open a file required by the Visual Basic source scanner.

**Cause:** A file necessary for the Visual Basic Source File Scanner could not be opened. This prevents Visual Basic processing (VB.LEX, VB.PRS).

**Correction:** Ensure that installation of this application has not been corrupted. Reinstall the application if necessary. If the problem persists, contact Technical Support.

---

**Message:** 120 Unable to open a file required by the Macro 4.0 source scanner.

**Cause:** The application was unable to open one of the two Excel Macro 4.0 scanner support files in the installation directory (M4.LEX, M4.PRS).

**Correction:** Reinstall the application to restore these files. If the problem persists, contact Technical Support.

---

**Message:** 121 The floating point number is either 'Infinite' or 'Not-A-Number'.

**Cause:** The Spreadsheet Scanner found a value in a cell which indicates an invalid numeric value or a corrupted spreadsheet.

**Correction:** Open the spreadsheet in the appropriate application and save it again.

**Background:** An 'Infinite' value indicates that a floating point number at the limit of its expressible range and has been saved as an infinite value. It is not reasonable to perform calculations on this value. A 'Not-A-Number' value is typically the result of invalid data being interpreted as a floating point value.

---

**Message:** 122 Stack Overflow.

**Cause:** The Spreadsheet Scanner has encountered data which caused this stack to overflow and interrupt spreadsheet processing.

**Correction:** Open and save the spreadsheet using the spreadsheet application and scan the file again. If this problem persists, contact Technical Support.

**Background:** The Spreadsheet Scanner finds all formula references by interpreting the formulas it finds in cells using a stack-based process. An underflow indicates a very large amount of data has been pushed onto the stack.

---

**Message:** 123 Stack Underflow.

**Cause:** The Spreadsheet Scanner has encountered data which caused this stack to underflow and interrupt spreadsheet processing.

**Correction:** Open and save the spreadsheet using the spreadsheet application and scan the file again. If this problem persists, contact Technical Support.

**Background:** The Spreadsheet Scanner finds all formula references by interpreting the formulas it finds in cells using a stack-based process. An underflow indicates that more operators than data have been encountered in processing.

---

**Message:** 124 Scan terminated by user.

**Cause:** Stop Scan or Exit was selected requesting that the scan be terminated.

**Correction:** This is not a processing problem. Information printed to the Log Window may be incomplete.

**Message:** 125 Unable to open a file required by the C/C++ source scanner.

**Cause:** The C/C++ Source File Scanner was unable to open an essential support file, which should be located in the installation directory (C.LEX, C.PRS).

**Correction:** Reinstall the application to restore the support files. If this problem persists, contact Technical Support.

**Message:** 126 Unable to open a file required by the PowerBuilder source scanner.

**Cause:** The PowerBuilder Source File Scanner was unable to open an essential support file which should be located in the installation directory (PBL.LEX, PBL.PRS).

**Correction:** Reinstall the application to restore the support files. If this problem persists, contact Technical Support.

**Message:** 127 Unable to scan file after 2 attempts, skipping file.

**Cause:** The Agent was run with the /R parameter to permit checkpoint restart. It has failed to process a file after two attempts (after being restarted each time) and has abandoned scanning this file.

**Correction:** The file name is reported in the log. This indicates either a severely damaged data file or a data situation not supported by the current scanner. Contact Technical Support.

**Message:** 128 Skipping file due to user request.

**Cause:** The file has been skipped on user request. Any information reported for this file is incomplete.

**Correction:** Rescan the file to get an accurate analysis.

**Message:** 130 ZIP File error.

**Cause:** The application was unable to open the archive for scanning. Several types of problems could have caused the problem, such as an invalid file structure, a compressed archive contained within a compressed archive, file is in use, etc.

**Correction:** Check to ensure that the compressed file can be opened by the application that created it to ensure that it is a valid compressed file structure or that it is not currently opened for use. Ensure that the archive does not contain other compressed archives.

**Message**: 131 Code page problem.

**Cause:** The application detected that the file was created with a different code page than what this application is currently using.

**Correction:** Install this application as an appropriate international version which is able to scan the file.

**Background:** Applications use specific code pages for character recognition. If a file was created by an application using a code page which is not the same code page

as that used by this application, the application detects this as a code page error and does not scan the file.

---

**Message:** 200 Text date without a year.

**Cause:** The Unformatted File Scanner found a text date which does not have a year component.

**Correction:** This situation does not indicate a potential year 2000 problem. However, to avoid future problems (or complications), ensure that the date is correct and that it does not have a year component.

---

**Message:** 201 Text date with a 2 digit year.

**Cause:** The Unformatted File Scanner encountered a text date with a 2 digit year in an unformatted file.

**Correction:** This situation alone may not indicate a year 2000 problem. However, review the use of the file in question to avoid future complications.

**Background:** A 2 digit year inherently has a year 2000 problem because the century digits must be assumed. The assumption used to determine the century digits (that is, 18, 19, or 20) is specific to the use of the date. The default assumptions of the application using this file may not be appropriate, and may change due to environmental changes.

---

**Message:** 202 Text date with a 4 digit year.

**Cause:** The Unformatted File Scanner encountered a text date which represents the year with 4 digits in an unformatted file.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

---

**Message:** 203 File contains excessive problematic 2 digit dates.

**Cause:** The Unformatted File Scanner detected a file with a significant number of 2 digit year dates.

**Correction:** The file is likely used for storing or transporting data which contains 2 digit years. Confirm that applications using this file will not perform erroneous calculations on this data.

**Background:** A 2 digit year inherently has a year 2000 problem because the century digits must be assumed. The assumption used to determine the century digits (that is, 18, 19, or 20) is specific to the use of the date. The default assumptions of the application using this file may not be appropriate and may change due to environmental changes.

---

**Message:** 300 Cells whose value is a text date but have a date display format that specifies a 4 digit year.

**Cause:** The noted cell is formatted as a date with a 4 digit year format, but the value of the cell is text that is interpretable as a date.

**Correction:** This message indicates a situation where the cell contents are not the same type as the formatting and may indicate a data entry problem. The spreadsheet application will most likely misinterpret the value of the cell and produce erroneous results. Review this cell.

**Message:** 301 Cells affected by a cell whose value is a text date but has a date display format that specifies a 4 digit year.

**Cause:** The noted cell references a cell whose value is text that can be interpreted as a date, although it has the date format used to display a 4 digit year.

**Correction:** The original cell has a data entry problem because the cell contents cannot be interpreted as a date but the cell display format suggests a date. Because this cell references a non-date, it signifies a potential calculation error. Review the referenced cell.

---

**Message:** 302 Cells whose value is a text date but have a date display format that specifies a 2 digit year.

**Cause:** The noted cell is formatted as a date with an unsafe 2 digit year format, but the value of the cell is text that is interpreted as a date.

**Correction:** This message indicates a situation where the cell contents are not of the same type as the formatting and may signal a data entry problem. The spreadsheet application will misinterpret the value of the cell and produce erroneous results. In addition, if the cell is intended to hold a date value, the date format should be specified to display a 4 digit year. Review the cell.

---

**Message:** 303 Cells affected by a cell whose value is a text date but has a date display format that specifies a 2 digit year.

**Cause:** The noted cell references a cell whose value is text that can be interpreted as a date, but which has a format to display a 2 digit year date.

**Correction:** Because the cell contents cannot be displayed in its cell format, but the cell display format suggests that it is a date, the original cell probably has a data entry problem. Because this cell references a non-date, it is a potential calculation error. Review the referenced cell.

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**Message:** 304 Cells whose value is a text date but have a date display format does not include a year.

**Cause:** The noted cell is formatted to display a date with no year, but the text found within the cell is not interpretable as a date with a year.

**Correction:** This message indicates a situation where the cell contents is not of the same type as the formatting and may indicate a data entry problem. The spreadsheet application will misinterpret the value of the cell and produce erroneous results. Review the cell to ensure correct data format and verify that a date format without a year is appropriate for the cell.

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**Message:** 305 Cells affected by a cell whose value is a text date but has a date display format that does not include a year.

**Cause:** The noted cell references a cell formatted to display a date with no year but the text found within the cell is not interpretable as a date with a year.

**Correction:** Because the cell contents cannot be interpreted as a date, but the cell display format suggests that it is a date, the original cell probably has a data entry problem. Because this cell references a non-date, it is a potential calculation error. Review the referenced cell.

**Message:** 306 Cells whose value is near the 1900/2000 conversion cusp.

**Cause:** The noted cell contains a date within the specified warning range of the cusp date associated with the current spreadsheet application and version. The date may be interpreted incorrectly by the spreadsheet application.

**Correction:** Review the cell because it may be interpreted with an incorrect century. Change it to an unambiguous 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to a century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 307 Cells affected by a cell whose value is near the 1900/2000 conversion cusp.

**Cause:** The noted cell references a cell with a value near the cusp date for the current spreadsheet application and version.

**Correction:** Because the referenced cell contents may be interpreted differently between different versions of the same spreadsheet application, calculations made by this cell may be incorrect. Review the referenced cell and change its date to a safe 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 308 Cells that use a date related function and are affected by a cell whose value is near the 1900/2000 conversion cusp.

**Cause:** The noted cell contains a function related to date processing, and references a cell whose value is near the cusp date for the current spreadsheet application and version.

**Correction:** The referenced cell contents may be interpreted differently by different versions of the spreadsheet application. Review the referenced cell and ensure that its data is a safe 4-digit year date.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 309 Cells affected by a date related function and a cell whose value is near the 1900/2000 conversion cusp.

**Cause:** The noted cell references a cell containing a function related to date processing, and references a cell whose value is near the cusp date of the current spreadsheet application and version.

**Correction:** The referenced cell contents may be interpreted differently by different versions of the spreadsheet application. Review the referenced cell and ensure that its data is a safe 4-digit year date.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 310 Cells whose value can change century with a software version upgrade.

**Cause:** The noted cell contains a value affected by the cusp date differences between the spreadsheet version it was created with, and later software versions. As a result, the date may change century when it is recalculated in a later software version, producing results different from the current software version.

**Correction:** Review the date and change it to a safe 4 digit year which will not be affected by changes in the cusp date of different software versions.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 311 Cells affected by a cell whose value can change century with a software version upgrade.

**Cause:** The noted cell references a cell whose date value may change between different versions of the spreadsheet application.

**Correction:** Review the contents of the referenced cell and change them to safe 4 digit years which will not be affected by changes in the cusp date of different software versions.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions

of the same software application, causing a software upgrade to potentially change calculations.

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**Message:** 312 Cells that use a date related function and are affected by a cell whose value can change century with a software version upgrade.

**Cause:** The noted cell contains a function related to date processing and performs calculations using a cell whose value may be interpreted with a different century value between different versions of the spreadsheet application.

**Correction:** Review the referenced cell and change its date value to a safe 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

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**Message:** 313 Cells affected by a date related function and a cell whose value can change century with a software version upgrade.

**Cause:** The noted cell references a cell with a date related function and references a cell containing a date near a cusp date for a version of the software other than the one used to create this spreadsheet.

**Correction:** Review the cell referenced by this cell and change its date to a safe 4 digit year and review the use of the date related function in other referenced cells.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

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**Message:** 314 Cells whose value is near the 1900/2000 conversion cusp and can change century with a software version upgrade.

**Cause:** The cell references a cell whose value is a text date near the 1900/2000 cusp date and whose value is also a text date that may change with a software version upgrade.

**Correction:** Review the referenced cell and change it to a safe 4 digit year date.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

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**Message:** 315 Cells affected by a cell whose value is near the 1900/2000 conversion cusp and can change century with a software version upgrade.

**Cause:** The cell references a cell whose value is a text date near the 1900/2000 cusp date and whose value is also a text date that may change with a software version upgrade.

**Correction:** Review the cell referenced by this cell and change it to a safe 4 digit date.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

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**Message:** 316 Cells that use a date related function and are affected by a cell whose value is near the 1900/2000 conversion cusp and can change century with a software version upgrade.

**Cause:** The cell references a cell whose value is a text date near the 1900/2000 cusp date and whose value is also a text date that may change with a software version upgrade.

**Correction:** Review the cell referenced by this cell and change it into a safe 4 digit date.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

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**Message:** 317 Cells affected by a date related function and a cell whose value is near the 1900/2000 conversion cusp and can change century with a software version upgrade.

**Cause:** The cell references a cell whose value is a text date near the 1900/2000 conversion cusp and whose value is also a text date that may change with a software version upgrade.

**Correction:** Review the cell referenced by this cell and change it into a safe 4 digit date.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

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**Message:** 318 Cells whose value is a text date with a 4 digit year.

**Cause:** The value of the noted cell is a text date with a safe 4 digit year date.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

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**Message:** 319 Cells affected by a cell whose value is a text date with a 4 digit year.

**Cause:** The cell references a cell whose value is a text date with a 4 digit year.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

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| **Message:** | 320 Cells that use a date related function and are affected by a cell whose value is a text date with a 4 digit year. |
| **Cause:** | The cell references a cell whose value is a text date with a 4 digit year. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date. |

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| **Message:** | 321 Cells affected by a date related function and a cell whose value is a text date with a 4 digit year. |
| **Cause:** | The cell references a cell whose value is a text date with a 4 digit year. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date. |

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| **Message:** | 322 Cells whose value is a text date with a 2 digit year. |
| **Cause:** | The noted cell has an unsafe 2 digit text date that may cause a year 2000 problem. |
| **Correction:** | Review the date and change it to a safe 4 digit date. |

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| **Message:** | 323 Cells affected by a cell whose value is a text date with a 2 digit year. |
| **Cause:** | The cell references a cell whose value is a text date with a 2 digit year. |
| **Correction:** | Review the referenced cell and change the 2 digit year to a safe 4 digit year. |

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| **Message:** | 324 Cells that use a date related function and are affected by a cell whose value is a text date with a 2 digit year. |
| **Cause:** | The cell references a cell whose value is a text date with a 2 digit year. |
| **Correction:** | Review the referenced cell and change the 2 digit year to a safe 4 digit year. |

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| **Message:** | 325 Cells affected by a date related function and a cell whose value is a text date with a 2 digit year. |
| **Cause:** | The cell references a cell whose value is a text date with a 2 digit year. |
| **Correction:** | Review the referenced cell and change the 2 digit year to a safe 4 digit year. |

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| **Message:** | 326 Cells whose value is a text date without a year. |
| **Cause:** | The noted cell has a text date which does not specify a year. |
| **Correction:** | Review the cell to ensure that the lack of a year is not a data entry problem, even though this situation will not cause a year 2000 problem. |

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| **Message:** | 327 Cells affected by a cell whose value is a text date without a year. |
| **Cause:** | The noted cell references a cell with a text date which does not specify a year. |
| **Correction:** | Review the cell to ensure that the lack of a year is not a data entry problem, even though this situation will not cause a year 2000 problem. |

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| **Message:** | 328 Cells that use a date related function and are affected by a cell whose value is a text date without a year. |
| **Cause:** | The noted cell uses a date related function and references a cell with a text date value which does not specify a year. |
| **Correction:** | Review the cell to ensure that the lack of a year is not a data entry problem, even though this situation will not cause a year 2000 problem. |

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| **Message:** | 329 Cells affected by a date related function and a cell whose value is a text date without a year. |
| **Cause:** | The noted cell uses a date related function and references a cell with a text date value which does not specify a year. |
| **Correction:** | Review the cell to ensure that the lack of a year is not a data entry problem, even though this situation will not cause a year 2000 problem. |

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| **Message:** | 330 Cells whose value is an internal date displayed with a 4 digit year. |
| **Cause:** | The noted cell has a safe internal date form displayed with a safe 4 digit display format. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date. |

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| **Message:** | 331 Cells affected by a cell whose value is an internal date displayed with a 4 digit year. |
| **Cause:** | The noted cell references a cell with a safe internal date form, displayed with a safe 4 digit display format. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date. |

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| **Message:** | 332 Cells that use a date related function and are affected by a cell whose value is an internal date displayed with a 4 digit year. |
| **Cause:** | The noted cell contains a date related function and references a cell with a safe internal date form displayed with a safe 4 digit display format. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date. |

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| **Message:** | 333 Cells affected by a date related function and a cell whose value is an internal date displayed with a 4 digit year. |
| **Cause:** | The noted cell contains a date related function and directly references a cell with a safe internal date form displayed with a safe 4 digit display format. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date. |

**Message:** 334 Cells whose value is an internal date displayed with a 2 digit year.

**Cause:** The noted cell contains a safe internal date displayed in an ambiguous 2 digit year format.

**Correction:** The cell contains a full date, but the display format may prevent the user from determining the associated century digits to validate its contents. Update the display format to a 4 digit year to remove potential ambiguity.

**Message:** 335 Cells affected by a cell whose value is an internal date displayed with a 2 digit year.

**Cause:** The noted cell references a cell with a safe internal date displayed in an ambiguous 2 digit year format.

**Correction:** The referenced cell contains a full date, but the display format may prevent the user from determining the associated century digits to validate its contents. Update the display format to a 4 digit year to remove potential ambiguity.

**Message:** 336 Cells that use a date related function and are affected by a cell whose value is an internal date displayed with a 2 digit year.

**Cause:** The noted cell uses a date related function and references a cell with a safe internal date displayed in an ambiguous 2 digit year format.

**Correction:** The referenced cell contains a full date, but the display format may prevent the user from determining the associated century digits to validate its contents. Update the display format to a 4 digit year to remove potential ambiguity.

**Message:** 337 Cells affected by a date related function and a cell whose value is an internal date displayed with a 2 digit year.

**Cause:** The noted cell references a cell with a date related function and a cell with a safe internal date displayed in an ambiguous 2 digit year format.

**Correction:** The referenced cell contains a full date, but the display format may prevent the user from determining the associated century digits to validate its contents. Update the display format to a 4 digit year to remove potential ambiguity.

**Message:** 338 Cells whose value is an internal date displayed without a year.

**Cause:** The noted cell contains a date in an internal format which can hold a safe 4 digit year displayed in a format without a year.

**Correction:** This is not a Year 2000 problem and is noted as a low severity to indicate the presence of a date.

**Message:** 339 Cells affected by a cell whose value is an internal date displayed without a year.

**Cause:** The noted cell references a cell containing a date in an internal format which can hold a safe 4 digit year displayed in a format without a year.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

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| **Message:** | 340 Cells that use a date related function and are affected by a cell whose value is an internal date displayed without a year. |
| **Cause:** | The noted cell uses a date related function and references a cell containing a date in an internal format which can hold a safe 4-digit year displayed in a format without a year. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of date operations. |

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| **Message:** | 341 Cells affected by a date related function and a cell whose value is an internal date displayed without a year. |
| **Cause:** | The noted cell references a cell with a date related function and a cell containing a date in an internal format which can hold a safe 4 digit year displayed in a format without a year. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of date operations. |

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| **Message:** | 342 Cells whose value is a text date that cannot be represented as an internal date. |
| **Cause:** | The noted cell contains a text date that is recognized by the spreadsheet scanner's date formats, but which cannot be represented as a date within the spreadsheet. |
| **Correction:** | Review this erroneous date, as it cannot be converted and used by spreadsheet calculations. |

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| **Message:** | 343 Cells affected by a cell whose value is a text date that cannot be represented as an internal date. |
| **Cause:** | The noted cell references a cell containing a text date recognized by the spreadsheet scanner's date formats, but which cannot be represented as a date within the spreadsheet. |
| **Correction:** | Review this erroneous date, as it cannot be converted and used by spreadsheet calculations. |

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| **Message:** | 344 Cells whose value is a date format string that specifies a 4 digit year. |
| **Cause:** | The noted cell contains a date format string which specifies a safe 4 digit year. |
| **Correction:** | The use of this format string will display a date in a safe 4 digit format and does not constitute a year 2000 problem. |

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| **Message:** | 345 Cells affected by a cell whose value is a date format string that specifies a 4 digit year. |
| **Cause:** | The noted cell references a cell containing a date format string which specifies a safe 4 digit year. |
| **Correction:** | The use of this format string will display a date in a safe 4 digit format and does not constitute a year 2000 problem. |

**Message:** 346 Cells that use a date related function and are affected by a cell whose value is a date format string that specifies a 4 digit year.

**Cause:** The noted cell uses a date related function and references a cell containing a date format string which specifies a safe 4 digit year.

**Correction:** The use of this format string will display a date in a safe 4 digit format and does not constitute a year 2000 problem.

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**Message:** 347 Cells whose value is a date format string that specifies a 2 digit year.

**Cause:** The noted cell contains a date format string which specifies an unsafe 2 digit year.

**Correction:** Review this format string and change it to a safe 4 digit year.

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**Message:** 348 Cells affected by a cell whose value is a date format string that specifies a 2 digit year.

**Cause:** The noted cell references a cell containing a date format string which specifies an unsafe 2 digit year display.

**Correction:** Review this format string and change it to a safe 4 digit year.

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**Message:** 349 Cells that use a date related function and are affected by a cell whose value is a date format string that specifies a 2 digit year.

**Cause:** The noted cell uses a date related function and references a cell containing a date format string which specifies an unsafe 2 digit year.

**Correction:** Review this format string and change it to a safe 4 digit year.

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**Message:** 350 Cells whose value is a date format string that does not specify a year.

**Cause:** The noted cell contains a date format string which specifies a date format without a year.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date operation.

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**Message:** 351 Cells affected by a cell whose value is a date format string that does not specify a year.

**Cause:** The noted cell references a cell containing a date format string which specifies a date format without a year.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date operation.

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**Message:** 352 Cells that use a date related function and are affected by a cell whose value is a date format string that does not specify a year.

**Cause:** The noted cell contains a date related function and references a cell containing a date format string which specifies a date format without a year.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date operation.

**Message:** 353 Cells whose formula includes a text date literal string near the 1900/2000 conversion cusp.

**Cause:** The noted cell contains a formula with a text date near a 1900/2000 conversion cusp for the current version of the spreadsheet application.

**Correction:** A text date near the conversion cusp indicates a date whose century may be misinterpreted. Update the literal date to a safe 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 354 Cells that use a date related function and whose formula includes a text date literal string near the 1900/2000 conversion cusp.

**Cause:** The noted cell contains a date related function and a formula with a text date near a 1900/2000 conversion cusp for the current version of the spreadsheet application.

**Correction:** A text date near the conversion cusp indicates a date whose century may be misinterpreted. Update the literal date to a safe 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 355 Cells affected by a cell whose formula includes a text date literal string near the 1900/2000 conversion cusp.

**Cause:** The noted cell references a cell with a formula which includes a text date near the 1900/2000 conversion cusp for the current version of the spreadsheet application.

**Correction:** A text date near the conversion cusp indicates a date whose century may be misinterpreted. Update the literal date to a safe 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 356 Cells affected by a cell that uses a date related function and whose formula includes a text date literal string near the 1900/2000 conversion cusp.

**Cause:** The noted cell references a cell with a date related function and a formula which includes a text date near the 1900/2000 conversion cusp for the current version of the spreadsheet application.

**Correction:** A text date near the conversion cusp indicates a date whose century may be misinterpreted. Update the literal date to a safe 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

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**Message:** 357 Cells whose formula includes a text date that can change century with a software version upgrade.

**Cause:** The noted cell contains a formula with a text date that will be interpreted as a different century by different versions of the spreadsheet application.

**Correction:** Change this date to a safe 4 digit year which will not be interpreted differently by different versions of the application.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

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**Message:** 358 Cells that use a date related function and whose formula includes a text date that can change century with a software version upgrade.

**Cause:** The noted cell contains a date related function and a formula with a text date that will be interpreted as a different century by different versions of the spreadsheet application.

**Correction:** Change this date to a safe 4 digit year which will not be interpreted differently by different versions of the application.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

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**Message:** 359 Cells affected by a cell whose formula includes a text date that can change century with a software version upgrade.

**Cause:** The noted cell references a cell with a formula which includes a text date that will be interpreted as a different century by different versions of the spreadsheet application.

**Correction:** Change this date to a safe 4 digit year which will not be interpreted differently by different versions of the application.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions

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| | of the same software application, causing a software upgrade to potentially change calculations. |
| **Message:** | 360 Cells affected by a cell that uses a date related function and whose formula includes a text date that can change century with a software version upgrade. |
| **Cause:** | The noted cell references a cell with a date related function and a formula which includes a text date that will be interpreted as a different century by different versions of the spreadsheet application. |
| **Correction:** | Change this date to a safe 4 digit year which will not be interpreted differently by different versions of the application. |
| **Background:** | Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations. |
| **Message:** | 361 Cells whose formula includes a text date literal string with a 4 digit year. |
| **Cause:** | The noted cell contains a text date which specifies a safe 4 digit year. |
| **Correction:** | This is not a year 2000 problem. |
| **Message:** | 362 Cells that use a date related function and whose formula includes a text date literal string with a 4 digit year. |
| **Cause:** | The noted cell contains a date related function and a formula with a text date which specifies a safe 4 digit year. |
| **Correction:** | This is not a year 2000 problem. |
| **Message:** | 363 Cells affected by a cell whose formula includes a text date literal string with a 4 digit year. |
| **Cause:** | The noted cell references a cell containing a text date which specifies a safe 4 digit year. |
| **Correction:** | This is not a year 2000 problem. |
| **Message:** | 364 Cells affected by a cell that uses a date related function and whose formula includes a text date literal string with a 4 digit year. |
| **Cause:** | The noted cell references a cell containing a date related function and a formula with a text date which specifies a safe 4 digit year. |
| **Correction:** | This is not a year 2000 problem. |
| **Message:** | 365 Cells whose formula includes a text date literal string with a 3 digit year. |
| **Cause:** | The noted cell contains a formula which has a text date with a 3 digit year. This format is used by certain functions to represent dates as days since 1900 with a range to 2178. |
| **Correction:** | Verify the use of this date to ensure it is used with a function that expects a 3 digit year, and that it is not a data entry error. |

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| **Message:** | 366 Cells that use a date related function and whose formula includes a text date literal string with a 3 digit year. |
| **Cause:** | The noted cell contains date related function and a formula which has a text date with a 3 digit year. This format is used by certain functions to represent dates as days since 1900 with a range to 2178. |
| **Correction:** | Verify the use of this date to ensure it is used with a function that expects a 3 digit year, and that it is not a data entry error. |

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| **Message:** | 367 Cells affected by a cell whose formula includes a text date literal string with a 3 digit year. |
| **Cause:** | The noted cell references a cell with a formula which includes a text date with a 3 digit year. This format is used by certain functions to represent dates as days since 1900 with a range to 2178. |
| **Correction:** | Verify the use of this date to ensure it is used with a function that expects a 3 digit year, and that it is not a data entry error. |

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| **Message:** | 368 Cells affected by a cell that uses a date related function and whose formula includes a text date literal string with a 3 digit year. |
| **Cause:** | The noted cell references a cell containing a date related function and a formula which has a text date with a 3 digit year. This format is used by certain functions to represent dates as days since 1900 with a range to 2178. |
| **Correction:** | Verify the use of this date to ensure it is used with a function that expects a 3 digit year, and that it is not a data entry error. |

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| **Message:** | 369 Cells whose formula includes a text date literal string with a 2 digit year. |
| **Cause:** | The noted cell contains a formula with a text date with a 2 digit year. This may cause a year 2000 problem. |
| **Correction:** | Change this date to a 4 digit year. |

| | |
|---|---|
| **Message:** | 370 Cells that use a date related function and whose formula includes a text date literal string with a 2 digit year. |
| **Cause:** | The noted cell contains a date related function and a formula with a text date with a 2 digit year. This may cause a year 2000 problem. |
| **Correction:** | Change this date to a 4 digit year. |

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|---|---|
| **Message:** | 371 Cells affected by a cell whose formula includes a text date literal string with a 2 digit year. |
| **Cause:** | The noted cell references a cell containing a formula with a text date with a 2 digit year. This may cause a year 2000 problem. |
| **Correction:** | Change this date to a 4 digit year. |

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|---|---|
| **Message:** | 372 Cells affected by a cell that uses a date related function and whose formula includes a text date literal string with a 2 digit year. |
| **Cause:** | The noted cell references a cell containing a date related function and a formula with a text date with a 2 digit year. This may cause a year 2000 problem. |
| **Correction:** | Change this date to a 4 digit year. |

| | |
|---|---|
| **Message:** | 373 Cells whose formula includes a text date literal string without a year. |
| **Cause:** | The noted cell contains a formula with a text date which does not specify a year. |
| **Correction:** | This does not imply a year 2000 problem because no year is specified. Review the date to ensure that it is not a data entry error. |

| | |
|---|---|
| **Message:** | 374 Cells that uses a date related function and whose formula includes a text date literal string without a year. |
| **Cause:** | The noted cell contains a date related function and a formula with a text date which does not specify a year. |
| **Correction:** | This does not imply a year 2000 problem because no year is specified. Review the date to ensure that it is not a data entry error. |

| | |
|---|---|
| **Message:** | 375 Cells affected by a cell whose formula includes a text date literal string without a year. |
| **Cause:** | The noted cell references a cell containing a formula with a text date which does not specify a year. |
| **Correction:** | This does not imply a year 2000 problem because no year is specified. Review the date to ensure that it is not a data entry error. |

| | |
|---|---|
| **Message:** | 376 Cells affected by a cell that uses a date related function and whose formula includes a text date literal string without a year. |
| **Cause:** | The noted cell references a cell containing a date related function and a formula with a text date which does not specify a year. |
| **Correction:** | This does not imply a year 2000 problem because no year is specified. Review the date to ensure that it is not a data entry error. |

| | |
|---|---|
| **Message:** | 377 Cells whose formula includes a date format string that specifies a 4 digit year. |
| **Cause:** | The noted cell contains a formula with a date format specifying a safe 4 digit year. |
| **Correction:** | This does not imply a year 2000 problem because the 4 digit format will show century digits. |

**Message:** 378 Cells that use a date related function and whose formula includes a date format string that specifies a 4 digit year.

**Cause:** The noted cell contains a date related function and a formula with a date format string specifying a safe 4 digit year.

**Correction:** This does not imply a year 2000 problem because the 4 digit format will show century digits.

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**Message:** 379 Cells affected by a cell whose formula includes a date format string that specifies a 4 digit year.

**Cause:** The noted cell references a cell containing a formula with a date format string specifying a safe 4 digit year.

**Correction:** This does not imply a year 2000 problem because the 4 digit format will show century digits.

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**Message:** 380 Cells affected by a cell that uses a date related function and whose formula includes a date format string that specifies a 4 digit year.

**Cause:** The noted cell references a cell containing a date related function and a formula with a date format string specifying a safe 4 digit year.

**Correction:** This does not imply a year 2000 problem because the 4 digit format will show century digits.

---

**Message:** 381 Cells whose formula includes a date format string that specifies a 2 digit year.

**Cause:** The noted cell contains a formula with a format string which specifies a 2 digit year. This may cause year 2000 problems with the use of ambiguous 2 digit year results.

**Correction:** Review the cell contents and change the date format string to specify an unambiguous 4 digit year.

**Background:** A date format string can be introduced through functions like the TEXT function which cause a formula result to be formatted in a specific manner. The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

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**Message:** 382 Cells that use a date related function and whose formula includes a date format string that specifies a 2 digit year.

**Cause:** The noted cell uses data related functions and contains a format string specification within its formula that formats results in an ambiguous 2 digit year format. The use of these results may produce a year 2000 problem.

**Correction:** Review the cell contents and change the format string to specify an unambiguous 4 digit year.

**Background:** A date format string can be introduced through functions like the TEXT function which cause a formula result to be formatted in a specific manner.

The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

---

**Message:** 383 Cells affected by a cell whose formula includes a date format string that specifies a 2 digit year.

**Cause:** The noted cell references a cell containing a date format string specifying a 2 digit year result. The use of this 2 digit year (by this cell) will produce a year 2000 problem.

**Correction:** Review the referenced cell and change the format string to an unambiguous 4 digit year format.

**Background:** A date format string can be introduced through functions like the TEXT function which cause a formula result to be formatted in a specific manner. The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

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**Message:** 384 Cells affected by a cell that uses a date related function and whose formula includes a date format string that specifies a 2 digit year.

**Cause:** The noted cell uses the output of a cell which has a format string specifying an ambiguous 2 digit year format. This reference will cause a year 2000 problem.

**Correction:** Review the format string and change it to a safe 4 digit year format.

**Background:** A date format string can be introduced through functions like the TEXT function which cause a formula result to be formatted in a specific manner. The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

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**Message:** 385 Cells whose formula includes a date format string that does not specify a year.

**Cause:** The noted cell has a date format string which does not specify a year in its cell contents format.

**Correction:** This format string does not imply year 2000 problems.

**Background:** A date format string can be introduced through functions like the TEXT function which cause a formula result to be formatted in a specific manner. The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

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**Message:** 386 Cells that use a date related function and whose formula includes a date format string that does not specify a year.

**Cause:** The noted cell contains a date related function that references a cell with a format string which does not display a year.

**Correction:** This does not imply a year 2000 problem because the date will be converted to the current year.

**Background:** A date format string can be introduced through functions like the TEXT function which cause a formula result to be formatted in a specific manner.

The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

**Message:** 387 Cells affected by a cell whose formula includes a date format string that does not specify a year.

**Cause:** The noted cell references a cell with a date display string that does not display a year.

**Correction:** This does not imply a year 2000 problem because the date will be converted to the current year.

**Background:** A date format string can be introduced through functions like the TEXT function which cause a formula result to be formatted in a specific manner. The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

**Message:** 388 Cells affected by a cell that uses a date related function and whose formula includes a date format string that does not specify a year.

**Cause:** The noted cell references a cell that uses a date related function with a date format string that does not display a year. The display format of the cell has a format string that does not specify a year.

**Correction:** This does not imply a year 2000 problem because the date will be converted to the current year.

**Background:** A date format string can be introduced through functions like the TEXT function which cause a formula result to be formatted in a specific manner. The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

**Message:** 389 Cells that use the DATE() function with a 4 digit year argument.

**Cause:** The noted cell uses the DATE() function with a safe 4-digit year argument.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 390 Cells that use a date related function and use the DATE() function with a 4 digit year.

**Cause:** The noted cell contains a date related function and uses the DATE() function with a safe 4-digit year argument.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond

century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 391 Cells affected by a cell that uses the DATE() function with a 4 digit year.

**Cause:** The noted cell references a cell containing a DATE() function using a 4-digit text date as a year argument.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 392 Cells that use a date related function and are affected by a cell that uses the DATE() function with a 4 digit year.

**Cause:** The noted cell contains a date related function and references a cell with a DATE() function using a 4-digit text date as a year argument.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 393 Cells affected by a cell that uses a date related function and uses the DATE() function with a 4 digit year.

**Cause:** The noted references a cell containing a date related function and uses a DATE() function with a safe 4 digit year value.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 394 Cells that use the DATE() function with a 3 digit year.

**Cause:** The noted cell uses the DATE() function with a 3 digit year. This specifies a date in century 20.

**Correction:** Review the cell to ensure that the date should be in century 20 or beyond.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond

century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 395 Cells that use a date related function and use the DATE() function with a 3 digit year.

**Cause:** The noted cell contains a date related function and uses the DATE() function with a 3 digit year. This specifies a date in century 20.

**Correction:** Review the cell to ensure that the date should be in century 20 or beyond.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 396 Cells affected by a cell that uses the DATE() function with a 3 digit year.

**Cause:** The noted cell references a cell which contains the DATE() function with a 3 digit year. This specifies a date in century 20.

**Correction:** Review the cell to ensure that the date should be in century 20 or beyond.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 397 Cells that use a date related function and are affected by a cell that uses the DATE() function with a 3 digit year.

**Cause:** The noted cell contains a date related function and references a cell that uses the DATE() function with a 3 digit year. This specifies a date in century 20.

**Correction:** Review the cell to ensure that the date should be in century 20 or beyond.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 398 Cells affected by a cell that uses a date related function and uses the DATE() function with a 3 digit year.

**Cause:** The noted cell references a cell that contains the DATE() function with a 3 digit year. This specifies a date in century 20.

**Correction:** Review the cell to ensure that the date should be in century 20 or beyond.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond

century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 399 Cells that use the DATE() function with a 2 digit year.

**Cause:** The noted cell contains the DATE() function with a 2 digit year. This specifies a date in century 19.

**Correction:** Review the cell to ensure that the date should be in century 19.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 400 Cells that use a date related function and use the DATE() function with a 2 digit year.

**Cause:** The noted cell contains a date related function and uses the DATE() function with a 2 digit year. This specifies a date in century 19.

**Correction:** Review the cell to ensure that the date should be in century 19.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 401 Cells affected by a cell that uses the DATE() function with a 2 digit year.

**Cause:** The noted cell references a cell containing the DATE() function with a 2 digit year. This specifies a date in century 19.

**Correction:** Review the cell to ensure that the date should be in century 19.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 402 Cells that use a date related function and are affected by a cell that uses the DATE() function with a 2 digit year.

**Cause:** The noted cell uses the DATE() function with a 2 digit year. This specifies a date in century 19.

**Correction:** Review the cell to ensure that the date should be in century 19.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond

century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 403 Cells affected by a cell that uses a date related function and uses the DATE() function with a 2 digit year.

**Cause:** The noted cell references a cell that uses a date related function and uses the DATE() function with a 2 digit year. This specifies a date in century 19.

**Correction:** Review the cell to ensure that the date should be in century 19.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 404 Cells that use the DATE() function with a non-constant year.

**Cause:** The noted cell uses the DATE() function with a year value that is not a constant. The resultant date could be in any century at or beyond 19.

**Correction:** Review the cell contents to ensure that the calculation should have a date beyond January 1, 1900.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 405 Cells that use a date related function and use the DATE() function with a non-constant year.

**Cause:** The noted cell uses the DATE() function with a year value which is not a constant. The resultant date could be in any century at or beyond 19.

**Correction:** Review the cell contents to ensure that the calculation should have a date beyond January 1, 1900.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 406 Cells affected by a cell that uses the DATE() function with a non-constant year.

**Cause:** The noted cell references a cell that uses the DATE() function with a year value which is not a constant. The resultant date could be in any century at or beyond 19.

**Correction:** Review the cell contents to ensure that the calculation should have a date beyond January 1, 1900.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE

is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 407 Cells that use a date related function and are affected by a cell that uses the DATE() function with a non-constant year.

**Cause:** The noted cell uses the DATE() function with a year value which is not a constant. The resultant date could be in any century at or beyond 19.

**Correction:** Review the cell contents to ensure that the calculation should have a date beyond January 1, 1900.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 408 Cells affected by a cell that uses a date related function and uses the DATE() function with a non-constant year.

**Cause:** The noted cell references a cell that uses a date related function and uses the DATE() function with a year value that is not a constant. The resultant date could be in any century at or beyond 19.

**Correction:** Review the cell contents to ensure that the calculation should have a date beyond January 1, 1900.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 409 Cells that use the DATE() function with an Out-Of-Range year.

**Cause:** The noted cell uses the DATE() function with a year that is either a negative value or greater than 9999.

**Correction:** Review the cell and correct the erroneous date.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 410 Cells that use a date related function and use the DATE() function with an Out-Of-Range year.

**Cause:** The noted cell uses the DATE() function with a year that is either a negative value or greater than 9999.

**Correction:** Review the cell and correct the erroneous date.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 411 Cells affected by a cell that uses the DATE() function with an Out-Of-Range year.

**Cause:** The noted cell references a cell that uses the DATE() function with a year that is either a negative value or greater than 9999.

**Correction:** Review the cell and correct the erroneous date.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 412 Cells that use a date related function and are affected by a cell that uses the DATE() function with an Out-Of-Range year.

**Cause:** The noted cell uses the DATE() function with a year that is either a negative value or greater than 9999.

**Correction:** Review the cell and correct the erroneous date.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 413 Cells affected by a cell that uses a date related function and uses the DATE() function with an Out-Of-Range year.

**Cause:** The noted cell references a cell that uses a date related function and uses the DATE() function with a year that is either a negative value or greater than 9999.

**Correction:** Review the cell and correct the erroneous date.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 414 Cells that use the value 1900.

**Cause:** The noted cell uses the numeric value 1900. This indicates a date year calculation.

**Correction:** Review the cell to ensure that dates are not being calculated, or that they are being correctly calculated and not introducing a year 2000 problem.

**Background:** The use of numeric value 1900 may indicate a date calculation outside of the normal date functions.

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**Message:** 415 Cells affected by a cell that uses the value 1900.

**Cause:** The noted cell references a cell which uses the numeric value 1900. This indicates a date year calculation.

**Correction:** Review the cell to ensure that dates are not being calculated, or that they are being correctly calculated and not introducing a year 2000 problem.

**Background:** The use of numeric value 1900 may indicate a date calculation outside of the normal date functions.

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**Message:** 416 Cells whose value is the number 1900.

**Cause:** The noted cell has the numeric value 1900. This indicates a date year calculation.

**Correction:** Review the cell to ensure that dates are not being calculated, or that they are being correctly calculated and not introducing a year 2000 problem.

**Background:** The use of numeric value 1900 may indicate a date calculation outside of the normal date functions.

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**Message:** 417 Cells affected by a cell whose value is the number 1900.

**Cause:** The noted cell references a cell with the numeric value 1900. This indicates a date year calculation.

**Correction:** Review the cell to ensure that dates are not being calculated, or that they are being correctly calculated and not introducing a year 2000 problem.

**Background:** The use of numeric value 1900 may indicate a date calculation outside of the normal date functions.

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**Message:** 418 Cells with an external reference.

**Cause:** The noted cell references a cell in another spreadsheet file. The spreadsheet scanner does not track this reference, but notes it for review.

**Correction:** Review the cell to ensure that it does not have a year 2000 problem.

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**Message:** 419 Cells affected by a cell with an external reference.

**Cause:** The noted cell is affected by a cell which references a cell in another spreadsheet file. The spreadsheet scanner does not track this reference, but notes it for review.

**Correction:** Review the cell to ensure that it does not have a year 2000 problem.

**Background:** Spreadsheet engines will follow external links to other worksheet files to resolve references and perform the necessary calculations. The spreadsheet scanner does not track through these references since it will be scanning large

amounts of data. Review this external reference to determine if imported data has a year 2000 problem.

**Message:** 420 Cells whose value is a string that includes a date with 4 digit year.

**Cause:** The noted cell produces a string which contains a date with a safe 4 digit year. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

**Message:** 421 Cells whose value is a string that includes a date with 2 digit year.

**Cause:** The noted cell produces a string which contains a date with an ambiguous 2 digit year. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

**Message:** 422 Cells whose value is a string that includes a date without a year.

**Cause:** The noted cell produces a string which contains a date with a year. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

**Message:** 423 Cells whose value is a string that includes a date near the 1900/2000 conversion cusp.

**Cause:** The noted cell produces a string which contains a date near the 1900/2000 conversion cusp. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 424 Cells whose value is a string that includes a date that can change century with a software version upgrade.

**Cause:** The noted cell produces a string which contains a date between the conversion cusps for different versions of the software. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 425 Cells whose value is a string that includes a date near the 1900/2000 conversion cusp and can change century with a software version upgrade.

**Cause:** The noted cell produces a string which contains a date between the conversion cusps for different versions of the software. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 426 Cells whose value is a string that includes a date that cannot be represented as an internal date.

**Cause:** The noted cell produces a string which includes a date value outside of the range which can be represented as an internal date (0000 to 9999). This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 427 Cells that use a string that includes a date with 4 digit year.

**Cause:** The noted cell uses a string which includes a date with a 4 digit year. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 428 Cells that use a string that includes a date with 2 digit year.

**Cause:** The noted cell uses a string which includes a date with a 2 digit year. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 429 Cells that use a string that includes a date without a year.

**Cause:** The noted cell uses a string which includes a date without a year. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 430 Cells that use a string that includes a date near the 1900/2000 conversion cusp.

**Cause:** The noted cell uses a string which includes a date near the 1900/2000 conversion cusp. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 431 Cells that use a string that includes a date that can change century with a software version upgrade.

**Cause:** The noted cell uses a string which includes a date between the conversion cusp dates for different versions of the spreadsheet application, and which could change with a software upgrade. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not attempt to regard the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 432 Cells that use a string that includes a date near the 1900/2000 conversion cusp and can change century with a software version upgrade.

**Cause:** The noted cell uses a string which includes a date between the conversion cusp dates for different versions of the spreadsheet application, and which could change with a software upgrade. This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 433 Cells that use a string that includes a date that cannot be represented as an internal date.

**Cause:** The noted cell uses a string which includes a date which could not be represented as an internal date (outside the range of 0000 to 9999). This date is not in a form which can be directly used in calculations.

**Correction:** Because the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 434 Cells whose value is an internal date currently displayed with a 4 digit year but have a cell format that is based on the system's 'short date' format.

**Cause:** The noted cell has an internal date capable of holding a full 4 digit year and is displayed with the system 'short date' format which is currently set to a 4 digit year.

**Correction:** The system 'short date' format can be changed. Change the cell format to a format which does not rely on the system 'short date'.

**Background:** The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant.

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**Message:** 435 Cells whose value is an internal date currently displayed with a 2 digit year but have a cell format that is based on the system's 'short date' format.

**Cause:** The noted cell has an internal date capable of holding a full 4 digit year and is displayed with the system 'short date' format which is currently set to a 2 digit year.

**Correction:** The system 'short date' format can be changed. Change the cell format to a format which does not rely on the system 'short date'.

**Background:** The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant.

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**Message:** 436 Cells whose value is an internal date currently displayed without a year but have a cell format that is based on the system's 'short date' format.

**Cause:** The noted cell has an internal date capable of holding a full 4 digit year and is displayed with the system 'short date' format which is currently set to display no year.

**Correction:** The system 'short date' format can be changed. Change the cell format to a format which does not rely on the system 'short date'.

**Background:** The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant.

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**Message:** 437 Cells with an internal date prior to the year.

**Cause:** The noted cell has an internal date which is earlier than the date specified in the Spreadsheet Settings dialog.

**Correction:** Review the cell contents to determine if it is valid.

**Background:** The Spreadsheet Settings dialog provides a filter criteria for signaling whether an internal date is earlier than a selected date. This provides an ability to screen for dates which may have been invalidly converted or which are inappropriate for a file and may be a data entry error. This date is usually set at the cusp date to filter old dates which are moved to the next century by the date windowing feature.

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**Message:** 438 Cells affected by a cell with an internal date prior to the year.

**Cause:** The noted cell references a cell that has an internal date which is earlier than the date specified in the Spreadsheet Settings dialog.

**Correction:** Review the cell contents to determine if it is valid.

**Background:** The Spreadsheet Settings dialog provides a filter criteria for signaling whether an internal date is earlier than a selected date. This provides an ability to screen for dates which may have been invalidly converted or which are inappropriate for a file and may be a data entry error. This date is usually set at the cusp date to filter old dates which are moved to the next century by the date windowing feature.

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**Message:** 439 Cells that do not have a date value but have a date display format that specifies a 4 digit year.

**Cause:** The noted cell has a date display format for a 4 digit date, but does not contain a date value.

**Correction:** Review the cell contents to determine whether the cell should contain a date, or whether it is formatted incorrectly.

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**Message:** 440 Cells affected by a cell that does not have a date value but has a date display format that specifies a 4 digit year.

**Cause:** The noted cell references a cell with a date display format for a 4 digit date, but does not contain a date value.

**Correction:** Review the cell contents to determine whether the cell should contain a date, or whether it is formatted incorrectly.

**Message:** 441 Cells that do not have a date value but have a date display format that specifies a 2 digit year.

**Cause:** The noted cell has a date display format for a 2 digit date, but does not contain a date value.

**Correction:** Review the cell contents to determine whether the cell should contain a date, or whether it is formatted incorrectly.

**Message:** 442 Cells affected by a cell that does not have a date value but has a date display format that specifies a 2 digit year.

**Cause:** The noted cell references a cell with a date display format for a 2 digit date, but does not contain a date value.

**Correction:** Review the cell contents to determine whether the cell should contain a date, or whether it is formatted incorrectly.

**Message:** 443 Cells that do not have a date value but have a date display format that does not specify a year.

**Cause:** The noted cell has a date display format that does not display a year, but the cell does not contain a date value.

**Correction:** Review the cell contents to determine whether the cell should contain a date, or whether it is formatted incorrectly.

**Message:** 444 Cells affected by a cell that does not have a date value but has a date display format that does not specify a year.

**Cause:** The noted cell references a cell with a date display format, that does not display a year, but the cell does not contain a date value.

**Correction:** Review the cell contents to determine whether the cell should contain a date, or whether it has an inappropriate format.

**Message:** 445 Cells whose value is a number that may be interpreted as a date with a 4 digit year.

**Cause:** The noted cell has a numeric value which may be interpreted as a date.

**Correction:** Review the cell contents to determine if the cell contents represents a date, or whether it is a false match.

**Background:** The Spreadsheet Scanner evaluates numeric patterns as if they might represent an n-digit date, rather than a textually formatted date (for example, 980101). This capability is provided as a means to locate numbers entered to represent dates. Typically such a number is not used as a date, though calculations may be performed on the number to extract date values. Refer the Help system's 'Date Formats' topic for more information.

**Message:** 446 Cells affected by a cell whose value is a number that may be interpreted as a date with a 4 digit year.

**Cause:** The noted cell references a cell that has a numeric value which may be interpreted as a date.

**Correction:** Review the cell contents to determine if the cell contents represents a date, or whether it is a false match.

**Background:** The Spreadsheet Scanner evaluates numeric patterns as if they might represent an n-digit date, rather than a textually formatted date (for example, 980101). This capability is provided as a means to locate numbers entered to represent dates. Typically such a number is not used as a date, though calculations may be performed on the number to extract date values. Refer the Help system's 'Date Formats' topic for more information.

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**Message:** 447 Cells whose value is a number that may be interpreted as a date with a 2 digit year.

**Cause:** The noted cell has a numeric value which may be interpreted as a date.

**Correction:** Review the cell contents to determine if the cell contents represents a date, or whether it is a false match.

**Background:** The Spreadsheet Scanner evaluates numeric patterns as if they might represent an n-digit date, rather than a textually formatted date (for example, 980101). This capability is provided as a means to locate numbers entered to represent dates. Typically such a number is not used as a date, though calculations may be performed on the number to extract date values. Refer the Help system's 'Date Formats' topic for more information.

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**Message:** 448 Cells affected by a cell whose value is a number that may be interpreted as a date with a 2 digit year.

**Cause:** The noted cell references a cell that has a numeric value which may be interpreted as a date.

**Correction:** Review the cell contents to determine if the cell contents represents a date, or whether it is a false match.

**Background:** The Spreadsheet Scanner evaluates numeric patterns as if they might represent an n-digit date, rather than a textually formatted date (for example, 980101). This capability is provided as a means to locate numbers entered to represent dates. Typically such a number is not used as a date, though calculations may be performed on the number to extract date values. Refer the Help system's 'Date Formats' topic for more information.

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**Message:** 449 Cells whose value is a number that may be interpreted as a date without a year.

**Cause:** The noted cell has a numeric value which may be interpreted as a date.

**Correction:** Review the cell contents to determine if the cell contents represents a date, or whether it is a false match.

**Background:** The Spreadsheet Scanner evaluates numeric patterns as if they might represent an n-digit date, rather than a textually formatted date (for example, 980101). This capability is provided as a means to locate numbers entered to represent dates. Typically such a number is not used as a date, though calculations may

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| | be performed on the number to extract date values. Refer the Help system's 'Date Formats' topic for more information. |
| **Message:** | 450 Cells affected by a cell whose value is a number that may be interpreted as a date without a year. |
| **Cause:** | The noted cell references a cell that has a numeric value which may be interpreted as a date. |
| **Correction:** | Review the cell contents to determine if the cell contents represents a date, or whether it is a false match. |
| **Background:** | The Spreadsheet Scanner evaluates numeric patterns as if they might represent an n-digit date, rather than a textually formatted date (for example, 980101). This capability is provided as a means to locate numbers entered to represent dates. Typically such a number is not used as a date, though calculations may be performed on the number to extract date values. Refer the Help system's 'Date Formats' topic for more information. |
| **Message:** | 451 Cells whose value is date that cannot be represented as an internal date but have a date display format that specifies a 4 digit year. |
| **Cause:** | The noted cell has a value which is a date, but which cannot be represented within the bounds of an internal date, and has a date display format of a 4 digit year. |
| **Correction:** | Review the cell and correct the date. This is not a year 2000 problem, but may be a data entry problem. |
| **Background:** | An internal date can represent dates in the range of 0000 to 9999 years (1900 to 2078 in older Excel versions). |
| **Message:** | 452 Cells affected by a cell whose value is a date that cannot be represented as an internal date but has a date display format that specifies a 4 digit year. |
| **Cause:** | The noted cell references a cell that has a value which is a date, but which cannot be represented within the bounds of an internal date, and has a date display format of a 4 digit year. |
| **Correction:** | Review the cell and correct the date. This is not a year 2000 problem, but may be a data entry problem. |
| **Background:** | An internal date can represent dates in the range of 0000 to 9999 years (1900 to 2078 in older Excel versions). |
| **Message:** | 453 Cells whose value is a date that cannot be represented as an internal date but have a date display format that specifies a 2 digit year. |
| **Cause:** | The noted cell has a value which is a date, but which cannot be represented within the bounds of an internal date, and has a date display format of a 2 digit year. |
| **Correction:** | Review the cell and correct the date. This is not a year 2000 problem, but may be a data entry problem. |

**Background:** An internal date can represent dates in the range of 0000 to 9999 years (1900 to 2078 in older Excel versions).

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**Message:** 454 Cells affected by a cell whose value is a date that cannot be represented as an internal date but has a date display format that specifies a 2 digit year.

**Cause:** The noted cell references a cell that has a value which is a date, but which cannot be represented within the bounds of an internal date, and has a date display format of a 2 digit year.

**Correction:** Review the cell and correct the date. This is not a year 2000 problem, but may be a data entry problem.

**Background:** An internal date can represent dates in the range of 0000 to 9999 years (1900 to 2078 in older Excel versions).

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**Message:** 455 Cells whose value is a date that cannot be represented as an internal date but have a date display format that does not specify a year.

**Cause:** The noted cell has a value which is a date, but which cannot be represented within the bounds of an internal date, and has a date display format that does not display a year.

**Correction:** Review the cell and correct the date. This is probably not a year 2000 problem, but may be a data entry problem.

**Background:** An internal date can represent dates in the range of 0000 to 9999 years (1900 to 2078 in older Excel version). It is unlikely that a user will have a valid date outside the range of 0000 to 9999.

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**Message:** 456 Cells affected by a cell whose value is a date that cannot be represented as an internal date but has a date display format that does not specify a year.

**Cause:** The noted cell references a cell that has a value which is a date, but which cannot be represented within the bounds of an internal date, and has a date display that does not display a year.

**Correction:** Review the cell and correct the date. This is not a year 2000 problem, but may be a data entry problem.

**Background:** An internal date can represent dates in the range of 0000 to 9999 years (1900 to 2078 in older Excel versions).

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**Message:** 457 Cells that use a date related function but do not have a recognized date value included in the formula.

**Cause:** The noted cell has a date related function, but does not have a date value.

**Correction:** Review the cell.

**Background:** Date related functions should have date values as arguments to produce valid results.

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**Message:** 458 Cells that do not have a recognized date value included in their formula but are affected by a cell that uses a date related function.

**Cause:** The noted cell does not have a value recognizable as a date and references a cell with a date related function.

**Correction:** Review the cell. This is a mixture of date and non-date values which may have a year 2000 calculation problem.

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| **Message:** | 459 Cells that use the value(s) 365 and/or 366. |
| **Cause:** | The noted cell uses the value of 365 or 366 in a formula. |
| **Correction:** | Review the cell to see whether date calculations are being performed using 365 or 366 to convert days into years. |
| **Background:** | This situation is flagged to indicate possible date calculations. It may indicate the decomposition of numeric values into years, or the reverse, and may be a potential year 2000 problem if 2 digit values are used to represent years. |

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| **Message:** | 460 Cells affected by a cell that uses the value(s) 365 and/or 366. |
| **Cause:** | The noted cell references a cell that uses the value of 365 or 366 in a formula. |
| **Correction:** | Review the cell to see whether date calculations are being performed using 365 or 366 to convert days into years. |
| **Background:** | This situation is flagged to indicate possible date calculations. It may indicate the decomposition of numeric values into years, or the reverse, and may be a potential year 2000 problem if 2 digit values are used to represent years. |

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| **Message:** | 500 Charts affected by a cell whose value is near the 1900/2000 conversion cusp. |
| **Cause:** | The chart references a cell with a date value near the cusp date for the current spreadsheet application and version. |
| **Correction:** | Because the referenced cell contents may be interpreted differently by different versions of the same spreadsheet application, calculations made in this cell create potential year 2000 problems. Review the referenced cell and change its date to a safe 4-digit year. |
| **Background:** | Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations. |

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| **Message:** | 501 Charts affected by a date related function and a cell whose value is near the 1900/2000 conversion cusp. |
| **Cause:** | The chart references a cell with a date related function and a cell with a date value near the cusp date for the current spreadsheet application and version. |
| **Correction:** | Because the referenced cell contents may be interpreted differently by different versions of the same spreadsheet application, calculations made in this cell create potential year 2000 problems. Review the referenced cell and change its date to a safe 4-digit year. |
| **Background:** | Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions |

of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 502 Charts affected by a cell whose value can change century with a software version upgrade.

**Cause:** The chart references a cell whose date value may change by using different versions of the spreadsheet application.

**Correction:** Review the contents of the referenced cell and change it to a safe 4 digit year which will not be affected by changes in the cusp date of different versions of the software.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 503 Charts affected by a date related function and a cell whose value can change century with a software version upgrade.

**Cause:** The noted cells contain a function related to date processing and perform calculations using a cell whose value may be interpreted with a different century value by using different versions of the spreadsheet application.

**Correction:** Review the referenced cell and change its date value to a safe 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 504 Charts affected by a cell whose value is near the 1900/2000 conversion cusp and can change century with a software version upgrade.

**Cause:** The chart references a cell with a date value near the cusp date for the current spreadsheet application and version.

**Correction:** Because the referenced cell contents may be interpreted differently by different versions of the same spreadsheet application, calculations made in this cell create potential year 2000 problems. Review the referenced cell and change its date to a safe 4-digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions

of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 505 Charts affected by a date related function and a cell whose value is near the 1900/2000 conversion cusp and can change century with a software version upgrade.

**Cause:** The chart references a cell whose value is a text date near the 1900/2000 conversion cusp and whose value is also a text date which may change with a software version upgrade.

**Correction:** Review the cell referenced by this cell and change it to a safe 4 digit date.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 506 Charts affected by a cell whose value is a text date with a 4 digit year.

**Cause:** The chart references a cell whose value is a text date with a 4 digit year.

**Correction:** This is not a year 2000 problem.

**Message:** 507 Charts affected by a date related function and a cell whose value is a text date with a 4 digit year.

**Cause:** The chart references a cell whose value is a text date with a 4 digit year.

**Correction:** This is not a year 2000 problem.

**Message:** 508 Charts affected by a cell whose value is a text date with a 2 digit year.

**Cause:** The chart references a cell whose value is a text date with a 2 digit year.

**Correction:** Review the referenced cell and change the 2 digit year to a safe 4 digit year.

**Message:** 509 Charts affected by a date related function and a cell whose value is a text date with a 2 digit year.

**Cause:** The chart references a cell whose value is a text date with a 2 digit year.

**Correction:** Review the referenced cell and change the 2 digit year to a safe 4 digit year.

**Message:** 510 Charts affected by a cell whose value is a text date without a year.

**Cause:** The chart references a cell with a text date which does not specify a year.

**Correction:** Review the cell to ensure that the lack of a year is not a data entry problem. This situation will not cause a year 2000 problem.

**Message:** 511 Charts affected by a date related function and a cell whose value is a text date without a year.

**Cause:** The chart uses a date related function and references a cell with a text date value which does not specify a year.

**Correction:** Review the cell to ensure that the lack of a year is not a data entry problem. This situation will not cause a year 2000 problem.

**Message:** 512 Charts affected by a cell whose value is an internal date displayed with a 4 digit year.

**Cause:** The chart references a cell with a safe internal date for, displayed with a safe 4 digit display format.

**Correction:** This is not a year 2000 problem.

**Message:** 513 Charts affected by a date related function and a cell whose value is an internal date displayed with a 4 digit year.

**Cause:** The chart references a cell that contains a date related function and directly references a cell with a safe internal date form displayed with a safe 4 digit display format.

**Correction:** This is not a year 2000 problem.

**Message:** 514 Charts affected by a cell whose value is an internal date displayed with a 2 digit year.

**Cause:** The chart references a cell with a safe internal date displayed in an ambiguous 2 digit year format.

**Correction:** The referenced cell contains a full date, but the contents cannot be validated because of the 2 digit display format. Update the display format to a 4 digit year to remove any ambiguity.

**Message:** 515 Charts affected by a date related function and a cell whose value is an internal date displayed with a 2 digit year.

**Cause:** The chart references a cell with a date related function and a cell with a safe internal date displayed in an ambiguous 2 digit year format.

**Correction:** The referenced cell contains a full date, but the contents cannot be validated because of the 2 digit display format. Update the display format to a 4 digit year to remove any ambiguity.

**Message:** 516 Charts affected by a cell whose value is an internal date displayed without a year.

**Cause:** The chart references a cell containing a date in an internal format which can hold a safe 4 digit year displayed in a format without a year.

**Correction:** This is not a year 2000 problem. It is noted to indicate the presence of a date.

**Message:** 517 Charts affected by a date related function and a cell whose value is an internal date displayed without a year.

**Cause:** The chart references a cell with a date related function and a cell containing a date in an internal format which can hold a safe 4 digit year displayed in a format without a year.

**Correction:** This is not a year 2000 problem. It is noted to indicate the presence of date operations.

**Message:** 518 Charts affected by a cell whose value is a text date that cannot be represented as an internal date.

**Cause:** The chart references a cell which has a text date that is recognized by the Spreadsheet Date Formats, but which cannot be represented as a date within the spreadsheet.

**Correction:** Review this date because it is likely an error and cannot be converted or used by spreadsheet calculations.

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**Message:** 519 Charts affected by a cell whose value is a date format string that specifies a 4 digit year.

**Cause:** The chart references a cell which holds a date format string which specifies a safe 4 digit year.

**Correction:** This is not a year 2000 problem.

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**Message:** 520 Charts affected by a date related function and a cell whose value is a date format string that specifies a 4 digit year.

**Cause:** The chart references a cell that uses a date related function and references a cell which is a date format string specifying a 4 digit year.

**Correction:** This is not a year 2000 problem.

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**Message:** 521 Charts affected by a cell whose value is a date format string that specifies a 2 digit year.

**Cause:** The chart references a cell which holds a date format string which specifies an unsafe 2 digit year display.

**Correction:** Review this format string and change it to a safe 4 digit year display format.

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**Message:** 522 Charts affected by a date related function and a cell whose value is a date format string that specifies a 2 digit year.

**Cause:** The chart references a cell that uses a date related function and references a cell which holds a date format string which specifies an unsafe 2 digit year display.

**Correction:** Review this format string and change it to a safe 4 digit year display format.

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**Message:** 523 Charts affected by a cell whose value is a date format string that does not specify a year.

**Cause:** The chart references a cell which holds a date format string which specifies a date display without a year.

**Correction:** This is not a year 2000 problem.

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**Message:** 524 Charts affected by a date related function and a cell whose value is a date format string that does not specify a year.

**Cause:** The chart references a cell that has a date related function and references a cell which holds a date format string which specifies a date display without a year.

**Correction:** This is not a year 2000 problem. It is noted to indicate the presence of a date operation.

**Message:** 525 Charts affected by a cell whose formula includes a text date literal string near the 1900/2000 conversion cusp.

**Cause:** The chart references a cell that has a formula which has a text date that is near a 1900/2000 conversion cusp for the current version of the spreadsheet application.

**Correction:** A text date near the cusp date indicates a date which may have its century misinterpreted. Update the literal date to a safe 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 526 Charts affected by a cell that uses a date related function and whose formula includes a text date literal string near the 1900/2000 conversion cusp.

**Cause:** The chart references a cell with a date related function and a formula which includes a text date near the 1900/2000 conversion cusp for the current version of the spreadsheet application.

**Correction:** A text date near the conversion cusp indicates a date which may have its century misinterpreted. The cell value may be in error. Update the literal date to a safe 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 527 Charts affected by a cell whose formula includes a text date that can change with a software version upgrade.

**Cause:** The chart references a cell which has a formula which has a text date which will be interpreted to be in a different century by different versions of the spreadsheet application.

**Correction:** Change this date to a safe 4 digit year which will not be interpreted differently by different versions of the application.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to a century 19 date. The cusp date may be different between different

versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 528 Charts affected by a cell that uses a date related function and whose formula includes a text date that can change century with a software version upgrade.

**Cause:** The chart references a cell which has a date related function and a formula which has a text date which will be interpreted to be in a different century by different versions of the spreadsheet application.

**Correction:** Change this date to a safe 4 digit year.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to century 19 date. The cusp date may be different between different versions of the same software application, causing a software upgrade to potentially change calculations.

**Message:** 529 Charts affected by a cell whose formula includes a text date literal string with a 4 digit year.

**Cause:** The chart references a cell which has a text date which specifies a safe 4 digit year.

**Correction:** This is not a year 2000 problem.

**Message:** 530 Charts affected by a cell that uses a date related function and whose formula includes a text date literal string with a 4 digit year.

**Cause:** The chart references a cell which has a date related function and a formula which has a text date which specifies a safe 4 digit year.

**Correction:** This is not a year 2000 problem.

**Message:** 531 Charts affected by a cell whose formula includes a text date literal string with a 3 digit year.

**Cause:** The chart references a cell which has a formula which has a text date with a 3 digit year. This format is used by certain functions to represent dates as days since 1900 with a range to 2178.

**Correction:** Verify the use of this date to ensure that it is used with a function that expects a 3 digit year, and that it is not a data entry error.

**Message:** 532 Charts affected by a cell that uses a date related function and whose formula includes a text date literal string with a 3 digit year.

**Cause:** The chart references a cell which has a date related function and a formula that has a text date with a 3 digit year. This format is used by certain functions to represent dates as days since 1900 with a range to 2178.

**Correction:** Verify the use of this date to ensure that it is used with a function that expects a 3 digit year, and that it is not a data entry error.

**Message:** 533 Charts affected by a cell whose formula includes a text date literal string with a 2 digit year.

**Cause:** The chart references a cell which has a formula with a text date with a 2 digit year. This may cause a year 2000 problem.

**Correction:** Change this date to a 4 digit year.

**Message:** 534 Charts affected by a cell that uses a date related function and whose formula includes a text date literal string with a 2 digit year.

**Cause:** The chart references a cell which has a date related function and a formula with a text date with a 2 digit year. This may cause a year 2000 problem.

**Correction:** Change this date to a 4 digit year.

**Message:** 535 Charts affected by a cell whose formula includes a text date literal string without a year.

**Cause:** The chart references a cell which has a formula with a text date which does not specify a year.

**Correction:** This is not a year 2000 problem because no year is specified. Review the date to ensure that it is not a data entry error.

**Message:** 536 Charts affected by a cell that uses a date related function and whose formula includes a text date literal string without a year.

**Cause:** The chart references a cell which has a date related function and a formula including a text date which does not specify a year.

**Correction:** This is not a year 2000 problem because no year is specified. Review the date to ensure that it is not a data entry error.

**Message:** 537 Charts affected by a cell whose formula includes a date format string that specifies a 4 digit year.

**Cause:** The chart references a cell which has a formula with a date format string specifying a safe 4 digit year.

**Correction:** This is not a year 2000 problem.

**Message:** 538 Charts affected by a cell that uses a date related function and whose formula includes a date format string that specifies a 4 digit year.

**Cause:** The chart references a cell which has a date related function and a formula with a date format string specifying a safe 4 digit year.

**Correction:** This is not a year 2000 problem.

**Message:** 539 Charts affected by a cell whose formula includes a date format string that specifies a 2 digit year.

**Cause:** The chart references a cell which has a date format string specifying a 2 digit year result. The use of this 2 digit year (by this cell) will produce a year 2000 problem.

**Correction:** Review the referenced cell and change the format string to an unambiguous 4 digit year format.

**Background:** A date format string can be introduced through functions like the TEXT function, which cause a formula result to be formatted in a specific manner. The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

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**Message:** 540 Charts affected by a cell that uses a date related function and whose formula includes a date format string that specifies a 2 digit year.

**Cause:** The chart uses the output of a cell which has a format string specifying an ambiguous 2 digit year format. This reference will cause a year 2000 problem.

**Correction:** Review the format string and change it to a safe 4 digit year format.

**Background:** A date format string can be introduced through functions like the TEXT function, which cause a formula result to be formatted in a specific manner. The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

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**Message:** 541 Charts affected by a cell whose formula includes a date format string that does not specify a year.

**Cause:** The chart references a cell with a date display string which does not display a year.

**Correction:** This does not have a year 2000 problem because the date will be converted to the current year.

**Background:** A date format string can be introduced through functions like the TEXT function, which cause a formula result to be formatted in a specific manner. The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

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**Message:** 542 Charts affected by a cell that uses a date related function and whose formula includes a date format string that does not specify a year.

**Cause:** The chart uses a date related function with a date format string that does not display a year.

**Correction:** This is not a year 2000 problem because the date will be converted to the current year.

**Background:** A date format string can be introduced through functions like the TEXT function, which cause a formula result to be formatted in a specific manner. The following formula formats a date with a 2 digit year: ="Budget report as of "&TEXT(TODAY(),"dd-mmm-yy")

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**Message:** 543 Charts affected by a cell that uses the DATE() function with a 4 digit year.

**Cause:** The chart references a cell which has a DATE() function using a 4-digit text date as a year argument.

**Correction:** This is not a year 2000 problem.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond

century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 544 Charts affected by a cell that uses a date related function and uses the DATE() function with a 4 digit year.

**Cause:** The chart references a cell that has a date related function and uses the DATE() function with a safe 4 digit year value.

**Correction:** This is not a year 2000 problem.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 545 Charts affected by a cell that uses the DATE() function with a 3 digit year.

**Cause:** The chart references a cell that uses the DATE() function with a year with 3 digits. This specifies a date in century 20.

**Correction:** Review the cell to ensure that the date should be in century 20 or beyond.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 546 Charts affected by a cell that uses a date related function and uses the DATE() function with a 3 digit year.

**Cause:** The chart references a cell that uses the DATE() function with a year with 3 digits. This specifies a date in century 20.

**Correction:** Review the cell to ensure that the date should be in century 20 or beyond.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 547 Charts affected by a cell that uses the DATE() function with a 2 digit year.

**Cause:** The chart references a cell that uses the DATE() function with a year with 2 digits. This specifies a date in century 19.

**Correction:** Review the cell to ensure that the date should be limited to century 19.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond

century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 548 Charts affected by a cell that uses a date related function and uses the DATE() function with a 2 digit year.

**Cause:** The chart references a cell that uses the DATE() function with a year with 2 digits. This specifies a date in century 19.

**Correction:** Review the cell to ensure that the date should be limited to century 19.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 549 Charts affected by a cell that uses the DATE() function with a non-constant year.

**Cause:** The chart references a cell that uses the DATE() function with a year value which is not a constant. The resultant date could be in any century at or beyond 19.

**Correction:** Review the cell contents to ensure that the calculation should have a date beyond January 1, 1900.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 550 Charts affected by a cell that uses a date related function and uses the DATE() function with a non-constant year.

**Cause:** The chart references a cell that uses the DATE() function with a year value which is not a constant. The resultant date could be in any century at or beyond 19.

**Correction:** Review the cell contents to ensure that the calculation should have a date beyond January 1, 1900.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

**Message:** 551 Charts affected by a cell that uses the DATE() function with an Out-Of-Range year.

**Cause:** The chart references a cell that uses the DATE() function with a year that is either a negative value or greater than 9999.

**Correction:** Review the cell and correct the date because it cannot be used in a calculation.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 552 Charts affected by a cell that uses a date related function and uses the DATE() function with an Out-Of-Range year.

**Cause:** The chart references a cell that uses the DATE() function with a year that is a either a negative value or greater than 9999.

**Correction:** Review the cell and correct the date because it cannot be used in a calculation.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

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**Message:** 553 Charts affected by a cell that uses the value 1900.

**Cause:** The chart references a cell which uses the numeric value 1900. This may indicate a date year calculation.

**Correction:** Review the cell to ensure that dates are not being calculated, or that they are being correctly calculated and not introducing a year 2000 problem.

**Background:** The use of the numeric value 1900 is indicative of a date calculation outside of normal date functions.

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**Message:** 554 Charts affected by a cell whose value is the number 1900.

**Cause:** The chart references a cell with the numeric value 1900. This may indicate a date year calculation.

**Correction:** Review the cell to ensure that dates are not being calculated, or that they are being correctly calculated and not introducing a year 2000 problem.

**Background:** The use of numeric value 1900 is indicative of a date calculation outside of normal date functions.

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**Message:** 555 Charts affected by a cell with an external reference.

**Cause:** The chart is affected by a cell which references a cell in another spreadsheet file. The spreadsheet scanner will not track this reference.

**Correction:** Review the cell to ensure that it does not create year 2000 problems.

**Background:** Spreadsheet engines will follow external links to other worksheet files to resolve references and perform the necessary calculations. The spreadsheet scanner does not track through these references since it will be scanning large

amounts of data. Review this external reference to determine if imported data has a year 2000 problem.

**Message:** 556 Charts affected by a cell whose value is a string that includes a date with 4 digit year.

**Cause:** The chart references a cell that produces a string which contains a date with a safe 4 digit year. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

**Message:** 557 Charts affected by a cell whose value is a string that includes a date with 2 digit year.

**Cause:** The chart references a cell that produces a string which contains a date with an ambiguous 2 digit year. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

**Message:** 558 Charts affected by a cell whose value is a string that includes a date without a year.

**Cause:** The chart references a cell that produces a string which contains a date with a year. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

**Message:** 559 Charts affected by a cell whose value is a string that includes a date near the 1900/2000 conversion cusp.

**Cause:** The chart references a cell that produces a string which contains a date near the 1900/2000 conversion cusp. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 560 Charts affected by a cell whose value is a string that includes a date that can change century with a software version upgrade.

**Cause:** The chart references a cell that produces a string which contains a date between the conversion cusps for different versions of the software. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 561 Charts affected by a cell whose value is a string that includes a date near the 1900/2000 conversion cusp and can change century with a software version upgrade.

**Cause:** The chart references a cell that produces a string which contains a date between the conversion cusps for different versions of the software. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 562 Charts affected by a cell whose value is a string that includes a date that cannot be represented as an internal date.

**Cause:** The chart references a cell that produces a string which includes a date value outside of the range which can be represented as an internal date (0000 to 9999). This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 563 Charts affected by a cell that uses a string that includes a date with 4 digit year.

**Cause:** The chart references a cell that uses a string which includes a date with a 4 digit year. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 564 Charts affected by a cell that uses a string that includes a date with 2 digit year.

**Cause:** The chart references a cell that uses a string which includes a date with a 2 digit year. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 565 Charts affected by a cell that uses a string that includes a date without a year.

**Cause:** The chart references a cell that uses a string which includes a date without a year. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 566 Charts affected by a cell that uses a string that includes a date near the 1900/2000 conversion cusp.

**Cause:** The chart references a cell that uses a string which includes a date near the 1900/2000 conversion cusp. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 567 Charts affected by a cell that uses a string that includes a date that can change century with a software version upgrade.

**Cause:** The chart references a cell that uses a string which includes a date between the cusp dates for different versions of the spreadsheet application, and which could change with a software upgrade. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 568 Charts affected by a cell that uses a string that includes a date near the 1900/2000 conversion cusp and can change century with a software version upgrade.

**Cause:** The chart references a cell that uses a string which includes a date between the cusp dates for different versions of the spreadsheet application, and which could change with a software upgrade. This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 569 Charts affected by a cell that uses a string that includes a date that cannot be represented as an internal date.

**Cause:** The chart references a cell that uses a string which includes a date which could not be represented as an internal date (outside the range of 0000 to 9999). This date is not in a form which can be directly used in calculations.

**Correction:** Since the date is within a larger text string, it cannot be directly used in calculations. Review the use of the cell in calculations to ensure that calculations do not interpret the cell as a date.

**Background:** A date embedded within a larger string may look like a date, but is not directly usable as a date in calculations. This may indicate a simple text field, such as a title, or a date input error.

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**Message:** 570 Charts affected by a cell whose value is an internal date currently displayed with a 4 digit year but have a cell format that is based on the systems 'short date' format.

**Cause:** The chart references a cell that has an internal date capable of holding a full 4 digit year, and is displayed with the system 'short date' format which is currently set to a 4 digit year.

**Correction:** The system 'short date' format can be changed. Change the cell format to a format which does not rely on the system 'short date'.

**Background:** The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant.

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**Message:** 571 Charts affected by a cell whose value is an internal date currently displayed with a 2 digit year but have a cell format that is based on the systems 'short date' format.

**Cause:** The chart references a cell that has an internal date capable of holding a full 4 digit year, and is displayed with the system 'short date' format which is currently set to a 2 digit year.

**Correction:** The system 'short date' format can be changed. Change the cell format to a format which does not rely on the system 'short date'.

**Background:** The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant.

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**Message:** 572 Charts affected by a cell whose value is an internal date currently displayed without a year but have a cell format that is based on the systems 'short date' format.

**Cause:** The chart references a cell that has an internal detectable of holding a full 4 digit year, and is displayed with the system 'short date' format which is currently set to display no year.

**Correction:** The system 'short date' format can be changed. Change the cell format to a format which does not rely on the system 'short date'.

**Background:** The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant.

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**Message:** 573 Charts affected by a cell with an internal date prior to the year

**Cause:** The chart references a cell that has an internal date which is earlier than the date specified in the Spreadsheet Settings dialog.

**Correction:** Review the cell contents to determine if it is valid.

**Background:** The Spreadsheet Settings dialog provides a filter criteria for signaling whether an internal date is earlier than a selected date. This provides an ability to screen for dates which may have been invalidly converted or which are inappropriate for a file and may be a data entry error. This date is usually set at the cusp date to filter old dates which are moved to the next century by the date windowing feature.

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**Message:** 574 Charts affected by a cell that does not have a date value but has a date display format that specifies a 4 digit year.

**Cause:** The chart references a cell that has a date display format, for a 4 digit date, but does not contain a date value.

**Correction:** Review the cell contents to determine whether the cell should contain a date, or whether it has an incorrect format.

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**Message:** 575 Charts affected by a cell that does not have a date value but has a date display format that specifies a 2 digit year.

**Cause:** The chart references a cell that has a date display format, for a 2 digit date, but does not contain a date value.

**Correction:** Review the cell contents to determine whether the cell should contain a date, or whether it has an incorrect format.

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**Message:** 576 Charts affected by a cell that does not have a date value but has a date display format that does not specify a year.

**Cause:** The chart references a cell that has a date display format, that does not display a year, but the cell does not contain a date value.

**Correction:** Review the cell contents to determine whether the cell should contain a date, or whether it has an incorrect format.

**Message:** 577 Charts affected by a cell whose value is a number that may be interpreted as a date with a 4 digit year.

**Cause:** The chart references a cell that has a numeric value which may be interpreted as a date.

**Correction:** Review the cell contents to determine if the cell contents is being used to represent a date, or whether it is a false match.

**Background:** The Spreadsheet Scanner evaluates numeric patterns as if they might represent an n-digit date, rather than a textually formatted date (for example, 980101). This capability is provided as a means to locate numbers entered to represent dates. Typically such a number is not used as a date, though calculations may be performed on the number to extract date values. Refer the Help system's 'Date Formats' topic for more information.

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**Message:** 578 Charts affected by a cell whose value is a number that may be interpreted as a date with a 2 digit year.

**Cause:** The chart references a cell that has a numeric value which may be interpreted as a date.

**Correction:** Review the cell contents to determine if the cell contents is being used to represent a date, or whether it is a false match.

**Background:** The Spreadsheet Scanner evaluates numeric patterns as if they might represent an n-digit date, rather than a textually formatted date (for example, 980101). This capability is provided as a means to locate numbers entered to represent dates. Typically such a number is not used as a date, though calculations may be performed on the number to extract date values. Refer the Help system's 'Date Formats' topic for more information.

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**Message:** 579 Charts affected by a cell whose value is a number that may be interpreted as a date without a year.

**Cause:** The chart references a cell that has a numeric value which may be interpreted as a date.

**Correction:** Review the cell contents to determine if the cell contents is being used to represent a date, or whether it is a false match.

**Background:** The Spreadsheet Scanner evaluates numeric patterns as if they might represent an n-digit date, rather than a textually formatted date (for example, 980101). This capability is provided as a means to locate numbers entered to represent dates. Typically such a number is not used as a date, though calculations may be performed on the number to extract date values. Refer the Help system's 'Date Formats' topic for more information.

---

**Message:** 580 Charts affected by a cell whose value is a date that cannot be represented as an internal date but has a date display format that specifies a 4 digit year.

**Cause:** The chart references a cell that has a value which is a date, but which cannot be represented within the bounds of an internal date, and has a date display format of a 4 digit year.

**Correction:** Review the cell and correct the date. This is not a year 2000 problem, but may be a data entry problem.

**Background:** An internal date can represent dates in the range of 0000 to 9999 years (1900 to 2078 in older Excel versions).

---

**Message:** 582 Charts affected by a cell whose value is a date that cannot be represented as an internal date but has a date display format that specifies a 2 digit year.

**Cause:** The chart references a cell that has a value which is a date, but which cannot be represented within the bounds of an internal date, and has a date display format of a 2 digit year.

**Correction:** Review the cell and correct the date. This is not a year 2000 problem, but may be a data entry problem.

**Background:** An internal date can represent dates in the range of 0000 to 9999 years (1900 to 2078 in older Excel versions).

---

**Message:** 584 Charts affected by a cell whose value is a date that cannot be represented as an internal date but has a date display format that does not specify a year.

**Cause:** The chart references a cell that has a value which is a date, but which cannot be represented within the bounds of an internal date, and has a date display that does not display a year.

**Correction:** Review the cell and correct the date. This is not a year 2000 problem, but may be a data entry problem.

**Background:** An internal date can represent dates in the range of 0000 to 9999 years (1900 to 2078 in older Excel versions).

---

**Message:** 586 Charts affected by a cell that uses a date related function but does not have a recognized date value included in the formula.

**Cause:** The chart references a cell that does not have a value recognizable as a date and references a cell with a date related function.

**Correction:** Review the cell. This is a mixture of date and non-date values which may have a year 2000 calculation problem.

---

**Message:** 600 Unable to process file with database server.

**Cause:** An Object Linking and Embedding (OLE) exception occurred while the Database Scanner was attempting to process the file. Text appears indicating the reason.

**Correction:** Ensure that the file is a valid database file and is accessible by the correct database application. The file may also need to be inactive while the Database Scanner is attempting to scan it.

**Background:** The application stops scanning the file as a database file and reverts to the Unformatted File Scanner.

---

**Message:** 601 Text date with no year digits.

**Cause:** The Database Scanner encountered a text date which has no year specified.

**Correction:** Verify that the date was intended to have no specified year, rather than being a date entry error.

**Background:** A text date with no specified year will be interpreted as a date with the current year not causing a year 2000 problem.

---

**Message:** 602 Text date with a 2 digit year.

**Cause:** The Database Scanner encountered a 2 digit date.

**Correction:** Investigate how this date entered the database and how the data is used to ensure that no year 2000 problems will result. When possible, use 4 digit dates to ensure no ambiguity.

**Background:** A 2 digit date causes an inherent year 2000 ambiguity when it is interpreted as a data value. The century may be determined incorrectly and produce erroneous results. It may be necessary to correct the data already in the database, and investigate the ways in which the data entered the database to ensure that no more year 2000 problems will be generated. If the data is in an Access database, the scanning process may have also indicated an Input Mask problem in the data entry form associated with this field.

---

**Message:** 603 Text date with a 4 digit year.

**Cause:** The Database Scanner encountered a 4 digit date.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicated the presence of a date.

---

**Message:** 604 Schema contains field definition with internal format date type.

**Cause:** A Database Scanner encountered a date encoded in an internal format that can hold safe 4 digit years.

**Correction:** A safe internal date format does not signal a potential Year 2000 problem. However, the date may have been interpreted from a 2 digit year when it entered the database. Investigate the entry mechanisms of the date to ensure that it resulted from a safe 4 digit year form.

**Background:** Because the date in the database can safely express years from 0000 to 9999, Year 2000 problems can be caused by the method used to interpret and store the date in the database. If data entry was done using a year 2000 safe method, the Internal Date is also year 2000 safe. If data entry was unsafe and permitted or required a 2 digit year, then both the data entry mask and the database contents may need to be corrected.

---

**Message:** 605 Internal date after the year 1899 and before.

**Cause:** The Database Scanner has encountered a safe internal date which is older than the year specified as an "Old Date" in the Database Settings dialog box.

**Correction:** An informative message produced by setting the "Old Date" option in the Database Settings dialog. If the "Old Date" value is incorrect, change it in the Database Settings dialog.

**Background:** Date windowing specifies a cusp date for converting 2 digit text dates to full 4 digit dates. This cusp date is used to translate 2 digit dates earlier than the cusp date to a century 20 date and 2 digit dates at or later than the cusp date to a century 19 date. The cusp date may be different between different

versions of the same software application, causing a software upgrade to potentially change calculations.

---

**Message:** 606 Embedded text date with no year digits.

**Cause:** The Database Scanner found a text date which does not contain year digits embedded in a larger text string.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date. Ensure that the text date in question should not have a year specification and that it is not a data entry error.

**Background:** A text date embedded within a larger string is unlikely to be used within computations because it is not recognized as a date by the database engine and would require additional code and processing to be used computationally.

---

**Message:** 607 Embedded text date with a 2 digit year.

**Cause:** The Database Scanner found a text date containing a 2-digit year embedded in a larger text string.

**Correction:** This constitutes a potential year 2000 problem. Examine the data and take appropriate action. It may be a data entry error.

**Background:** A text date embedded within a larger string is unlikely to be used within computations because it is not recognized as a date by the database engine and would require additional code and processing to be used computationally.

---

**Message:** 608 Embedded text date with a 4 digit year.

**Cause:** The Database Scanner found a text date containing a 4 digit year, embedded in a larger text string.

**Correction:** This date does not need correction for Year 2000 problems. However it may indicate a data entry problem because it is embedded within other text.

**Background:** A text date embedded within a larger string is unlikely to be used within computations because it is not recognized as a date by the database engine and would require additional code and processing to be used computationally.

---

**Message:** 700 Invalid input mask for form date field.

**Cause:** The database scanner found an input mask in a form which is invalid for the date field it controls.

**Correction:** Review the input mask and form and determine if this mismatch is appropriate. It may indicate an error in the input mask.

---

**Message:** 701 Date field in a form with input mask allowing a 2 digit year.

**Cause:** The Database Scanner found a date input mask which permits the entry of unsafe 2 digit years.

**Correction:** Update form date input masks to enforce 4 digit year entry format.

| | |
|---|---|
| **Message:** | 702 Date field in a form with input mask requiring a 2 digit year. |
| **Cause:** | An Input Form which has a Date Field mask requiring a 2 digit year input format was found. |
| **Correction:** | The input mask and any associated display masks should be changed to a 4 digit year format. |
| **Background:** | The requirement to use a 2 digit year format for data entry indicates a high degree of risk of perpetuating a Year 2000 problem for dates entered through this form. Ensure all date entry is performed using a safe 4 digit year format. |

| | |
|---|---|
| **Message:** | 703 Date field in a form with input mask requiring a 4 digit year. |
| **Cause:** | The Database Scanner encountered an Input Form containing a Date Field mask that requires a 4 digit year input format. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date. |
| **Background:** | Use a 4 digit input mask to ensure that form data entering the database has been validated as being associated with a 4 digit year. This eliminates a year 2000 data entry problem and eliminate the threat of perpetuation. |

| | |
|---|---|
| **Message:** | 704 Date field in a form with an undefined input mask allowing a 2 digit year. |
| **Cause:** | The Database Scanner found a date entry on a form containing no defined input mask to control data entry integrity. This permits unsafe 2 digit years to be entered. |
| **Correction:** | Control data entry of dates using an input mask that ensures safe 4 digit years will be entered. |

| | |
|---|---|
| **Message:** | 705 Date display format in a form with no year. |
| **Cause:** | The noted field is displayed on a form in a format that does not display a year. |
| **Correction:** | Review the form's display format to determine whether it is appropriate to display the date without a year value. |

| | |
|---|---|
| **Message:** | 706 Date field in a form with a date display format which allows a 2 digit year. |
| **Cause:** | The noted field is displayed on a form in a format that allows an ambiguous 2 digit year display. |
| **Correction:** | Review the form and update the date display format to a safe 4 digit date. Review the screen layout to ensure space is available for the additional two output characters. |

| | |
|---|---|
| **Message:** | 707 Date field in a form with a 2 digit year display format. |
| **Cause:** | The Database Scanner found a form containing a field format that restricts a date field to display a 2 digit year. |
| **Correction:** | Use a 4 digit year format for date displays to ensure that the full date value is displayed. |

**Background:** A date display format showing only 2 digit years limits your ability to determine whether dates have been entered correctly, and to know what values are in the database.

---

**Message:** 708 Date field in a form with a 4 digit year display format.

**Cause:** A form containing a field format restricting a date field to display a 4 digit year was found.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

---

**Message:** 709 Date field in a form report with an invalid display format.

**Cause:** The noted field has an invalid display format and may be incorrectly displayed in the report.

**Correction:** Review the report and the data field to determine why a mismatch between the data and the display format exists.

---

**Message:** 711 A control source date expression in a form allowing a 2 digit year.

**Cause:** A form control with a control source expression containing a date with a 2 digit year was found.

**Correction:** Examine the expression using the Access Expression Builder and use an expression with a 4 digit year.

---

**Message:** 712 A control source date expression in a form using a 2 digit year.

**Cause:** A form control with a control source expression containing a date with a 2 digit year was found.

**Correction:** Examine the expression using the Access Expression Builder and use an expression with a 4 digit year.

---

**Message:** 713 A control source date expression in a form using a 4 digit year.

**Cause:** A form control with a control source expression containing a date with a 4 digit year was found.

**Correction:** This in not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

---

**Message:** 800 Invalid input mask for report date field.

**Cause:** The report date field has an invalid input mask preventing valid data selection for this report field.

**Correction:** Correct the mask.

---

**Message:** 801 Date field in a report with input mask allowing a 2 digit year.

**Cause:** The noted report field has an input mask allowing data selection with a 2 digit year value. A 2 digit mask may permit ambiguous date selection or may prevent valid date selection constituting a year 2000 problem.

**Correction:** Review and correct the field input mask.

| | |
|---|---|
| **Message:** | 802 Date field in a report with input mask requiring a 2 digit year. |
| **Cause:** | The noted date field contains a data input mask which requires input of an unsafe 2 digit year. |
| **Correction:** | Update the input mask to require input of a 4 digit year. |

| | |
|---|---|
| **Message:** | 803 Date field in a report with input mask requiring a 4 digit year. |
| **Cause:** | The noted date field contains a data input mask which requires input of a safe 4 digit year. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date. |

| | |
|---|---|
| **Message:** | 804 Date field in a report with an undefined input mask allowing a 2 digit year. |
| **Cause:** | The database contains a stored report with a mask permitting entry of an unsafe 2 digit year date. |
| **Correction:** | Change the input mask to ensure date entry uses a safe 4 digit year format. Review the screen layout to ensure space is available for the additional two output characters. |

| | |
|---|---|
| **Message:** | 805 Date display format in a report with no year. |
| **Cause:** | The database contains a report with a date field displayed in a format that does not display a year. |
| **Correction:** | Review the report to determine whether it is appropriate to display the date without a year value. |

| | |
|---|---|
| **Message:** | 806 Date field in a report with a system short date display format which allows a 2 digit year. |
| **Cause:** | The database contains a stored report that displays dates in a system/user preferences dependent 'short date' format. |
| **Correction:** | Review the report and update it to use a safe 4 digit year format. |
| **Background:** | The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant. |

| | |
|---|---|
| **Message:** | 807 Date field in a report with a 2 digit year display format. |
| **Cause:** | The database contains a report that displays dates in a 2 digit year format. |
| **Correction:** | Review the report and update it to use a 4 digit year format. |

| | |
|---|---|
| **Message:** | 808 Date field in a report with a 4 digit year display format. |
| **Cause:** | The database has a report which displays a date with a safe 4 digit year format. |
| **Correction:** | This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date. |

**Message:** 809 Date field in a report with an invalid display format.

**Cause:** The noted report field contains a date but has an invalid display format.

**Correction:** Correct the display format.

---

**Message:** 811 A control source date expression in a report allowing a 2 digit year.

**Cause:** The source for a control (such as a text box) in a report is an expression containing a call to the 'Format' function and that function can allow a 2 digit year.

**Correction:** Change the Format function format argument to one that specifies a 4 digit year (for example, Format(HireDate, "mm/dd/yyyy")).

---

**Message:** 812 A control source date expression in a report using a 2 digit year.

**Cause:** The source for a control (such as a text box) in a report is an expression containing a call to the 'Format' function and that function's format argument specifies a 2 digit year (for example, Format(HireDate, "mm/dd/yy")).

**Correction:** Change the Format function format argument to one that specifies a 4 digit year for example, Format(HireDate, "mm/dd/yyyy")).

---

**Message:** 813 A control source date expression in a report using a 4 digit year.

**Cause:** The source for a control (such as a text box) in a report is an expression containing a call to the 'Format' function and that function's format argument specifies a 4 digit year (for example, Format(HireDate, "mm/dd/yyyy")).

**Correction:** This is not a year 2000 problem.

---

**Message:** 900 Date field in a table with a 2 digit year display format.

**Cause:** The Date Field in the database table has a 2 digit year display format. The century digits will not be visible if this field is displayed through this format.

**Correction:** Review and correct the display format to a 4 digit year format.

---

**Message:** 901 Date field in a table with a 4 digit year display format.

**Cause:** The Date Field in the database table has a display format which displays a 4 digit year.

**Correction:** This is not a year 2000 problem.

---

**Message:** 902 Date field in a table with an invalid display format.

**Cause:** The Date Field in the database table does not have a valid display format.

**Correction:** Review and correct the table element to use a valid display format.

---

**Message:** 903 Date field in a table with a system short date display format which allows a 2 digit year.

**Cause:** The database contains a stored report that displays dates in a system/user preferences dependent 'short date' format.

**Correction:** Review the report and update it to use a safe 4 digit year format. Review the screen layout to ensure space is available for the additional two output characters.

**Background:** The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant.

---

**Message:** 904 Date field in a table with input mask requiring a 2 digit year.

**Cause:** The table contains a date field whose input mask requires an unsafe 2 digit year.

**Correction:** Change the input mask to require a 4 digit year.

---

**Message:** 905 Date field in a table with input mask requiring a 4 digit year.

**Cause:** The table contains a date field whose input mask requires a 4 digit year.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

---

**Message:** 906 Date field in a table with an undefined input mask allowing a 2 digit year.

**Cause:** The noted table field contains a date field without a defined input mask which allows unsafe 2 digit years to be entered.

**Correction:** Update the database to provide an input mask requiring safe 4 digit years.

---

**Message:** 907 Date field in a table with input mask allowing a 2 digit year.

**Cause:** The noted table field contains a date field with an input mask that allows a user to enter an unsafe 2 digit year.

**Correction:** Update the input mask to require entry of a safe 4 digit year.

---

**Message:** 1000 Date field in a query with a 2 digit year display format.

**Cause:** The date field in the query has a 2 digit year display format permitting the display of ambiguous dates.

**Correction:** Correct the display format using a full 4 digit year format.

---

**Message:** 1001 Date field in a query with a 4 digit year display format.

**Cause:** The date field in the query has a fully specified 4 digit year display format.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

---

**Message:** 1002 Date field in a query with an invalid display format.

**Cause:** The date field in the query has an invalid display format preventing its correct display as a date.

**Correction:** Correct the display format using a full 4 digit year format.

---

**Message:** 1003 Date field in a query with a system short date display format which allows a 2 digit year.

**Cause:** The mask in the query uses a format which may vary from user to user or from system to system.

**Correction:** Change the mask to require a 4 digit year to prevent input of unsafe 2 digit year records.

**Background:** The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant.

---

**Message:** 1004 Date field in a query with input mask requiring a 2 digit year.

**Cause:** The mask in the query requires an unsafe 2 digit year in the query specification.

**Correction:** Change the mask to require a 4 digit year to prevent selection of unsafe 2 digit year records.

---

**Message:** 1005 Date field in a query with input mask requiring a 4 digit year.

**Cause:** The mask in the query requires the use of a safe 4 digit year in the query specification.

**Correction:** This is not a problem and is noted as a low severity to indicate the presence of a date.

---

**Message:** 1006 Date field in a query with an undefined input mask allowing a 2 digit year.

**Cause:** The mask in the query is undefined, permitting the use of a 2 digit year in the query specification.

**Correction:** Change the mask to require a 4 digit year to prevent selection of unsafe 2 digit year records.

---

**Message:** 1007 Date field in a query with input mask allowing a 2 digit year.

**Cause:** The mask in the query will permit the use of a 2 digit year in the query specification.

**Correction:** Change the mask to require a 4 digit year to prevent selection of unsafe 2 digit year records.

---

**Message:** 1100 Visual Basic literal date values with a 4 digit year.

**Cause:** The noted Visual Basic source line has a text date value which specified a 4 digit year.

**Correction:** This is not a year 2000 problem and as a low severity to indicate the presence of a date.

---

**Message:** 1101 Visual Basic literal date values with a 2 digit year.

**Cause:** The noted Visual Basic source line has a text date value with a 2 digit year.

**Correction:** This is a potential year 2000 problem. Correct the text date value to use a 4 digit year.

---

**Message:** 1102 Visual Basic literal date values without a year.

**Cause:** The noted Visual Basic source line has a text date value which does not specify a year.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

| | |
|---|---|
| **Message:** | 1103 Visual Basic statements using the suspicious value 1900. |
| **Cause:** | The noted Visual Basic source line uses the value 1900 in calculations. This may mean that it is performing date calculations against the year 1900. |
| **Correction:** | Review the calculation to determine if the calculation is performed correctly. |

| | |
|---|---|
| **Message:** | 1104 Visual Basic builtin date type conversion functions. |
| **Cause:** | The noted source line uses a Visual Basic builtin function which performs date conversions. |
| **Correction:** | Review the use of the builtin function to determine if the date conversion is correct. |

| | |
|---|---|
| **Message:** | 1105 Visual Basic builtin date related functions. |
| **Cause:** | The noted Visual Basic source line uses a builtin Visual Basic function which is related to date processing. |
| **Correction:** | Review the use of the builtin function to determine if it is correctly implemented. |

| | |
|---|---|
| **Message:** | 1106 Visual Basic builtin time related functions. |
| **Cause:** | The noted Visual Basic source line uses a builtin Visual Basic function which is related to time processing. |
| **Correction:** | Time processing does not have a year 2000 problem, but this area of the code may also be doing date processing. |

| | |
|---|---|
| **Message:** | 1107 Visual Basic declarations of date variables. |
| **Cause:** | The noted Visual Basic source line uses a builtin Visual Basic function which is related to date processing. |
| **Correction:** | Review the date processing to ensure it is correctly implemented. |

| | |
|---|---|
| **Message:** | 1108 Visual Basic declarations of procedures that return a date value. |
| **Cause:** | The noted Visual Basic source line declares a function which returns a date value. |
| **Correction:** | This indicates date processing within the procedure and all lines that reference it. Review the procedure for correct implementation. |

| | |
|---|---|
| **Message:** | 1109 Visual Basic declarations of external procedures that return a date value. |
| **Cause:** | The noted Visual Basic source line declares an external function which returns a date value. |
| **Correction:** | This indicates date processing within the procedure and all the lines that reference it. Review the procedure for correct implementation. |

| | |
|---|---|
| **Message:** | 1110 Visual Basic declarations of date type parameters. |
| **Cause:** | The noted Visual Basic statement declares parameters with a date data type. This implies the use of these parameters to pass dates. |
| **Correction:** | Review the parameters to ensure that they are implemented correctly. |

**Message:** 1111 Visual Basic declarations of date type parameters to external procedures.

**Cause:** The noted Visual Basic statement declares date parameters to an external procedure. This indicates the passage of dates.

**Correction:** Review the use of the procedure and the associated variable to determine if year 2000 problems exist in the code.

**Message:** 1112 Visual Basic variables with a name that implies a date value.

**Cause:** The noted Visual Basic statement has a variable whose name implies date usage.

**Correction:** Review the use of the variables in the code to determine if year 2000 problems exist.

**Background:** A 'Date Hint' is a text string which may match an identifier or a function name, or it may be found within a string. It is an indication that the variable or that portion of code may have year 2000 problems.

**Message:** 1113 Visual Basic procedures with a name that implies a date value.

**Cause:** The noted Visual Basic statement has a procedure whose name implies a date usage.

**Correction:** Review the use of the procedure and the area of code to determine if a year 2000 problem exists.

**Background:** A 'Date Hint' is a text string which may match an identifier or a function name, or it may be found within a string. It is an indication that the variable or that portion of code may have year 2000 problems.

**Message:** 1114 Visual Basic external procedures with a name that implies a date value.

**Cause:** The noted Visual Basic statement references an external procedure whose name implies a date usage.

**Correction:** Review the use of the procedure and the area of code to determine if a year 2000 problem exists.

**Background:** A 'Date Hint' is a text string which may match an identifier or a function name, or it may be found within a string. It is an indication that the variable or that portion of code may have year 2000 problems.

**Message:** 1115 Visual Basic parameters with a name that implies a date value.

**Cause:** The noted Visual Basic statement has parameters whose name implies a date usage.

**Correction:** Review the use of the variables and the area of code to determine if a year 2000 problem exists.

**Background:** A 'Date Hint' is a text string which may match an identifier or a function name, or it may be found within a string. It is an indication that the variable or that portion of code may have year 2000 problems.

---

**Message:** 1116 Visual Basic parameters to an external procedure with a name that implies a date value.

**Cause:** The noted Visual Basic statement references an external procedure with parameters whose name implies a date usage.

**Correction:** Review the use of the variables and the area of code to determine if a year 2000 problem exists.

**Background:** A 'Date Hint' is a text string which may match an identifier or a function name, or it may be found within a string. It is an indication that the variable or that portion of code may have year 2000 problems.

---

**Message:** 1117 Visual Basic strings containing a date hint.

**Cause:** The noted Visual Basic statement contains a string which matches a 'Date Hint' which implies date usage by the code.

**Correction:** Review the string to determine if a year 2000 problem exists.

**Background:** A 'Date Hint' is a text string which may match an identifier or a function name, or it may be found within a string. It is an indication that the variable or that portion of code may have year 2000 problems.

---

**Message:** 1118 Visual Basic date format strings that do not include a year format specifier.

**Cause:** The noted Visual Basic statement has a date format string which does not specify a year format.

**Correction:** The format does not imply year 2000 problems, but it does indicate a date sensitivity in the code that should be reviewed.

---

**Message:** 1119 Visual Basic date format strings with a 2 digit year format specifier.

**Cause:** The noted Visual Basic statement has a date format string which specifies an unsafe 2 digit year format.

**Correction:** The format string will produce an ambiguous 2 digit year date which may cause year 2000 problems. Review the use of this date and change the date format string to specify a 4 digit year format.

---

**Message:** 1120 Visual Basic date format strings with a 4 digit year format specifier.

**Cause:** The noted Visual Basic statement has a date format string which specifies a safe 4 digit year format.

**Correction:** The format does not imply year 2000 problems, but it does indicate a date sensitivity in the code that should be reviewed.

---

**Message:** 1121 Visual Basic date format strings with a time specifier.

**Cause:** The noted Visual Basic statement has a date format string which includes a time specifier.

**Correction:** The date format will use a date value, but will return only the time portion of the date. Review the referenced variable for potential year 2000 problems in other areas of the date related code.

**Message:** 1122 Visual Basic builtin date format strings.

**Cause:** The noted Visual Basic statement references a Date Format String builtin to Visual Basic.

**Correction:** Builtin Date Format Strings may refer to date formats that are not year 2000 compliant. Review the referenced builtin to determine if it will cause a problem.

**Message:** 1123 Visual Basic identifiers with a name that implies a date value.

**Cause:** The noted Visual Basic statement has an identifier whose name implies that it may convey date information or be used in date calculations.

**Correction:** Review the use of the variable to ensure that a potential year 2000 problems does not exist.

**Message:** 1124 Visual Basic statements that open a file.

**Cause:** The noted Visual Basic statement opens a file. The use of the data in the associated file may have year 2000 problems.

**Correction:** Review the use of the file to determine if there is a potential year 2000 problem related to its use.

**Message:** 1125 Visual Basic statements that read from a file.

**Cause:** The noted Visual Basic statement reads data from a file and may cause a potential year 2000 problem if the data is to be used as dates.

**Correction:** Review the use of the data read by the statement to ensure that a year 2000 data calculation is not required.

**Message:** 1126 Visual Basic statements that write to a file.

**Cause:** The noted Visual Basic statement writes to a file producing results to be used by another application.

**Correction:** Review the statement to ensure that the data conveyed does not have a year 2000 problem.

**Message:** 1127 Visual Basic statements that use the value(s) 365 and/or 366.

**Cause:** The noted Visual Basic source line performs a calculation using the value 365 or 366. This may indicate a calculation transforming days to years.

**Correction:** Review the calculation to ensure its accuracy in year 2000 date calculations.

**Message:** 1128 Visual Basic date format strings that are based on the systems 'short date' setting.

**Cause:** The noted source line uses a date format string based on the system 'short date' format. This format can be changed and may not be year 2000 compliant.

**Correction:** Use a defined 4 digit year date format.

**Background:** The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant.

---

**Message:** 1129 Visual Basic date format strings that are based on the systems 'long date' setting.

**Cause:** The noted source line uses a date format string based on the system 'long date' format. This format can be changed and although it is not necessarily year 2000 compliant, this format normally contains 4 digit years.

**Correction:** Use a defined 4 digit year date format.

**Background:** The system 'long date' and 'short date' formats can be easily changed and may be set to formats which are not year 2000 compliant.

---

**Message:** 1130 Macros that use a date related function includes a text date literal string near the 1900/2000 conversion cusp.

**Cause:** A macro uses a date related function and has a text date which is near the 1900/2000 cusp date.

**Correction:** Change the text date to a 4 digit year.

---

**Message:** 1131 Macros that use a date related function and whose formula includes a text date that can change century with a software version upgrade.

**Cause:** A macro has a date related function and a text date whose century interpretation would change century with a software upgrade.

**Correction:** Change the date to a 4 digit year.

---

**Message:** 1132 Macros that use a date related function and whose formula includes a text date literal string with a 2 digit year.

**Cause:** A macro has a date related function and a text date with an ambiguous 2 digit year.

**Correction:** Change the date to a 4 digit date.

---

**Message:** 1133 Macros that use a date related function and whose formula includes a text date literal string with a 3 digit year.

**Cause:** A macro has a date related function and a text date with a 3 digit year.

**Correction:** Change the text date to a 4 digit year.

---

**Message:** 1134 Macros that use a date related function and whose formula includes a text date literal string with a 4 digit year.

**Cause:** A macro has a date related function and a text date with a safe 4 digit year.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

---

**Message:** 1135 Macros that use a string that includes a date that cannot be represented as an internal date.

**Cause:** A macro has a date embedded in a string. Although this date is part of a larger text string and cannot be evaluated, its representation would not be representable within the limits of an internal date.

**Correction:** Review this macro. This date probably represents a data error.

**Message:** 1136 Macros that use a date related function and whose formula includes a text date literal string without year.

**Cause:** A macro has a date related function and a text date which does not have a year.

**Correction:** Review the cell contents to ensure that the date string is correctly implemented.

---

**Message:** 1137 Macros that use the DATE() function with an Out-Of-Range year.

**Cause:** A macro uses a DATE() function with a year value which is out of the range usable by the DATE() function.

**Correction:** Review the cell contents to ensure that the date is a correctly implemented.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

---

**Message:** 1138 Macros that use the DATE() function with a 2 digit year.

**Cause:** A macro uses a DATE() function with a year value which has a 2 digit year. This date will be interpreted as century 19.

**Correction:** Review the cell contents to ensure that the date string is correct

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

---

**Message:** 1139 Macros that use the DATE() function with a 3 digit year.

**Cause:** A macro uses a DATE() function with a year value which will be interpreted as century 20.

**Correction:** Review the cell contents to ensure that the date string is correct.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

---

**Message:** 1140 Macros that use the DATE() function with a 4 digit year.

**Cause:** A macro has a date embedded in a string. Although this date is part of a larger text string and cannot be evaluated, its representation is of a date without a year.

**Correction:** This may constitute a date problem, since the DATE() function may interpret a 4 digit year value differently depending upon whether it is above or below 1900. This date should be corrected.

**Background:** The DATE() function uses 1900 as a base date for year values between 0 and 1899, and does not do Date Windowing. Thus, a 2 digit year supplied to DATE is within century 19. A 3 digit year will probably be in century 20 and beyond (if the value is 100 or greater), and a 4 digit year (below 1900) is well beyond century 20. A 4 digit year of 1900 or higher is taken as the actual year value to the year 9999.

---

**Message:** 1141 Macros that include a text date literal string with a 2 digit year.

**Cause:** A macro has a text string which represents a date with an ambiguous 2 digit year.

**Correction:** Change the date into an unambiguous 4 digit year.

---

**Message:** 1142 Macros that include a text date literal string without a year.

**Cause:** A macro has a date string which represents a date without a year.

**Correction:** Review the cell contents to ensure that the date string is correct.

---

**Message:** 1143 Macros that include a text date literal string with a 3 digit year.

**Cause:** A macro has a text date which represents a date with a 3 digit year.

**Correction:** Review the cell contents to ensure that the date string is correct.

---

**Message:** 1144 Macros that include a text date literal string with a 4 digit year.

**Cause:** A macro has a text string representing a date with a 4 digit year.

**Correction:** This is not a year 2000 problem and is noted as a low severity to indicate the presence of a date.

---

**Message:** 1145 Macros that include a text date that cannot be represented as an internal date.

**Cause:** A macro has a text string which represents a date outside the range which can be represented as an internal date.

**Correction:** Review the cell for correct usage.

---

**Message:** 1146 Macros that include a text date literal string near the 1900/2000 conversion cusp.

**Cause:** A macro has a 2 digit text date which is near the 1900/2000 conversion cusp.

**Correction:** Change the date into an unambiguous 4 digit date.

---

**Message:** 1147 Macros that include a text date that can change century with a software version upgrade.

**Cause:** A macro has a 2 digit date whose interpretation can change century with a software version upgrade.

**Correction:** Change the date into an unambiguous 4 digit date.

---

**Message:** 1148 Macros with Embedded string that includes a date with 2 digit year.

**Cause:** A macro has a date embedded in a string. Although this date is part of a larger text string and cannot be evaluated, its representation is of a 2 digit year.

**Correction:** Review the cell contents to ensure that the date string is correct.

| | |
|---|---|
| **Message:** | 1149 Macros with Embedded string that includes a date with 3 digit year. |
| **Cause:** | A macro has a date embedded in a string. Although this date is part of a larger text string and cannot be evaluated, its representation is of a 3 digit year. |
| **Correction:** | Review the cell contents to ensure that the date string is correct. |

| | |
|---|---|
| **Message:** | 1150 Macros with Embedded string that includes a date with 4 digit year. |
| **Cause:** | A macro has a date embedded in a string. Although this date is part of a larger text string and cannot be evaluated, its representation is of a 4 digit year. |
| **Correction:** | Review the cell contents to ensure that the date string is correct. |

| | |
|---|---|
| **Message:** | 1151 Macros with Embedded string that includes a date without a year. |
| **Cause:** | A macro has a date embedded in a string. Although this date is part of a larger text string and cannot be evaluated, its representation is of a date without a year. |
| **Correction:** | Review the cell contents to ensure that the date string is correct. |

| | |
|---|---|
| **Message:** | 1152 Macros with Embedded string that includes a date near the 1900/2000 conversion cusp. |
| **Cause:** | A macro has a date embedded in a string. Although this date is part of a larger text string and cannot be evaluated, its representation is near the 1900/2000 conversion cusp. |
| **Correction:** | Review the cell contents to ensure that the date string is correct. |

| | |
|---|---|
| **Message:** | 1153 Macros with Embedded string that includes a date that cannot be represented as an internal date. |
| **Cause:** | A macro has a date embedded in a string. Although this date is part of a larger text string and cannot be evaluated, its representation is not in a range which could be represented as an internal date. |
| **Correction:** | Review the cell contents to ensure that the date string is correct. |

# Symantec Service and Support Solutions

Symantec is committed to excellent service worldwide. Our goal is to provide you with professional assistance in the use of our software and services, wherever you are located.

Technical Support and Customer Service solutions vary by country. If you have questions about the services described below, please refer to the section "Worldwide Service and Support" at the end of this chapter.

## Registering your Symantec product

To register your Symantec product, please complete the registration card included with your package and drop the card in the mail. You can also register via modem during the installation process (if your software offers this feature), via fax to (800) 800-1438 or (541) 984-8020, or online at http://www.symantec.com/.

## Technical support

Symantec offers an array of technical support options designed for your individual needs to help you get the most out of your software investment.

### World Wide Web

The Symantec World Wide Web site (http://service.symantec.com) is the doorway to a set of online technical support solutions where you will find the following services:

#### Interactive problem solver

Symantec's online interactive problem solver (known as the Support Genie) helps you solve problems and answer questions about many Symantec products.

#### Product knowledgebases

Product knowledgebases enable you to search thousands of documents used by Symantec Support Technicians to answer customer questions.

#### FAQs

Frequently Asked Questions documents, also known as FAQs, list commonly asked questions and clear answers for specific products.

### Discussion groups

Discussion groups provide a forum where you can ask questions and receive answers from Symantec online support technicians.

### FTP

Point your web browser to http://service.symantec.com to search for and download technical notes and software updates. You can also click the LiveUpdate button in programs enabled with this feature to automatically download and install software updates and virus definitions.

## Other Support Options

Other Symantec support options include the following:

| | |
|---|---|
| **America Online** | Type Keyword: SYMANTEC to access the Symantec forum. |
| **CompuServe** | Type GO SYMANTEC to access the Symantec forum. |
| **Symantec BBS** | Set your modem to 8 data bits, 1 stop bit, no parity and dial (541) 484-6669. |
| **Automated fax retrieval system** | To receive general product information, fact sheets and product upgrade order forms directly to your fax machine, please call our Customer Service fax retrieval system at (800) 554-4403 or (541) 984-2490.<br><br>For technical application notes, please call our Technical Support fax retrieval system at (541) 984-2490 and select option 2. |
| **StandardCare Support** | This service is offered on 541 toll telephone lines from 6 a.m. to 4 p.m. PST. The support period begins with the first call made to Technical Support. Only available in the United States and Canada at (541)984-7990. |
| **Gold and 900 PriorityCare Support (Fee-based Support)** | These services are offered on 800 and 900 lines for a fee from 6 a.m. to 4 p.m. PST. The 800 option at (800) 745-6056 includes a per incident charge of $29.00. The 900 option at (900) 646-0000 will cost $2.95 per minute. Customers may purchase Gold Support subscriptions for five or ten incidents. Only available in the United States and Canada. |

## Support for old and discontinued versions

When a new version of this software is released, registered users will receive upgrade information in the mail. Telephone support will be provided for the previous version for 6 months after the release of the new version. Technical information may still be available through online support.

When Symantec announces that a product will no longer be marketed or sold, telephone support will be discontinued 60 days later. Support will only be available for discontinued products through online services. See the section "Technical support" for online service options.

# Customer Service

You may contact Customer Service online at:

http://www.symantec.com/

Customer Service can assist you with non-technical questions such as:

- Subscribing to the Symantec Support Solution of your choice.
- Obtaining product literature or trialware.
- Locating resellers and consultants in your area.
- Replacing missing or defective CDs, disks, manuals, etc.
- Updating your product registration with address or name changes.
- Order or return or rebate status.
- Frequently Asked Queestions (FAQ's).
- Posting questions to a Customer Service Newsgroup.

You may call Customer Service at: (800) 441-7234.

### Upgrade Orders

For upgrade orders, please call the Customer Service Order Desk at: (800) 568-9501.

# Worldwide Service and Support

Symantec provides Technical Support and Customer Service worldwide. Services vary by country and include International Partners who represent Symantec in regions without a Symantec office. For general information, please contact the Symantec Service and Support Office for your region.

# Service and Support offices

**NORTH AMERICA**

| | |
|---|---|
| Symantec Corporation<br>175 W. Broadway<br>Eugene, OR 97401 | **http://www.symantec.com/**<br>(800) 441-7234 (USA & Canada)<br>(541) 334-6054 (all other locations)<br>Fax: (541) 984-8020 |
| Automated Fax Retrieval | (800) 554-4403<br>(541) 984-2490 |

**BRAZIL**

| | |
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**EUROPE**

| | |
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| Symantec Ltd.<br>Schipholweg 103<br>2316 XC Leiden<br>The Netherlands | +31 (71) 408 3111<br>Fax: +31 (71) 408 3150 |
| Automated Fax Retrieval | +31 (71) 408 3782 |

**ASIA/PACIFIC RIM**

| | |
|---|---|
| Symantec Australia Pty. Ltd.<br>408 Victoria Road<br>Gladesville, NSW 2111<br>Australia | +61 (2) 9850 1000<br>Fax: +61 (2) 9850 1001 |
| Automated Fax Retrieval | +61 (2) 9817 4550 |

Most International Partners provide Customer Service and Technical Support for Symantec products in your local language. For more information on other Symantec and International Partner locations, please call our Technical Support automated fax retrieval service, in the United States at +1 (541) 984-2490, choose Option 2, and request document 1400.

Every effort has been made to ensure the accuracy of this information. However, the information contained herein is subject to change without notice. Symantec Corporation reserves the right for such change without prior notice.

5/99

# Norton 2000

# CD Replacement Form

**CD REPLACEMENT:** After your 60-Day Limited Warranty, if your CD becomes unusable, fill out and return 1) this form, 2) your damaged CD, and 3) your payment (see pricing below, add sales tax if applicable), to the address below to receive replacement CD. DURING THE 60-DAY LIMITED WARRANTY PERIOD, THIS SERVICE IS FREE. You must be a registered customer in order to receive CD replacements.

## FOR CD REPLACEMENT

Please send me: ___ CD Replacement

Name _____

Company Name_____

Street Address (No P.O. Boxes, Please) _____

City _____ State _____ Zip/Postal Code _____

Country* _____ Daytime Phone _____

Software Purchase Date _____

*This offer limited to U.S., Canada, and Mexico. Outside North America, contact your local Symantec office or distributer.

Briefly describe the problem: _____

_____

| | |
|---|---|
| CD Replacement Price | $ 10.00 |
| Sales Tax (See Table) | |
| Shipping & Handling | $ 4.95 |
| TOTAL DUE | |

**SALES TAX TABLE:** **AZ** (5%), **CA** (7.25%), **CO** (3%), **CT** (6%), **DC** (5.75%), **FL** (6%), **GA** (4%), **IA** (5%), **IL** (6.25%), **IN** (5%), **KS** (4.9%), **LA** (4%), **MA** (5%), **MD** (5%), **ME** (6%), **MI** (6%), **MN** (6.5%), **MO** (4.225%), **NC** (6%), **NJ** (6%), **NY** (4%), **OH** (5%), **OK** (4.5%), **PA** (6%), **SC** (5%), **TN** (6%), **TX** (6.25%), **VA** (4.5%), **WA** (6.5%), **WI** (5%). Please add local sales tax (as well as state sales tax) in AZ, CA, FL, GA, MO, NY, OH, OK, SC, TN, TX, WA, WI.

## FORM OF PAYMENT ** (Check One):

___ Check (Payable to Symantec) Amount Enclosed $ _____ __ Visa __ Mastercard __ American Express

Credit Card Number _____Expires _____

Name on Card (please print) _____ Signature _____

****U.S. Dollars. Payment must be made in U.S. dollars drawn on a U.S. bank.**

## MAIL YOUR CD REPLACEMENT ORDER TO:

Symantec Corporation
Attention: Order Processing
175 West Broadway
Eugene, OR 97401-3003 (800) 441-7234

**Please allow 2-3 weeks for delivery within the U.S.**



SYMANTEC.™

# N2K Team

| | | |
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