



# Information Management for z/OS

## *Desktop User's Guide*

*Version 7.1*

SC31-8740-00





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## Tivoli Information Management for z/OS Desktop User's Guide

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# Contents

<b>Preface</b> .....	<b>ix</b>
Who Should Read This Document .....	ix
Prerequisite and Related Documents .....	ix
What This Document Contains .....	ix
Desktop Enhancements for Tivoli Information Management for z/OS Version 7.1.....	x
Typeface Conventions .....	xi
Contacting Customer Support .....	xii
<b>Chapter 1. Introduction</b> .....	<b>1</b>
Data Flow.....	3
<b>Chapter 2. Installation</b> .....	<b>7</b>
Hardware Requirements.....	7
Software Requirements .....	7
Installing the Desktop .....	8
Host Installation Instructions .....	8
Workstation Installation Instructions.....	11
Verifying HTTP Server File Access .....	13
Loading the Sample Helpdesk Hierarchy File.....	14
Providing Users with the Configuration Editor Information .....	15
Setting Up People Records .....	15
HTTP Server Security and the Desktop .....	17
<b>Chapter 3. Using the Desktop Sample Application</b> .....	<b>19</b>
Getting Started .....	19
Logging on .....	20
Using the Configuration Editor .....	21
Tivoli Information Management for z/OS Desktop Window .....	23
Navigating the Desktop .....	25
Using Your Mouse.....	25
Using the Keyboard.....	25
Managing Windows.....	25
Using Drag and Drop .....	25
Using the Menu Bar .....	26
Using the Toolbar .....	27
Setting User Preferences .....	28
Responding to Validation Errors.....	33

---

I	Locking Records for Update . . . . .	34
	Resetting Data. . . . .	35
	Transacting with Tivoli Information Management for z/OS. . . . .	36
	Using the Calendar . . . . .	36
I	Attaching Files to Records. . . . .	37
	Completing and Filing Records . . . . .	39
	Summary of Tasks You Can Perform . . . . .	39
	Call Registration . . . . .	41
	Caller . . . . .	41
	Call Taker . . . . .	42
	Create Call . . . . .	44
	Update Call Registration . . . . .	45
	Update Caller . . . . .	45
	Update Call Taker . . . . .	46
	Update Call. . . . .	46
	Problem Registration . . . . .	47
	General Information . . . . .	47
	Detail Description . . . . .	48
	Assignee . . . . .	49
	Create Problem . . . . .	51
	Associate Problem to Call . . . . .	52
	Update Problem Registration . . . . .	53
	Update General Information. . . . .	53
	Update Detail Description . . . . .	54
	Update Assignee . . . . .	54
I	Change Registration . . . . .	55
I	Requester Data . . . . .	55
I	Assignee Data . . . . .	56
I	Close Data . . . . .	57
I	Approver Data. . . . .	57
I	Text Data . . . . .	59
I	Update Change Registration. . . . .	60
I	Update Requester Data . . . . .	61
I	Update Assignee Data . . . . .	61
I	Update Close Data . . . . .	61
I	Update Approver Data. . . . .	62
I	Update Text Data . . . . .	62
I	Activity Records . . . . .	63
	People Registration . . . . .	64

---

---

	Create . . . . .	64
	Update . . . . .	65
	Creating Solution Records . . . . .	66
	Problem Solution Data. . . . .	66
	Create Solution . . . . .	67
	Searching for Data . . . . .	68
	Selecting a Table Panel . . . . .	69
	Specifying Columns . . . . .	70
	Searching from the Center Pane. . . . .	71
	Searching from the Actions Menu . . . . .	74
	Sorting the Search Data. . . . .	76
	Rearranging Columns from a Search . . . . .	76
	Printing the Search Results List Table Display . . . . .	76
	Resetting the Search Results List Table Display . . . . .	76
	Change Approval. . . . .	77
	Mapping Smart Fields . . . . .	78
	Viewing the History of a Record . . . . .	79
	Importing and Exporting Files . . . . .	80
	Importing Files from the HTTP Server. . . . .	80
	Exporting Files to the HTTP Server. . . . .	81

**Chapter 4. Designing a Desktop Application . . . . . 85**

	Data Model Records . . . . .	85
	Understanding the Desktop Data Model Records . . . . .	86
	Understanding the Field and Panel Design . . . . .	86
	Creating the Data Attribute Records. . . . .	88
	Creating the Data View Records . . . . .	91
	Associating Data Attribute Records with a Data View Record . . . . .	92
	Using the Desktop Options . . . . .	95
	Create R and Update R Tasks . . . . .	123
	Enabling Change Approval Processing . . . . .	124
	Defining the Change Approval Table . . . . .	125
	Building Data Model Records with the BLGTDMBL TSX. . . . .	130

**Chapter 5. The Desktop Toolkit . . . . . 131**

	Customizing the Desktop. . . . .	131
	Logging on with the Toolkit . . . . .	132
	Toolkit Graphical Components. . . . .	134
	Window . . . . .	134

---

Menu Bar . . . . .	136
Pop-up Menu. . . . .	138
Toolbar . . . . .	138
Status and Transactions . . . . .	139
Using the Toolkit To Build or Change an Application Hierarchy . . . . .	140
Building a Hierarchy . . . . .	140
Changing a Hierarchy . . . . .	141
Associating Data Properties . . . . .	142
Associating Tasks with Panel Types . . . . .	143
Understanding Required Field Processing. . . . .	144
Associating Button Properties . . . . .	145
Defining Table Panels for the Desktop User. . . . .	150
Enabling the Parent/child Function. . . . .	152
Previewing the Application . . . . .	152
Mapping Smart Fields . . . . .	153
Building Field Level Help . . . . .	158
Working with Solution Records . . . . .	161
Saving the Application Hierarchy. . . . .	162
Sending the Hierarchy File to the HTTP Server . . . . .	162
Getting the Hierarchy File from the HTTP Server . . . . .	162
Enabling the User Export Option . . . . .	162
Exporting Files to the HTTP Server. . . . .	164
Importing Files from the HTTP Server. . . . .	165
Writing TSPs and TSXs. . . . .	167
Writing Search TSXs for the Desktop . . . . .	171
Using the Toolkit To Build an Application Help Hierarchy . . . . .	172
Previewing Your Application Help Hierarchy . . . . .	174
Designing the Application . . . . .	175
<b>Appendix A. Data Model Record List . . . . .</b>	<b>177</b>
BLGDVLAY . . . . .	177
Map of GUI Fields to Host Records. . . . .	178
Data View Records . . . . .	190
<b>Appendix B. Toolkit Reference for the Sample Application . . . . .</b>	<b>199</b>
Default Hierarchy Properties . . . . .	199
<b>Appendix C. Identifying Help Desk Callers . . . . .</b>	<b>205</b>
Creating a Record . . . . .	205

---



---

Displaying Records .....	209
<b>  Appendix D. Working with Customized Desktop Applications .....</b>	<b>211</b>
Working with List Data Fields in the Desktop .....	211
Performing Actions on the Table .....	211
Parent and Child Records .....	213
Creating a Child Record .....	215
Updating a Child Record .....	215
Displaying a Child Record .....	216
Deleting a Child Record .....	216
<b>  Appendix E. REXX EXECs .....</b>	<b>217</b>
<b>Appendix F. Where to Find More Information .....</b>	<b>219</b>
The Tivoli Information Management for z/OS Library .....	219
<b>Index .....</b>	<b>223</b>



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## Preface

This guide provides an overview of the Tivoli® Information Management for z/OS Desktop application. The Desktop is an optional feature of Tivoli Information Management for z/OS that enables users to create and interact with records in the Tivoli Information Management for z/OS database through a customizable starter application that uses a Java™ framework to present data in a graphical user interface. The guide describes how to install, use, and customize the Desktop to meet the particular needs of your Tivoli Information Management for z/OS environment.

There may be references in this publication to versions of Tivoli Information Management for z/OS's predecessor products. For example:

- TME 10™ Information/Management Version 1.1
- Information/Management Version 6.3, Version 6.2, Version 6.1
- Tivoli Service Desk for OS/390® Version 1.2

## Who Should Read This Document

This guide is intended for users of the Desktop, the Desktop administrator, the Tivoli Information Management for z/OS administrator or installation coordinator, or anyone interested in learning how to use the Desktop to create an application that exchanges data with Tivoli Information Management for z/OS.

If you are creating an application that uses the Java-based Desktop interface, or modifying the Desktop application to suit your needs, you do not require Java programming skills. If you are an administrator for the Desktop application, it may help to be familiar with the Panel Modification Facility of Tivoli Information Management for z/OS.

## Prerequisite and Related Documents

The library for Tivoli Information Management for z/OS consists of an extensive set of publications, as described in “Where to Find More Information” on page 219. In addition to this guide, the following Tivoli Information Management for z/OS publication is recommended if you are installing or customizing the Desktop:

- *Tivoli Information Management for z/OS Panel Modification Facility Guide*

## What This Document Contains

This book contains the following sections:

- “Introduction” on page 1 provides an overview of the application and explains how it is used in a Tivoli Information Management for z/OS environment.
- “Installation” on page 7 explains how to install the application in the host and workstation environments.
- “Using the Desktop Sample Application” on page 19 describes how to start and use the basic Tivoli Information Management for z/OS Desktop (if you did not make modifications to the sample Desktop application).
- “Designing a Desktop Application” on page 85 describes how data model records are used by Tivoli Information Management for z/OS at the host to design the look and

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function of the Desktop on the user's workstation. Information is provided to help you modify the existing design of the Desktop or set up new data model records to create a new application.

- “The Desktop Toolkit” on page 131 describes how to use the Toolkit provided with the Desktop to build a new application or modify an existing one. Suggestions are also provided on how to approach building your own application.
- “Data Model Record List” on page 177 lists the sample data model records used by Tivoli Information Management for z/OS to define the operation of the Desktop.
- “Toolkit Reference for the Sample Application” on page 199 summarizes the layout of the sample Desktop application from a Toolkit perspective so that you can see what panel types, data view records, buttons, and functions are used in the sample application.
- “Identifying Help Desk Callers” on page 205 describes how to create records on the Tivoli Information Management for z/OS host that can be used to identify help desk callers or support personnel.
- “Working with Customized Desktop Applications” on page 211 describes the use of functions which may be available on your customized Desktop, including how to manage groups of related list data fields as tables and how you can work with the tables. This appendix also provides information on parent and child records.
- “REXX EXECs” on page 217 lists for the administrator the commonly used REXX EXECs which support the basic functions of the Desktop.

## Desktop Enhancements for Tivoli Information Management for z/OS Version 7.1

The Desktop was introduced in Tivoli Service Desk for OS/390 Version 1.2 as a help desk starter application. It has been enhanced with performance changes, security changes, and usability changes. Among the changes in the Desktop for Tivoli Information Management for z/OS Version 7.1 are:

- Security is improved. You can use the Desktop in conjunction with an HTTP Server that implements basic authentication. This change is described in “HTTP Server Security and the Desktop” on page 17.
- The locking of records when they are retrieved for update. This prevents other users from updating or retrieving a record for update when it has been retrieved for update by another user. Locking and unlocking records is described in “Locking Records for Update” on page 34.
- The ability to attach files, such as error logs, traces, and even audio files, to Tivoli Information Management for z/OS records. This enhancement adds considerably to the value of an individual record. Information about using this function can be found in “Attaching Files to Records” on page 37.
- The ability to create solution records which preserve valuable information about the resolution of problems. Solution records can be recalled to aid in the resolution of future problems. For more information about solution records, see “Creating Solution Records” on page 66, as well as the *Tivoli Information Management for z/OS Program Administration Guide and Reference*.
- The ability to view history data about a record. Additional information about this can be found in “Viewing the History of a Record” on page 79.

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- The ability to import any type of file from the HTTP Server and export any type of file to the HTTP Server. For example, you can create a system dump, or record a message about a problem, and export it to the HTTP Server (or import it from the HTTP Server). This is described in “Importing and Exporting Files” on page 80 for the Desktop and in “Exporting Files to the HTTP Server” on page 164 and “Importing Files from the HTTP Server” on page 165 for the Toolkit.
  - The ability for the Desktop to handle list data fields. List data fields can be managed as individual fields, and groups of related list data fields can be managed as tables. The Desktop administrator should refer to “Using the Desktop Options” on page 95 for additional information. Details about how the Desktop user works with list data fields can be found in “Working with List Data Fields in the Desktop” on page 211.
  - The ability for the Desktop administrator to enable change approval processing, allowing Desktop users to approve or reject changes for particular approvers. Information about enabling this function can be found in “Enabling Change Approval Processing” on page 124.
  - The ability to use the Toolkit to define the table panels that can be accessed by the Desktop user. In order to provide more meaningful information for the Desktop user, the administrator can limit table selections, define table descriptions, and define column titles for those tables which are enabled for the user. Detail on using this capability can be found in “Defining Table Panels for the Desktop User” on page 150.
  - The ability to use the Toolkit to create customized field level help for the Desktop user. Detail on using this capability can be found in “Building Field Level Help” on page 158.
  - The ability to use the Toolkit to build a customized help menu hierarchy that reflects your customized application hierarchy structure. Such a help menu hierarchy can be tailored to the needs of your organization. Detail on using this capability can be found in “Using the Toolkit To Build an Application Help Hierarchy” on page 172.
  - The ability to use the Toolkit to associate parent and child records in the Tivoli Information Management for z/OS database. The Desktop administrator can create a button to enable the Desktop user to view the relationship between a parent record and one or more child records, and to create, update, display, or delete child records. This capability is described for in “Parent and Child Records” on page 213 for the Desktop user and in “Enabling the Parent/child Function” on page 152 for the Toolkit user.

## Typeface Conventions

This guide uses several typeface conventions for special terms and actions. These conventions have the following meaning:

**Bold** Entries that you must use literally, choices, or options that you select appear in **bold**. The names of titles or screen objects in graphical windows also appear in bold.

*Italics* Variables and values that you must provide appear in *italics*. New terms also appear in italics.

**Monospace**

Code examples, output, and messages are in monospace font.

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- Navigate our Web site at **<http://www.support.tivoli.com>**

For support outside the United States, refer to your Customer Support Handbook for phone numbers in your country. The Customer Support Handbook is available online at **<http://www.support.tivoli.com>**.

When you contact Tivoli Customer Support, be prepared to provide identification information for your company so that support personnel can assist you more readily.

The latest downloads and fixes can be obtained at **<http://www.tivoli.com/infoman>**.

## 1

# Introduction

The Desktop is an optional feature of Tivoli Information Management for z/OS that enables you to use or create a graphical user interface (GUI) application to add, update, delete, browse, or search data stored in the Tivoli Information Management for z/OS database. As shown in Figure 1, the Desktop provides a set of icons you can use to create records with information about calls, problems, changes, activities, and solutions, or to search for data in Tivoli Information Management for z/OS.

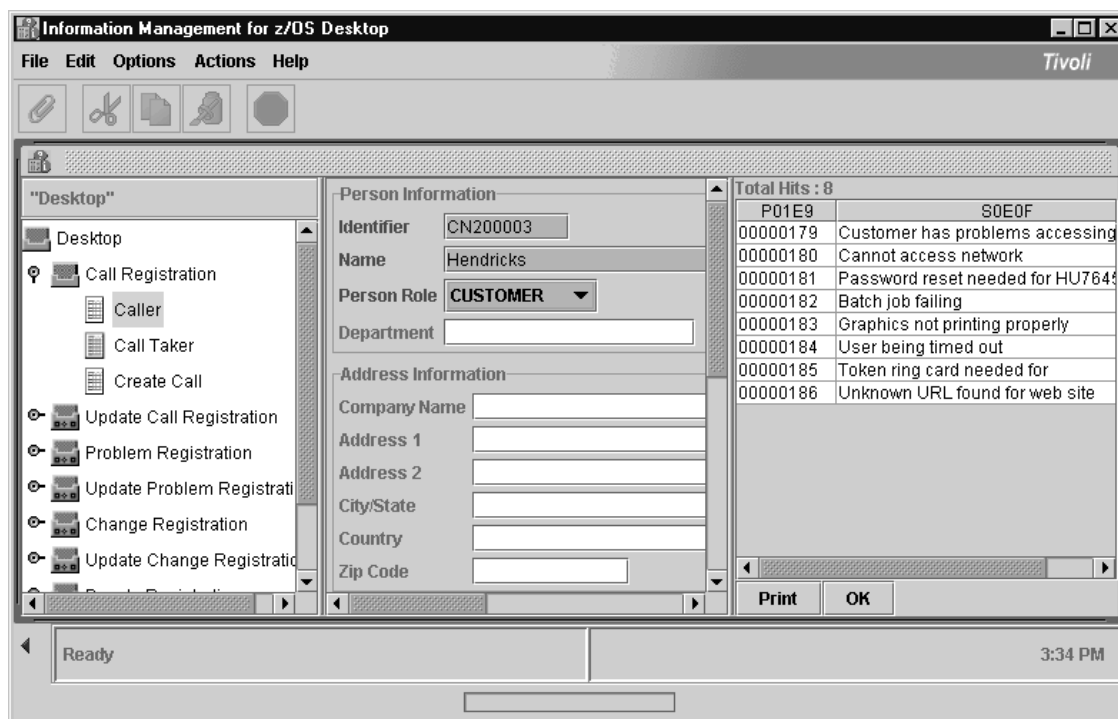


Figure 1. Tivoli Information Management for z/OS Desktop

The Desktop provides the ease of use of a GUI with the flexibility of designing your own application through the use of data model records on the host. The ISPF GUI mode of communicating with Tivoli Information Management for z/OS, in contrast, simply presents host panels on the workstation with graphic controls.

The Desktop provides the following:

- A sample application, called the Desktop application, which supplies the following types of records: Call, Problem, Change, Activity, and Solution. The Desktop also offers a search capability, allowing you to search for information in these records.

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You can use your mouse and graphical task panels to submit the records you create or modify to Tivoli Information Management for z/OS without having to touch traditional 3270 host panels. You do not have to see “numbered” options, use any special Tivoli Information Management for z/OS commands (such as ;BA), or remember how to formulate host queries to retrieve data. Instead, you enter text, make selections, and view data through a graphical user interface.

Keep in mind, however, that the Desktop is not a distributed help desk rewrite of Tivoli Information Management for z/OS. It provides application presentation on a distributed platform, and offers a way for you to tailor a GUI application to suit your business needs.

- A host-centric way to dynamically build a Java-based GUI through enhanced data model records

The GUI application can be customized easily to fit your business needs through the use of enhanced data model records. These data model records, which reside in the Tivoli Information Management for z/OS host database, provide a centralized location for administrators to make changes or updates to the design of the application. The use of data model records simplifies the task of updating your user’s application whenever a new requirement or process change comes up. You can easily add or delete data fields from GUI panels simply by altering the definition of the data model records on the host.

For example, suppose you want to add three new fields to an existing problem record entry panel in your Desktop application. You can create data attribute records for these fields (if they did not already exist) in Tivoli Information Management for z/OS. Then, you can easily associate the data attribute records with the data view record used by your application for problem records. You can also specify in what grouping or order these new fields should appear in the Desktop panel. Essentially, you can create your own application without the need for programming skills. Once the design is updated, users can automatically pick up the changes when they start up and log on to their Desktop application. With host-centric design, you can make application changes without having to worry about installing code upgrades on user workstations.

If you need special processing, you can also run Tivoli Information Management for z/OS terminal simulator panels (TSPs) or terminal simulator EXECs (TSXs) from fields or buttons in the GUI panel. You can also associate a TSP or TSX with a data view record and have the TSP or TSX run when a record is filed.

- A GUI Toolkit that is used to customize the appearance and function of your application  
Administrators can use the Desktop Toolkit to create applications that align with your business process flow. With the Toolkit, you can change the tree view (graphical hierarchy of processes and tasks that is called the *application hierarchy*) that will appear to your users. For example, you can use the Toolkit to add or delete process and task icons, define the transactions associated with tasks, and specify buttons that invoke functions in your application. You can use the Toolkit to modify the GUI panel that users will use to perform transactions with the Tivoli Information Management for z/OS database. The hierarchy of processes and tasks is also host-centric. After you save the design of the application hierarchy in a file, you can send the file to an FTP server in OS/390 UNIX<sup>®</sup> System Services where it will be automatically accessed by other networked workstations running the Desktop application.
- Data security

Through the use of Tivoli Information Management for z/OS privilege classes and field usage restrictions, you can control who has access to Tivoli Information Management for z/OS data and define what data the users see. Your OS/390 UNIX System Services



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administrator can control the directories and files a user can access through OS/390 UNIX System Services permission bit settings. Authorized individuals can be given the proper permission to update the file that governs the look of your application. The HTTP Server used by the Desktop can be configured to provide additional security through the use of basic authentication.

- Data functions

With the Desktop, you can create, update, delete, get, and search on records in the Tivoli Information Management for z/OS database. These general functions are provided with the sample application. If you decide to create an application, you can assign these functions to buttons of your choice in your application.

- Field validation and support for a variety of fields

As you move from one field to the next in the Desktop and enter data, the Desktop checks your data entries at the workstation. The Desktop uses validation information obtained from Tivoli Information Management for z/OS data attribute records when you start the Desktop application. If you enter an incorrect response, the Desktop informs you so that you can quickly correct the errors. Fields that accept only certain responses in Tivoli Information Management for z/OS, such as a problem status field that may accept only INITIAL, OPEN, or CLOSED as a response, are displayed in the Desktop as a combo box for easy selection. Fields with validation patterns are displayed as scrollable, editable text fields. Freeform text fields are displayed as multi-line, editable, scrollable text areas. Calendar buttons are also provided for date fields. By clicking a calendar button, you can view a monthly calendar and click on a day to enter date information.

- Configuration editor

A configuration editor is provided to enable you to establish a connection to Tivoli Information Management for z/OS and to provide the necessary identification information for database transactions. The configuration editor retains important identification and logon information, such as your HTTP Server name and port number, host information, and FTP port number and remote file path.

## Data Flow

The flow of data in the Desktop application, or in an application you create using the Desktop Toolkit interface, is depicted in Figure 2 on page 4. As noted in the diagram, the components that allow the Desktop to process data reside on the workstation and in the OS/390 UNIX System Services (formerly OpenEdition®) and MVS/ESA™ elements of OS/390.

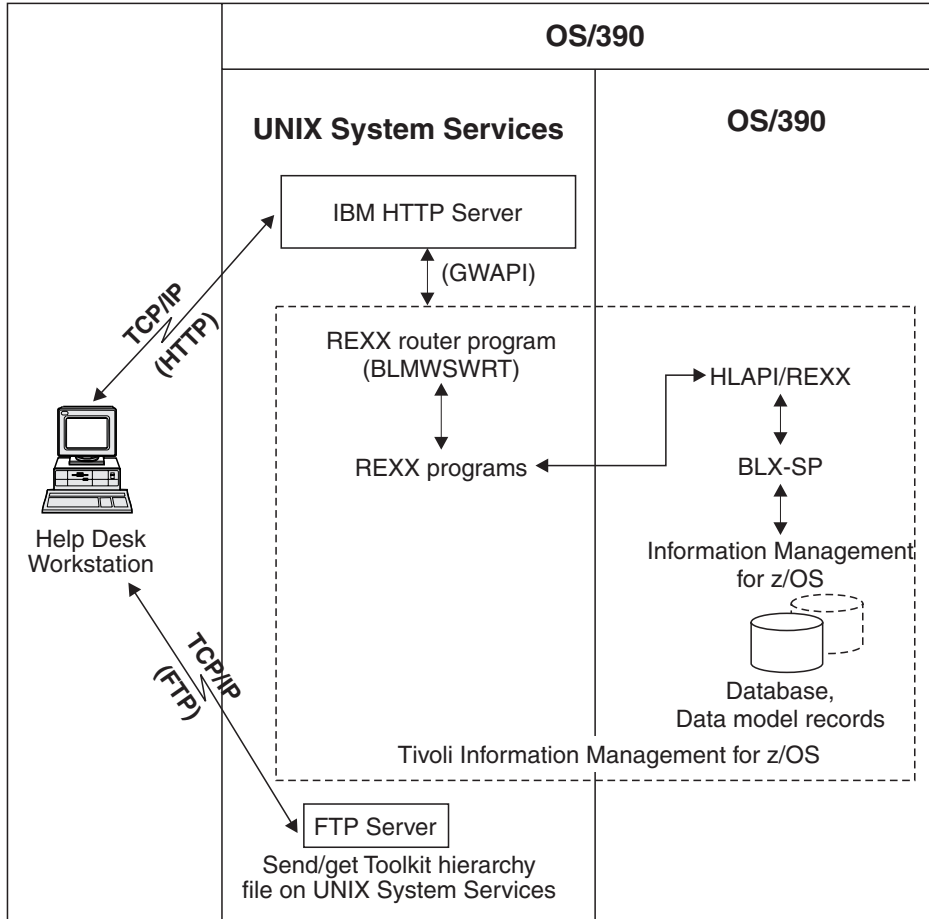


Figure 2. Overview of Desktop Application

Data flows in the following manner:

- You can communicate with Tivoli Information Management for z/OS through a help desk workstation that has the Desktop installed. A *configuration file* (called **jhd.properties**) on the workstation identifies who the user is. The user creates the configuration file through the Desktop configuration editor. The configuration file contains information such as the HTTP Server name and port number, host data (including privilege class), and FTP port number. You can access the configuration editor from Tivoli Information Management for z/OS logon window to change any configuration information as needed.

When you start the Desktop, configuration data is obtained from the configuration file on your help desk workstation. If a configuration file is not found on the workstation, you can display the Configuration Editor window, enter and save the configuration information in a file, and test the HTTP protocol transactions and FTP connections. You can then exit the configuration editor and start the Desktop.

If the configuration file already exists, an OS/390 logon dialog is displayed for you to sign on with an MVS™ TSO user ID and password. The entry of a password is required whenever a logon occurs.

- The following actions take place:
  - The Desktop *application hierarchy* is retrieved from the remote file path specified in your configuration file through an FTP connection to OS/390 UNIX System Services.

The application hierarchy was built previously by the administrator with the Desktop Toolkit. The file contains the graphical structure of your application; that is, the tree structure of processes and tasks and push buttons you can select. The application hierarchy determines what you see and do in the application.

HELPDESK is the name of the default application hierarchy that is initially used by the sample Desktop application.

The application hierarchy is retrieved from the OS/390 UNIX System Services directory whenever a user starts the Desktop application.

**Note:** If the application hierarchy is updated by an administrator on OS/390 UNIX System Services while users are logged on to Tivoli Information Management for z/OS, or if data model records are updated on Tivoli Information Management for z/OS, the updates will take effect the next time you start the Desktop (or Desktop Toolkit) application. Some data model record changes will not show up even after the user logs off unless the HTTP Server is restarted or the administrator issues the following command from a browser:

```
http://hostname:portnumber/INFOWEB/TERM.REXX
```

where hostname is the host name of your MVS system and portnumber is the port number used to access the HTTP Server for OS/390. This command should not be used if your Tivoli Information Management for z/OS system is running with parallel sysplex support activated.

- The connection between your workstation and HTTP Server is established, and the MVS/TSO user ID and password entered as part of the OS/390 logon are validated. The Tivoli Information Management for z/OS privilege class specified in the configuration file is validated. Then the MVS/TSO user ID is checked to see if it exists in the privilege class.
- HTTP Server starts a REXX program which establishes an initialization transaction with the Tivoli Information Management for z/OS environment. The REXX programs interface with Tivoli Information Management for z/OS through the Tivoli Information Management for z/OS HLAPI/REXX, which interfaces with the BLX-SP.
- Data view records and associated data attribute records (data model records) are read from the Tivoli Information Management for z/OS database and passed in a data stream through an HTTP connection to the application on your workstation.

What you see and do in the workstation application is largely determined by the information that is contained in the data view and data attribute records. The icons, panels, and entry fields in the workstation application are all defined at the Tivoli Information Management for z/OS host and specified in an application hierarchy that is built with the Toolkit.

- A hierarchy of processes and tasks, representing the work you can perform in that application, is presented in a panel in your application. You can click on task icons, enter or view data, and submit the data to Tivoli Information Management for z/OS through the Desktop.

The next section describes how to install the host and workstation components of the Desktop.



# 2

## Installation

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This section describes what you need to install and use the Tivoli Information Management for z/OS Desktop application.

### Hardware Requirements

The following workstation hardware is recommended at a minimum to use the Desktop:

- IBM® Personal Computer or any compatible system unit that supports a 133 MHz CPU or higher
- 48 MB or more of memory
- 40 MB hard disk space

### Software Requirements

To use the Desktop, you must have the following:

#### Host

- IBM HTTP Server for OS/390 Version 5.2 or later
- TCP/IP Version 3.2
- Tivoli Information Management for z/OS Version 7.1 or later

Data view and data attribute records must be installed in a Tivoli Information Management for z/OS database. Data view and data attribute records are provided with Tivoli Information Management for z/OS to support the Desktop application. These data model records are provided in the installation data set SBLMRCDS, and must be loaded. If you modify the Desktop application or create a new application that uses the Desktop interface, you must modify these data view and data attribute records or create new ones.

**Note:** Before modifying the data model records that are provided to support the sample Desktop application, you should make a copy of them and save the copy. This way, the setup of the original sample application is not lost, and you can return to the sample Desktop application if necessary.

- MVS/TSO user ID

Users and administrators of the Desktop must have a valid MVS/TSO user ID for the host system where Tivoli Information Management for z/OS is installed, including a privilege class assignment.

The TSO user ID should have an OMVS segment to enable the user or administrator to access OS/390 UNIX System Services. This user ID and password will be used to log on in the Desktop's logon dialog and will be used

to retrieve the application hierarchy. The application hierarchy is stored in an OS/390 UNIX System Services directory and is used by the Desktop application.

**Note to Administrators:** TSO user IDs should have the proper RACF<sup>®</sup> permission bit settings. User TSO user IDs should be able to retrieve the application hierarchy which is stored in OS/390 UNIX System Services and used by the Desktop application. Your OS/390 systems administrator can control the directories and files a user can access through RACF permission bit settings, and can restrict access to the application hierarchy by user ID. To use the sample Desktop application, users should be given read-only access to the application hierarchy. If you or other individuals are responsible for updating application hierarchies, you need write permission to the application hierarchies.

### Workstation

- Microsoft<sup>®</sup> Windows NT<sup>®</sup> 4.0, Windows<sup>®</sup> 95, Windows 98, or Windows 2000 Professional.
- A TCP/IP connection to Tivoli Information Management for z/OS

Users of the Desktop application are not required to know how to enter records natively in Tivoli Information Management for z/OS, although they do need a logon for Tivoli Information Management for z/OS.

The Desktop administrator or installer should have some familiarity with Tivoli Information Management for z/OS to be able to maintain host data model records supporting the Desktop application.

## Installing the Desktop

To install the Desktop, you need to install components in the host Tivoli Information Management for z/OS environment and on individual user workstations.

### Host Installation Instructions

To install the host components, follow these steps:

1. Ensure IBM HTTP Server for OS/390 Version 5.2 or later is installed and working in OS/390 UNIX System Services. You can use basic authentication in your HTTP Server. Additional information about HTTP Server security and the Desktop can be found in “HTTP Server Security and the Desktop” on page 17.
2. Ensure that a TCP/IP connection exists between the FTP server on OS/390 UNIX System Services and the workstation. Users require an FTP connection to receive transfers of the application hierarchy. The Desktop administrator requires an FTP connection to perform administrative duties such as sending application hierarchies to a directory location on OS/390 UNIX System Services.
3. Follow these steps to configure your HTTP Server for the Desktop:
  - a. The REXX EXECs should have been installed in UNIX System Services directory /usr/lpp/InfoMan/Desktop/rexx as part of the Tivoli Information Management for z/OS Version 7.1 base product installation process. Verify that the REXX EXECs are located in this directory.
  - b. Create an external link to the GWAPI REXX DLL, IMWX00. From an OS/390 UNIX System Services session, enter the following:

```
ln -e IMWX00 /usr/lpp/InfoMan/Desktop/rexx/IMWX00.so
```

For a listing of the names and functions of the most commonly used REXX EXECs, see “REXX EXECs” on page 217. The names of the REXX EXECs should be uppercase and include such EXEC names as BLMWNGET, BLMWSWRT, BLMWCMAC, and others. The EXECs support use of single-byte character set data.

- c. For double-byte character set (DBCS) support, you must perform this additional step after copying the REXX EXECs. (You can skip this step if you do not require support for double-byte character sets.) You must overlay the REXX EXECs located in /usr/lpp/InfoMan/Desktop/rexx with REXX EXECs that support use of DBCS data with the Desktop. The DBCS REXX EXECs are available in the SBLMREXD data set. You can overlay the REXX EXECs with the appropriate DBCS REXX EXECs by entering another OPUTX command as shown in this example:

```
oputx 'blm.sblmrexd' '/usr/lpp/InfoMan/Desktop/rexx' mode(755)
```

- d. Edit the BLMWSINI REXX EXEC to set additional parameters needed to initialize a session with Tivoli Information Management for z/OS. Set the following parameters to your own values:

```
application_id='IBMUSER'  
session_member='BLGSES00'  
privilege_class='MASTER'
```

The values are used to establish an initial Tivoli Information Management for z/OS session. The values are overridden by the logon values initially set by the Desktop user in the configuration editor.

- e. Create a new service directive in your HTTP Server configuration file for the REXX DLL, IMWX00. The HTTP Server configuration file is specified in the -r parameter on the ICSPARM parameter in your HTTP Server startup procedure. If the -r parameter is not specified on ICSPARM or if ICSPARM is not specified, the configuration file defaults to /etc/httpd.conf. If you specify the -r parameter, but don't specify a fully-qualified file name, the path for the configuration file defaults to the /etc directory.

Although the following information is displayed on two lines, type it as a single unbroken line.

```
Service /INFOWEB/*.REXX /usr/lpp/InfoMan/Desktop/rexx/IMWX00.so:IMWX00/  
/usr/lpp/InfoMan/Desktop/rexx/BLMWSWRT/*.REXX
```

For instructions on entering commands in a UNIX environment, refer to the OS/390 documentation.

- f. Modify the PATH statement for your HTTP Server to specify where to find the REXX routines (EXECs) used with the Desktop. The PATH statement is in your HTTP Server's environment variables file. The default environment variables file is /etc/httpd.envvars. Here is an example of what your PATH statement might contain:

```
PATH=/bin:./usr/lpp/internet/bin:/usr/lpp/InfoMan/Desktop/rexx
```

An environment variables file can be specified when starting your HTTP Server. If you do not specify an environment variables file, the default is /etc/httpd.envvars. To specify a different file, modify your HTTP Server startup JCL. The default startup JCL is in the IMWEBSRV PROC. Use the \_CEE\_ENFILE ENVAR option to specify the environment variables file that you want to use for your HTTP Server. The format of this option is:

```
ENVAR("_CEE_ENVFILE=filename")
```

The *filename* specifies the file containing the Language Environment® (LE) environment variables. The following example shows how the ENVAR option can be used to specify an environment variables file in your HTTP Server startup JCL:

```
//IMWPROC PROC LEPARM='ENVAR("_CEE_ENVFILE=/etc/httpd.envvars.tmp")',ICSPARM=
```

4. If you are starting HTTP Server as a cataloged procedure, add the Tivoli Information Management for z/OS SBLMMOD1 data set and your session member load library into your STEPLIB concatenation. If you are starting the HTTP Server from a UNIX session, be sure to include all of the above mentioned data sets in its STEPLIB global variable. You must also concatenate the Tivoli Information Management for z/OS SBLMTSX data set and any user-defined TSX data sets to ddname BLGTSX.
5. Ensure that the Tivoli Information Management for z/OS BLX-Service Provider (BLX-SP) is active.
6. Load the data model records in a Tivoli Information Management for z/OS database. If they have not already been loaded, you should load the base data model records, which support using people records interactively in Tivoli Information Management for z/OS, plus the specific data model records needed for the sample Desktop application. The records are provided in the Tivoli Information Management for z/OS installation data set SBLMRCDS. The base data model records are in a list named BLHLRBAS. Data model records for the Desktop are in a list named BLMLRDSK. You can use the batch job BLHRCDSJ in the SBLMSAMP library to load them.

**Note:** You must update the sample JCL with additional information (such as the name of the list of data model records needed to support the Tivoli Information Management for z/OS Desktop) before submitting it. The update instructions are included in the sample JCL.

The batch job runs a special TSX which unflattens the data model records and adds them to database 5.

**Note:** As an alternative to running a batch job to load the records, you can run the BLHRCDSL TSX interactively in Tivoli Information Management for z/OS. To run the TSX, enter the following command at a Tivoli Information Management for z/OS command line. (Do not enter the bracket characters; they indicate an optional parameter.)

**RUN BLHRCDSL *dsname* BLMLRDSK [REPLACE]**

where *dsname* is the fully qualified name of the SBLMRCDS program data set (without quotation marks) containing the data model records at your location.

BLMLRDSK is the name of the list of data model records required to support the sample Desktop application. (If the base data model records in list BLHLRBAS were not loaded as part of your Tivoli Information Management for z/OS installation, you must enter another RUN command and specify the BLHLRBAS list to load them.)

REPLACE is an optional parameter you can use to replace existing data model records if you already loaded them. REPLACE overwrites duplicate records.



If you have partitioned databases and want to load the data model records in a particular logical database partition, you must use a privilege class that has that partition specified as the primary partition ID when running this TSX.

As the TSX runs, a message is displayed for each record stored successfully in the Tivoli Information Management for z/OS database.

**Note:** Other optional parameters can be specified when running the BLHRCDSL TSX. For more information about loading data model records, refer to the *Tivoli Information Management for z/OS Planning and Installation Guide and Reference*.

7. Ensure that the Desktop users have the appropriate privilege class authorities to create, update, and display problem records and people records as appropriate. (See “Setting Up People Records” on page 15 for more information.)
8. Start or restart HTTP Server. If you are not using the default environment variables file (/etc/httpd.envvars) when starting HTTP Server, ensure that the correct location and name of the environment variables file is specified in the HTTP Server startup JCL. If you experience problems, you can start HTTP Server with the -v (verbose) or -vv (very verbose) parameters which can help you to diagnose problems. The use of these parameters can, however, affect your system performance.

## Workstation Installation Instructions

To install the workstation components, install the Desktop application on user workstations and the Desktop administrator’s workstation as described in “Installing the Desktop Application”.

### Installing the Desktop Application

Follow these steps to install the Desktop on a single user’s workstation or on the Desktop administrator’s workstation.

**Note:** If you need to install the Desktop on multiple workstations, you can distribute the Setup program and related setup files to those workstations through use of a software distribution program, such as Tivoli Software Distribution, or make the files available on a local area network drive. The files needed to install the Desktop are as follows:

```

HelpDeskInstall.txt
hd.LST
hd.z
setup.exe
setup.ins
setup.pkg
setup.rul
_INST32I.EX_
_ISDEL.EXE
_SETUP.DLL
_setup.lib

```

Upgrades or patches that can be downloaded from a Tivoli Web site may be available for the Desktop. For more information, visit <http://www.tivoli.com/infoman>.

1. You should uninstall Tivoli Service Desk for OS/390 Version 1.2 before you install Tivoli Information Management for z/OS Version 7.1. See “Uninstalling the Desktop” on page 13 for instructions on how to do this.

2. After you have “uninstalled” Tivoli Service Desk for OS/390 Version 1.2, you are ready to install Version Tivoli Information Management for z/OS 7.1. From the Windows Start menu, select **Run**.
3. Type the full path and file name for the Setup program. On the Tivoli Information Management for z/OS CD-ROM, the **Setup.exe** program is in the Desktop directory. For example:

e:\Desktop\EN\Setup.exe

Click **OK**.

4. Follow the instructions to install the application. A README file prompt also displays for you to browse current information about the application.

To start the application, use the **Start** menu as described in “Getting Started” on page 19.

**Note:** A file transfer error occurs if you try to start the Desktop without having an application hierarchy in an OS/390 UNIX System Services directory. The Desktop administrator must use the Desktop Toolkit to send an application hierarchy to OS/390 UNIX System Services before you can use the sample application. If you are an administrator, see “Sending the Hierarchy File to the HTTP Server” on page 162 for more information.

### Installing the Desktop Toolkit

The Desktop Toolkit is automatically installed when you install the Desktop. Users of the Toolkit should have a TCP/IP connection to an OS/390 UNIX System Services FTP server to transfer files built with the Toolkit.

### Installation Files

These are the directories and component files that are associated with installation of the Desktop on your workstation. A subdirectory **\Desktop** is also created at runtime and is located under the **\InfoMan** directory of your home directory.

#### **C:\InfoMan\Desktop\ (where C is the drive where you installed the Desktop)**

The default Desktop directory (which can be overridden at installation). Other directories and files included in this directory are as follows:

**bin\** Contains the **Blmhd.jar** file and other binary files needed to run the installation program, the Desktop, and the Toolkit. Batch files used to start the Desktop, Toolkit, or to uninstall the programs are included.

**doc\** Contains the **README.TXT** file, copyright, and license information.

#### **samples\**

Contains the default generic application hierarchy (**HELPDESK**) provided with the Desktop. The **HELPDESK** file is a binary file that the Desktop administrator should send to a target directory on the OS/390 UNIX System Services FTP server (as described in “Loading the Sample Helpdesk Hierarchy File” on page 14 and “Sending the Hierarchy File to the HTTP Server” on page 162). Users will obtain the application hierarchy for use with the sample Desktop application from this OS/390 UNIX System Services directory.

**Note:** If you are migrating from the Tivoli Service Desk for OS/390 Version 1.2 Desktop to the Tivoli Information Management for z/OS Version 7.1 Desktop, you should be

aware of a change in the subdirectory where the DESKTOP.ERR, DESKTOP.TRC, TOOLKIT.ERR, TOOLKIT.TRC, and the configuration files are stored. The error and trace files will still be automatically created and stored in this new directory. However, you will need to create new configuration files similar to the ones created in Tivoli Service Desk for OS/390 1.2 Desktop. For information about configuration files, see “Using the Configuration Editor” on page 21.

## Uninstalling the Desktop

In the event you need to uninstall the Desktop and the Toolkit, click **Start** on the Windows taskbar, click **Programs**, select **Tivoli Information Management for z/OS Desktop** and then click **UnInstall Desktop**.

The files extracted during the initial installation are removed.

To remove the Desktop program from the Start or Programs menu, do the following:

1. Click **Start** and then **Settings**.
2. Click **Taskbar** and then click the **Start Menu Programs** tab.
3. Click **Remove** and then select **Tivoli Information Management for z/OS Desktop**. Click **Remove**.

## Verifying HTTP Server File Access

To query whether the connection with the HTTP Server is successful, issue the following command from a browser window:

```
http://hostname:portnumber/INFOWEB/BLMWQMAC.REXX
```

In the previous example, *hostname* is the host name of your MVS system, and *portnumber* is the port number used to access the HTTP Server for z/OS.

The following message is displayed in your browser:

```
The HTTP Server is interacting with the Information Management for z/OS Desktop  
Rexx Modules
```

If you receive a browser error after running this command, consider using the OS/390 UNIX System Services (OMVS) command **chaudit** to turn on auditing for file access.

You can use the **chaudit** command to turn on auditing for file access, so that file access failures can be written to the MVS system log. You can view the auditing information in the MVS system log to identify the potential source of the problem. If you suspect the error may be related to file access, consider running the **chaudit** command to turn on auditing for the following files, at a minimum, to record file access failures. With the exception of the **httpd.conf** file, each of these file names is defined in **httpd.conf**.

### logs/httpd-errors

The error log.

**logs/httpd-log** The access log.

### /u/ICAPI/bin/PID

The process ID file.

**httpd.conf** The HTTP Server configuration file. This configuration file defines the location of log files such as the error log and access log. The HTTP Server

configuration file is specified in the ICSPARM parameter in the HTTP Server startup procedure. If the -r parameter is not specified on ICSPARM or if ICSPARM is not specified, the configuration file defaults to /etc/httpd.conf. If you specify the -r parameter but don't specify a fully-qualified file name, the path for the configuration file defaults to the /etc directory.

For the Desktop to run properly, the following directives must be present in httpd.conf. If these directives are not present, add them to httpd.conf under the direction Map suffixes to the content-type of a file. If the following directives are present in some other form, change them to match the following:

```
Add Type    .hs      text/html      ebcdic    1.0    #    HTML on PCs
Add Type    .htm     text/html      ebcdic    1.0    #    HTML on PCs
Add Type    .html    text/html      ebcdic    1.0    #    HTML on PCs
Add Type    .html    text/x-ssi-html ebcdic    1.0    #    HTML on PCs
Add Type    .gif     image/gif      ebcdic    1.0    #    HTML on PCs
Add Type    .xml     text/html      ebcdic    1.0    #    HTML on PCs
Add Type    .jhm     text/html      ebcdic    1.0    #    HTML on PCs
```

**Note:** If the web server is already running, then changing or adding these directives may interfere with normal web server activity.

You must also add the following directives, or you must modify the directives currently present in your http.conf file to match the following.

```
Pass        /InfoManHELP/*    /usr/lpp/InfoMan/Desktop/html/*
Map         /INFOWEB/java/*    /u/webb/java/*
```

**Note:** Associate the above directives with your own file paths.

You can use the **chaudit** command as necessary to generate audit information for other files, such as other log files in the logs directory.

Refer to *HTTP Server Planning, Installing, and Using V5.2 for OS/390* for more information about setting up and installing HTTP Server for the first time, and setting up RACF permissions.

For more information about using the **chaudit** command, refer to the *OS/390 UNIX System Services Command Reference*.

## Loading the Sample Helpdesk Hierarchy File

Before you or your users can invoke the Desktop, you should load the sample Helpdesk Hierarchy file. You must send the default generic application hierarchy provided with the Desktop to a target directory on the OS/390 UNIX System Services FTP server. To do this, you must use the Toolkit. Follow these steps:

1. Start the Toolkit.

**Note:** Before you can start the Toolkit, you may need to open the Configuration Editor and enter appropriate data. For more information about using the Configuration Editor, see "Using the Configuration Editor" on page 21.

2. Choose **File** and **Export**. The Export File window displays.

3. On the Export File window, click the folder icon in the Local File Information group to locate the sample Helpdesk Hierarchy. By default, the sample Helpdesk Hierarchy should be located in `x:\InfoMan\Desktop\samples`, where `x` is your hard drive.  
You also need to verify that the Remote File Path points to a valid directory. It is suggested you use the file name `HELPDESK`.
4. Click **Export**. If the message **File Successfully Transferred** appears, you are now ready to start the Desktop.

## Providing Users with the Configuration Editor Information

When you have invoked the Toolkit (or the Desktop) successfully, you will have determined the Configuration Editor information that your users will need to access the Desktop. All of your new Desktop users will need to know the information that should be specified on their Configuration Editor window the first time that they bring up the Desktop.

There are several ways that you can convey this information. You might create a screen capture of your Configuration Editor window and e-mail it to your users so that they will have a sample with the proper information. Another approach would be to attach your configuration file (**jhd.properties**) in an e-mail to your user community; your `jhd.properties` file should be located in your profile directory on your hard drive (for example, `winnt/profiles/xxxx/InfoMan`, where `xxxx` is your host ID). Note that your new users will not have this directory on their hard drive because they have not yet saved a `.properties` file or generated any Desktop or Toolkit trace or error logs. However, your users can detach the `.properties` file to any folder on their hard drive. Then, when they are presented with the Configuration Editor window, they can click **File** and **Open** and then select the `.properties` file from the folder they chose. So that the Desktop file will find the `.properties` file the next time your users invoke the Desktop, your users should then click **File** and **Save As** to be sure that the file is stored in their profile directory (for example, `winnt/profiles/xxxx/InfoMan`, where `xxxx` is the user's host ID), which will be the default directory given by the Desktop in which to save the `.properties` file.

**Note:** You can save the file name of the `.properties` file with a name more meaningful to your users than `jhd`. For example, if you have two MVS systems, referred to as `MVS1` and `MVS2`, it might be helpful to offer two `.properties` files, one named **mvs1.properties** and the other named **mvs2.properties**.

## Setting Up People Records

The Tivoli Information Management for z/OS program administrator must perform an additional task so that records created by the Desktop can be updated interactively, if necessary, on the Tivoli Information Management for z/OS host.

The Tivoli Information Management for z/OS program administrator must ensure that users who will work with data interactively in Tivoli Information Management for z/OS have the appropriate privilege classes to work with records. To use the sample Desktop application to create records containing information about people, users should have privilege classes that have authority to work with *people records*.

People records are special types of records in Tivoli Information Management for z/OS that contain information about the people who may be contacting your help desk for assistance, or who are involved in supporting your help desk operations (such as problem assignees). For example, a people record can contain a caller's ID number, name, department, company, and address, e-mail address, or fax number. By using people records with the Desktop, you

can reduce the amount of typing needed to submit a problem report. The records also provide help desk agents with useful information about a caller. If someone already known to your help desk calls to report another problem, the Desktop can retrieve people record information for the caller and display it for help desk agents to use. If a people record does not exist for a new caller, you can create one with the Desktop.

**Note:** There is a record type similar to the people record in Tivoli Information Management for z/OS, called the *person record*. The person record is unique to the Integration Facility application of Tivoli Information Management for z/OS. It should not be confused with the people record, which is a record type used in the Management application of Tivoli Information Management for z/OS by the Desktop. Person records used by the Integration Facility are not used by the Desktop or in the Management application of Tivoli Information Management for z/OS.

The Tivoli Information Management for z/OS administrator should check the privilege classes of Desktop users and update privilege class records to add people-record authority to those Desktop users who will require it:

### **Desktop users**

Ensure that users have create, update, and display authority for people records and problem records as appropriate. These authorities are needed to use the sample Desktop application. If you customize the Desktop application or create your own, you may want to restrict the creation or update of records to only certain users. Ensure that the correct authorities are given to your users as required to perform their duties.

### **Interactive host users**

Ensure that users have create, update, and display authority for people records and problem records as appropriate. These authorities are needed to use 3270 Tivoli Information Management for z/OS panels to update records generated or updated by the sample Desktop application.

**Note:** If you create a Desktop application, the authority given to users may be different. Ensure that users are given the proper management application authorities needed to perform their tasks.

The type of authority given to users for problem records will also apply to call records. There is no separate authority for call records on the BLG0J210 Authority Entry panel in Tivoli Information Management for z/OS because the problem record authority is used for call records also.

Refer to the *Tivoli Information Management for z/OS Program Administration Guide and Reference* for more information about defining privilege class authorities in Tivoli Information Management for z/OS. You can, if desired, set up people records interactively using host panels before deploying the Desktop at your location. See “Identifying Help Desk Callers” on page 205 for more information about creating people records in Tivoli Information Management for z/OS.

## HTTP Server Security and the Desktop

**Basic authentication** means that a user must provide a valid MVS user ID and password in order to send requests to the HTTP Server, which uses RACF to authenticate the user ID and password supplied. In order to activate basic authentication, the Desktop administrator must update the HTTP Server configuration file `httpd.conf`. In `httpd.conf`, the Desktop administrator must set the `UserID` directive to `UserId %%CLIENT%%`.

The HTTP Server runs under the `WEBSRV` user ID. If the `BLX-SP` being used by the Desktop has implemented API security, the authority assigned to `WEBSRV` might have to be changed. The following three scenarios should be considered:

### Scenario 1 – `APISECURITY=OFF`

No RACF profiles need to be updated. The HTTP Server will perform basic authentication if the configuration file contains `UserId %%CLIENT%%`.

### Scenario 2 – `APISECURITY=ON`

Define `WEBSRV` as a `PRIVILEGED` user in the RACF general resource profile created for the HTTP Server started procedure.

Any MVS user IDs that are used to access the HTTP Server must be added to the RACF general resource profile defined for the application ID specified in `REXX EXEC BLMWSINI`. The RACF profile is defined in the `INFOMAN` RACF resource class. If the RACF profile is not updated, the startup of the Desktop will fail with HLAPI return code 12, reason code 160. This information is not unique to the Desktop; it is needed for API security. See the chapter on API Security in the *Tivoli Information Management for z/OS Application Program Interface Guide* and the chapter on Security in the *Tivoli Information Management for z/OS Planning and Installation Guide and Reference* for more information about the `INFOMAN` resource class.

### Scenario 3 – `APISECURITY=ON`

`WEBSRV` is not defined as `PRIVILEGED` user. You must define a RACF general resource profile for each application ID that will use the Desktop. Then add `WEBSRV` as an authorized user to each of those profiles.

As in Scenario 2, any MVS user IDs that are used to access the HTTP Server must be added to the RACF general resource profile defined for the application ID specified in `REXX EXEC BLMWSINI`.





# 3

## Using the Desktop Sample Application

---

This chapter describes how to use the sample application provided with the Tivoli Information Management for z/OS Desktop. It describes the tasks a user can perform with the sample application; it does not describe how to customize or modify the application. For information about modifying the application, or creating a new one, see the following:

- “Designing a Desktop Application” on page 85
- “The Desktop Toolkit” on page 131
- “Designing the Application” on page 175

**Note:** If your Desktop application was modified, the description of the application as provided here may not match the content or behavior of your application. If your application looks or behaves differently than the sample application described in this chapter, you may find helpful information in “Working with Customized Desktop Applications” on page 211, or you may need to inquire with your Desktop administrator.

### Getting Started

When the Desktop components are successfully installed as described in “Installation” on page 7, you can start the sample Desktop in any of the following ways:

#### Start→Programs menu

In Windows, click **Start→Programs** and select **Information Management for z/OS Desktop**. Click **Information Management for z/OS Desktop**.

#### Command line

To start the sample application provided with the Desktop from a command line, follow these steps:

1. Open a workstation command window.
2. From the directory where the Desktop binary files are installed, issue the Desktop command to start the application. For example, if you accepted the default location:

```
C:\InfoMan\Desktop\bin\Desktop
```

The workstation is checked for the presence of a configuration file, and then the **Logon** dialog is displayed. Enter a valid user ID and password. (See “Logging on” on page 20 for instructions.)

**Note:** If a configuration file (**jhd.properties**) is not found on the workstation, the **Logon** dialog appears without a **User ID** field. Check the **Start Configuration Editor** box

to invoke the Configuration Editor, and then enter the data necessary to create the configuration file. See “Using the Configuration Editor” on page 21 for instructions on completing fields in the configuration editor. After you set the configuration and exit, and then start the application, the **Logon** dialog appears. If the logon is successful, the **Tivoli Information Management for z/OS Desktop** window is displayed so that you can interact with the host database.

If a connection does not occur with the Tivoli Information Management for z/OS host, you may receive an error message indicating the nature of the problem. Investigate the error, perform any necessary corrective action, and restart the application.

## Logging on

When you launch the Desktop or the Toolkit, a Logon dialog is displayed to collect your password and configuration file information. Enter the information requested.



Figure 3. Logon Dialog

### User ID

Your MVS TSO User ID. If no configuration file exists on the workstation, the **User ID** field will not be enabled. Check the Start Configuration Editor box and click **OK** to open the Configuration Editor window, where you can supply the required information. To change the User ID, you must also use the configuration editor. See “Using the Configuration Editor” on page 21.

### Password

The password associated with your MVS TSO user ID.

**Note:** You cannot change your MVS password from this dialog. Your password must coincide with the password you maintain on MVS.

### Configuration file

This field is a combo box populated with the \*.properties files found in the **InfoMan** subdirectory of your home directory. The default selection is the \*.properties file most recently used, if that file can be found, or **jhd.properties** otherwise.

You can place a check in the **Start Configuration Editor** check box and click **OK** to display the Configuration Editor dialog. For more information on the Configuration Editor dialog, see “Using the Configuration Editor”.

**Note:** If this is the first time you have logged on to this release of the Desktop, you must start the Configuration Editor and supply the correct information.

If the **Start Configuration Editor** check box is not selected, and if your logon information is correct and your connection to the HTTP Server is enabled, click **OK** to retrieve a copy of the application hierarchy from OS/390 UNIX System Services and to start the Desktop. Otherwise, an error message is displayed.

## Using the Configuration Editor

The configuration editor enables you to establish a connection with Tivoli Information Management for z/OS and provides the necessary identification information for the Desktop to engage in transactions with the Tivoli Information Management for z/OS database.

The Configuration Editor dialog is displayed by checking the **Start Configuration Editor** check box on the Desktop or Toolkit Logon dialogs and then clicking **OK**.

You can enter information to connect to the HTTP Server and your host Tivoli Information Management for z/OS system, and the FTP server in OS/390 UNIX System Services. Figure 4 shows a sample configuration editor window:

Figure 4. Tivoli Information Management for z/OS Desktop Configuration Editor Window

The values entered in the configuration editor window are stored in a configuration file on the workstation.

Enter the following information in the configuration editor window:

**Server Name**

The HTTP Server host name or IP address.

**Port Number**

The port number associated with the HTTP Server. Valid entries are 80 or a number in the range of 8000–65534.

**User ID**

The MVS TSO user ID used to log on to Tivoli Information Management for z/OS. The user ID and password are used to test the remote host connection when the configuration is saved.

**Password**

The MVS TSO password used to log on to Tivoli Information Management for z/OS. Whenever you run the sample Desktop application, you will be prompted for the entry of this password.

**Privilege Class**

Your startup privilege class name in Tivoli Information Management for z/OS (1 to 8 characters). The privilege class defines what tasks you can perform. For example, if you had the master privilege class, enter MASTER in this field if MASTER is the name of the privilege class used at your location. The user ID entered in the configuration editor window must be an eligible user of this privilege class.

**Port Number**

The port number of the FTP server to which you are connecting.

**Remote File Path**

The fully-qualified remote path on OS/390 UNIX System Services where the application hierarchy can be found.

**Hierarchy**

The name of the hierarchy file you are using. The hierarchy file defines the tasks you can perform. The generic default application hierarchy on OS/390 UNIX System Services is called HELPDESK.

**Mode** The mode you are using, either Active or Passive. The default is Passive. It is suggested that you do not change this setting unless instructed to do so by your service representative.

**Status** Displays a short status message. For a view of the long URL transaction, reference the trace file.

The following options are available from the Configuration Editor pull-down menu:

- Click **File** and then **Open** to open a configuration file.
- Click **File** and then **Save** to save the configuration file on the workstation. Click **File** and then **Save As** to change the configuration file name. If you use the **Save As** menu option, you must save the file in the \InfoMan subdirectory and the file extension must be .properties.

When you save the configuration file, the connection to the HTTP Server is tested. If the connection is successful, a properties file is created in the \InfoMan subdirectory of your

home directory. If the connection fails, your attempt to save the configuration file returns an error dialog, and you can select a check box on the error dialog to proceed with the save. This enables you to save a properties file containing an attribute (such as hostname) which is currently unavailable but is expected to be available in the future.

- Click **File** and then **Close** to exit the configuration editor.
- Click **Help** to display help on the Configuration Editor and its associated error messages. This option displays a list of message numbers. Click on the desired message number and the message help is displayed in the content viewer.

Upon returning to the Logon Dialog from the Configuration Editor, you can reselect the desired properties file.

## Tivoli Information Management for z/OS Desktop Window

The Tivoli Information Management for z/OS Desktop client window (shown in Figure 5 on page 24) consists of three panes, each of which has a particular function:

### Icon tree

The left pane contains a tree structure of icons you can click to perform a particular task supporting a business process. Two types of icons are displayed in the tree.



**Process icon:** A process icon is a folder containing task icons (or other process icons for a business process). Double-click a process icon to see the task icons associated with a process.



**Task icon:** A task icon represents a particular task you can perform. Task icons are usually found under process icons, and as such, are also known as “leaf-level icons” since they are the last items you can select in a tree structure. You can click on a task icon to bring up the work area for a task. The work area is displayed in the center pane of the window and contains fields for browsing, data entry, and searching. Task icons enable you to add or interact with records in the Tivoli Information Management for z/OS database.

### Work area

The center pane represents the work area for a task. This area displays the fields that you can act upon to create, delete, search, get, and update records in the Tivoli Information Management for z/OS database.

Transactions with the database occur when you click buttons in the pane or when you exit certain fields when entering or updating data. For example, in the sample Desktop application, if you type a problem ID (record number ID) in the **Problem ID** field of a task pane, and tab to another field (before clicking a button), a record retrieval transaction occurs to get the problem record information associated with the ID you entered.

**Search results**

The right pane is initially blank until a search is performed. You can perform a search using the **Search** task icon or by selecting **Freeform Search** from the **Actions** item on the menu bar. Once a search is performed, a summary list of search results is displayed in the search results list pane. (If no results are found, the pane is empty.) You can select an item in the search results list with your mouse, drag it to the tree structure in the left pane, and drop it on the text label associated with a task icon. When you drag and drop a search results list item this way, information from the selected search results list record is copied into the work area for your task and into the record for that task. By dragging and dropping information from a search results list, you can save time typing data for a new problem record if much of the information required for the new record is similar to an existing problem.

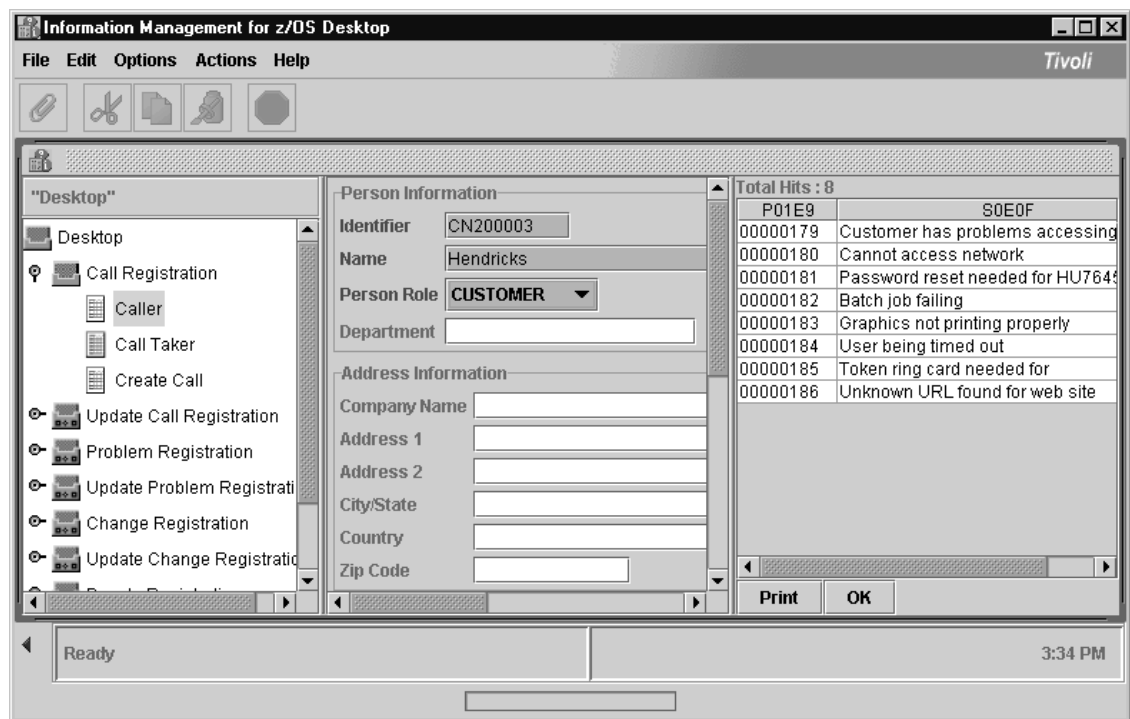


Figure 5. Sample Application Window

**Note:** After the Desktop is started, an authorization check is made whenever you click on a task name. If you are authorized to perform the selected task, the center pane is displayed. If you are not authorized to perform the task, the center pane is not displayed and an error message is issued.

In the center pane of the Desktop, field and validation pattern authorization can change the appearance of fields as follows:

- If you are not authorized for a field, the field label is shown but the field data is not shown.
- If you are authorized for a field but not authorized for any of the validation patterns, the field data is shown but the field is protected.

- If you are authorized for a field and authorized for some of the validation patterns, the field data is shown. You can change the field to the values for which you are authorized.

## Navigating the Desktop

This section shows you how to move around in the Desktop to perform simple operations.

Many of the tasks and operations you can perform in the Desktop can be performed by clicking icons, selecting data choices from pull-down menus, and dragging and dropping selections in a search results list.

We will not describe every possible method you can use to select a task or operation throughout the book, but this section will give you an idea of how to navigate in the sample application. Feel free to try these techniques in each window as you use the Desktop.

### Using Your Mouse

You can use a mouse to double-click icons displayed in tree views that have branches containing additional icons representing subtasks or other associations. Double-clicking the icon will expand or collapse the tree structure, enabling you to manage the view in the pane.

Clicking a leaf-level icon or task icon also causes the center pane, or your work area, to be displayed so that you can begin using the field data.

### Using the Keyboard

You can move up and down a list in a tree structure in a pane using the up and down arrow keys instead of using a mouse. When you want to expand a branch, press the right arrow key and the next level is displayed. Press the left arrow key to collapse the tree view again.

You can expand all nested processes within the application hierarchy by pressing **CTRL** and **D** at the same time. You can collapse all nested processes within the application hierarchy by pressing **CTRL** and **L** at the same time. (“Using the Menu Bar” on page 26 describes another way of expanding and collapsing the application hierarchy by using menu bar functions.)

### Managing Windows

You can size the outer Desktop window pane by placing the mouse pointer over the window edge or corner so that the two-headed arrow appears. Hold down the left mouse button and drag the edge or corner to the preferred position.

In the triple pane area, you can change the width of a window pane by dragging the edge of the split bar left or right, enabling you to view the data more easily. Although you can reduce the width of a pane, you cannot remove or change the order of panes.

### Using Drag and Drop

You can select and drag an item in the search results list in the right pane to the tree structure, and drop it on a process or task icon in the left pane. When you drag and drop a search results list item this way, retrieval of the dragged selection occurs and the center pane and associated record is refreshed with data retrieved from the dragged selection.

To select an item in the search results list, highlight the item with your mouse. Ensure that the tree structure is expanded. Press and hold the left or right mouse button and drag the mouse to the tree structure to the text label for the task you want to have prefilled with data.

Release the mouse button when the icon text label for the task is highlighted. The center pane and record associated with the icon is displayed with data from the retrieval.

**Note:** An item you select from the search results list may have more data fields than you see in a particular task pane. Drag and drop copies all associated data for the record, not just data displayed in the right pane. Therefore, more data may be copied over into a selected task in the application hierarchy than is displayed by double-clicking an item in the search results list. Also, you cannot selectively drag and drop individual field data from the search results list to the center pane of a task. You can, however, use the copy and paste functions available on the menu bar to paste data into individual fields.

## Using the Menu Bar

The Desktop application hierarchy contains the following pull-down menus:

- File** Use the **File** menu to exit from the sample application hierarchy and to import or export files.
- Use **Attach** to attach files to records. Additional information about Attach can be found in “Attaching Files to Records” on page 37.
  - Use **Export** to export other files, such as image, audio, video, or HTML files. Additional information about Export can be found in “Importing and Exporting Files” on page 80.
  - Use **Import** to import other files, such as image, audio, video, or HTML files. Additional information about Import can be found in “Importing and Exporting Files” on page 80.
  - If you select **Exit**, a message is displayed to ask you if you really want to exit the application hierarchy.
- Edit** Use the **Edit** menu to cut, copy, and paste text from one field to another in a task pane.
- Options**
- Select **Preferences** to choose options including the browser that you want to use, the way you want to view history data, and your color preferences. Additional information can be found in “Setting User Preferences” on page 28.
  - The **Search** option enables you to enter user preferences for searches of the Tivoli Information Management for z/OS database. Additional information on how to do searches can be found in “Searching for Data” on page 68.
- Actions** You can use the **Actions** menu to perform these functions:
- Freeform Search** Performs a freeform search. Results of the search are displayed in the right pane of the Desktop window.
- Map** Enables you to map *smart fields*. Smart field mapping is described in “Mapping Smart Fields” on page 78.
- Expand All** Expands the application hierarchy to show all nested processes. You can also perform this function from the keyboard by pressing **CTRL** and **D** at the same time.



**Collapse All** Collapses the application hierarchy to show only the root. You can also perform this function from the keyboard by pressing **CTRL** and **L** at the same time.

**Help**

Five choices are available under this option:

- **Desktop Help** provides help on the use and operation of the Desktop and on the creation of an application hierarchy in the Toolkit.
- **Desktop Messages** provides extended help on error messages that may be encountered in the Desktop. This help option displays a list of message numbers. Click on the desired message number and the message help is displayed in the content viewer.
- The Desktop administrator can customize the application help to provide specific help information for the application. If this has been done, the third option that appears under **Help** is the renamed root node designated by the Desktop administrator. If no customization to application help was done, the option appears as **Application Help**; but since there is no help specific to the application, choosing **Application Help** will result in an informational message (BLM31000I) stating that no application help is available.
- **Field Help** provides helps on particular fields in the Desktop. Select **Field Help** and the cursor becomes a help cursor (an arrow with a question mark). When you click on a field with this help cursor, the field help displays and the cursor returns to normal.
- **About Desktop** displays the version of the Desktop and copyright information.

**Using the Toolbar**

The Desktop application contains a toolbar menu, depicted in Figure 6, that contains icons for cutting, copying, and pasting text, and for stopping transactions with Tivoli Information Management for z/OS. To invoke hover help or to see a description of a particular toolbar icon, place the cursor over the icon to see its label description.



Figure 6. Desktop Toolbar

**Cutting, Copying, and Pasting**

To cut or copy text, you must begin by highlighting the text to be used. Cutting text removes the highlighted region, placing it in a paste buffer. Copying text leaves the highlighted region in place, placing a copy in the paste buffer to be pasted elsewhere. After copying, the highlighted region remains selected. You can use these icons to make entering data in fields easier.

To cut and paste text, highlight some text in the task pane by holding down the left mouse button and dragging the pointer over some text. Click the scissors icon. The text disappears. Place the cursor elsewhere where text is allowed and click the paste icon. The text you cut is inserted at the cursor.

To copy and paste text, highlight the text you want to copy and click the copy icon. Place the cursor elsewhere where text is allowed, and click the paste icon.

You can also cut, copy, and paste text by using the Edit pull-down menu on the menu bar.

### Stopping Communications with Tivoli Information Management for z/OS

To stop communications that are in progress between the Desktop workstation and Tivoli Information Management for z/OS, click the stop sign icon on the toolbar. Communication with the host is in progress if you see the status bar indicator blinking at the bottom of the window. A console message area at the bottom of the window displays messages to inform you what transaction is in progress with the Tivoli Information Management for z/OS database. For example, if you begin a search transaction, the console message area shows Begin transaction Search. You can click the stop sign to stop communications and revise your search argument if desired.

**Note:** Depending on when you click the stop sign icon, the transaction in progress may already be committed at the host. Stopping communications does not do a rollback of committed transactions. If you are unsure whether a transaction (such as an update or creation of a record) has been committed, you should check the Tivoli Information Management for z/OS database by searching for the record in question.

### Setting User Preferences

You can set your preferences for various Desktop options, such as the browser you want to use, how you want to view history data, and your color choices. When a record is locked for update, the **Preferences** menu item will be disabled.

To set your user preferences, click **Options** and then click **Preferences**. The following options are available.

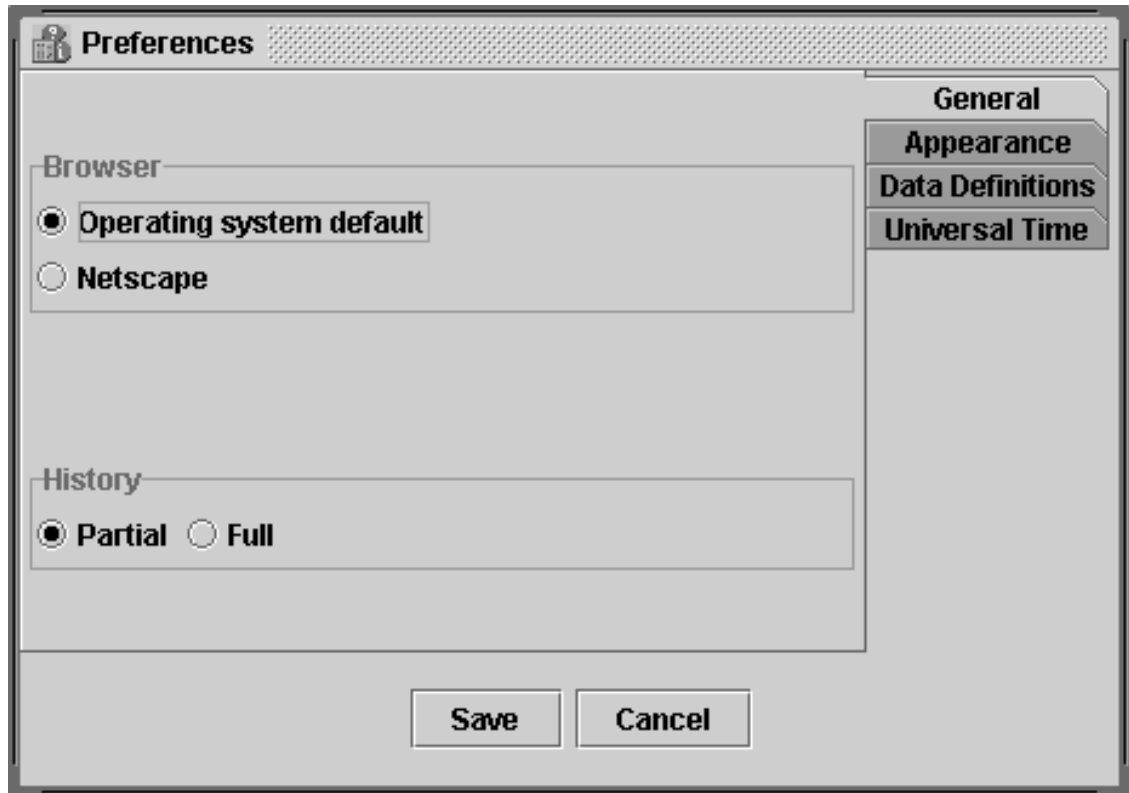


Figure 7. General Preferences Dialog

■ **General Preferences**

- Browser
  - Select either the Operating system default or Netscape by clicking the appropriate radio button; the default is Operating system default.
- History
  - Select whether you want partial or full information displayed when viewing history data for a record. The default is *partial*.
    - Partial information includes date, time, and user data.
    - Full information includes date, time, user, and all journalized fields.

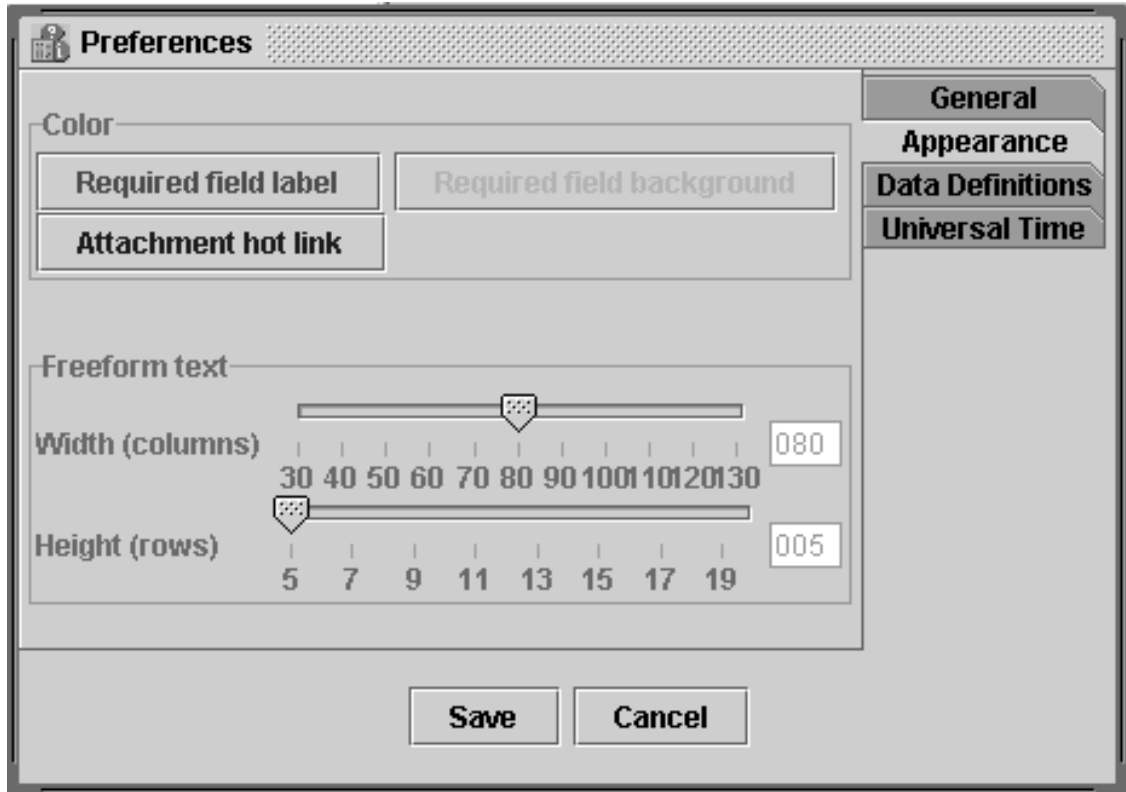


Figure 8. Appearance Preferences Dialog

■ **Appearance Preferences**

- Attachment hot link
  - To select the color of the attachment hot links that are created when you attach a file to a Tivoli Information Management for z/OS record:
    1. Click the **Attachment hot link** button (described in “Attaching Files to Records” on page 37). The Java color dialog is displayed. The default color for hot links is blue.
    2. Choose a color from the Java color dialog.
    3. Click **OK**.
- Required field label
  - To select the color of a required field label :
    1. Click the **Required field label** button. The Java color dialog is displayed. The default color is red.
    2. Choose a color from the Java color dialog.
    3. Click **OK**.
- Required field background
  - To select the color of a required field background :
    1. Click the **Required field background** button. The Java color dialog is displayed. The default color is blue.

2. Choose a color from the Java color dialog.
  3. Click **OK**.
- Freeform text
    - You can select the width and height of freeform text fields. These preferences will be used when creating the component viewport size. Enlarging the size of freeform text fields can allow you to preserve the formatting of longer passages of freeform text, making them easier to read.
      - Select the width of a freeform text field by moving the slider to the desired width. Valid widths range from 30 to 130 single byte characters. The default is 80. Use the number field to the right of the slider to determine your position.
      - Select the height of a freeform text field by moving the slider to the desired height. Valid heights range from 5 to 20 lines. The default is 5. Use the number field to the right of the slider to determine your position.

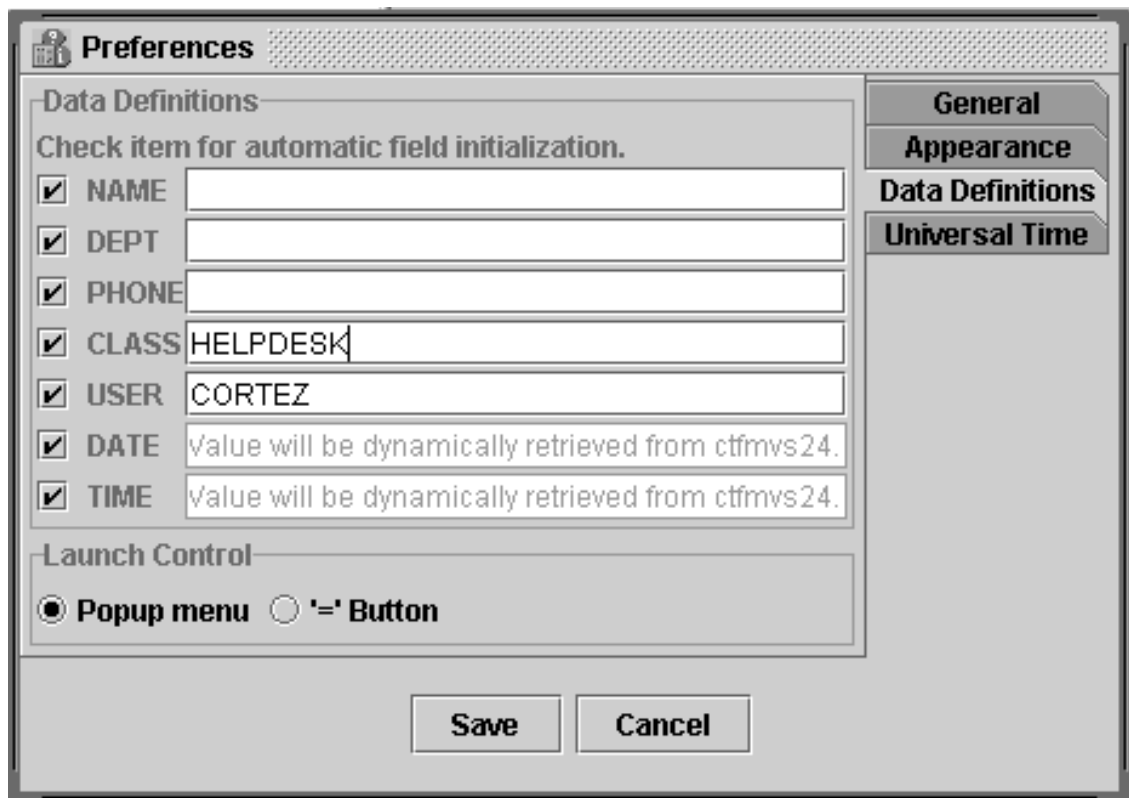


Figure 9. Data Definitions Preferences Dialog

■ **Data Definitions Preferences**

- You can enter information for fields that have data definition processing (equal sign processing) and can choose which of those fields you want to enable for automatic initialization. When you select the check box to the left of a data definition field, the field will be initialized to the preferred value providing the field contains no data and the record is in the Create or Update state.
  - **NAME** Enter the preferred value for your name. This field has no default.

- |                   – **DEPT** Enter the preferred value for your department. This field has no default.
- |                   – **PHONE** Enter the preferred value for your phone number. This field has no default.
- |                   – **CLASS** Enter the preferred value for your privilege class. This field defaults to the Privilege class value from the configuration data.
- |                   – **USER** Enter the preferred value for your User ID. This field defaults to the User ID value from the configuration data.
- |                   – **DATE** is set to the date value that is dynamically pulled from the configured Tivoli Information Management for z/OS host. This field is input-inhibited.
- |                   – **TIME** is set to the time value that is dynamically pulled from the configured Tivoli Information Management for z/OS host. This field is input-inhibited.
- |                   • Select the preferred launch control option for data definition processing on the Desktop. The default is a pop-up menu.
  - |                   – If you prefer to launch data definition processing using a pop-up menu, click **Pop-up menu**. To fill a Desktop field that is enabled for data definition processing with the value from the Data Definition, right-click the field and select **Data Definition** from the pop-up menu that displays.
  - |                   – If you prefer to launch data definition processing using an equal sign button, click **"=" Button**. An equal sign button will appear to the left of all Desktop fields that are enabled for data definition processing. Click the equal sign button to fill the desired fields with the values from the Data Definition.

|                   **Note:** Data definitions are defined in the Desktop and are not pulled from the host.

|

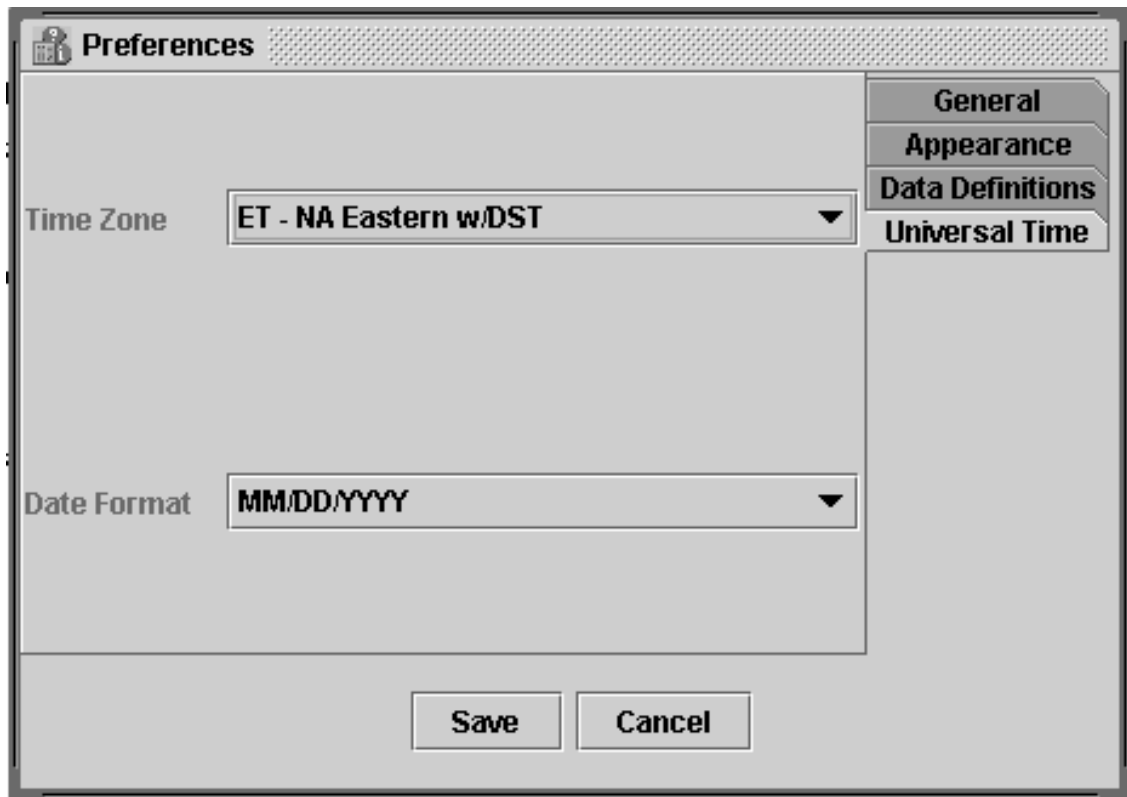


Figure 10. Universal Time Preferences Dialog

■ **Universal Time Preferences**

- Select the preferred time zone from the pull-down menu. The default will be set by the administrator on the Tivoli Information Management for z/OS host.
- Select the preferred date format from the pull-down menu. The default will be set by the administrator on the Tivoli Information Management for z/OS host.

When you are finished setting your user preferences, they are in effect for the remainder of the session. If you want to keep the current settings for the next session, click **Save** to save them; otherwise, click **Cancel**.

**Responding to Validation Errors**

As you enter information into a data-entry field, and then move or tab to another field (such that the first field has lost focus), an error message may be displayed if the data you supplied fails a validation check with Tivoli Information Management for z/OS. For example, you will receive a validation error message if you type letters in a field that only accepts numbers.

The validation criteria for a field is stored in Tivoli Information Management for z/OS (in data attribute records). As you add or update data and move your cursor out of fields, the entries you make are automatically checked to determine whether they pass the validation check if validation rules apply to the fields.

If you receive a validation error message, return to the field in error and correct the problem.

Likewise, if you forget to fill in a required field, a validation error message is displayed to inform you which field is missing data. You will automatically be presented with the pane in error so that you can supply the data. A check for required fields is performed when you execute a function by clicking on a button.

### Locking Records for Update

When you retrieve a record for update, the record is locked and a “lock” icon appears next to all Update panel type tasks that are associated with the data view record. The “lock” icon serves as a visual reminder that the record is locked. The record is locked to prevent other users from updating the record while you are working on it. When the record is locked, the **Record ID** field cannot be changed, but all other fields that you are authorized to change are editable.

To lock a record for update:

1. In the application hierarchy on the left pane of the Desktop, click on an update task.
2. The associated panel is displayed in the center pane of the Desktop; the data entry fields are disabled except for the record number ID (RNID). An “unlocked” icon appears next to the RNID field.

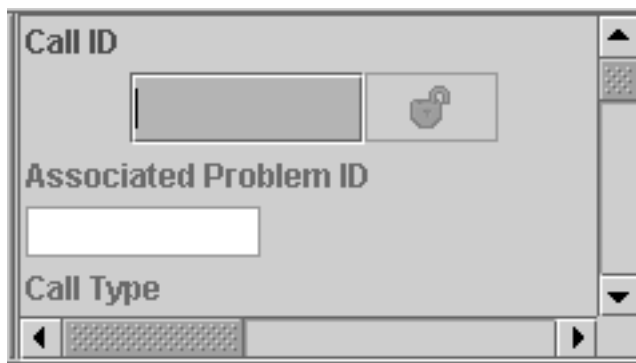


Figure 11. Unlocked RNID Field

3. Enter the RNID of the record that you want to update. Then tab out of the field or cause the field to lose focus. The record is retrieved from Tivoli Information Management for z/OS. A “lock” icon appears next to the RNID and next to all update panels that are associated with that data view record.



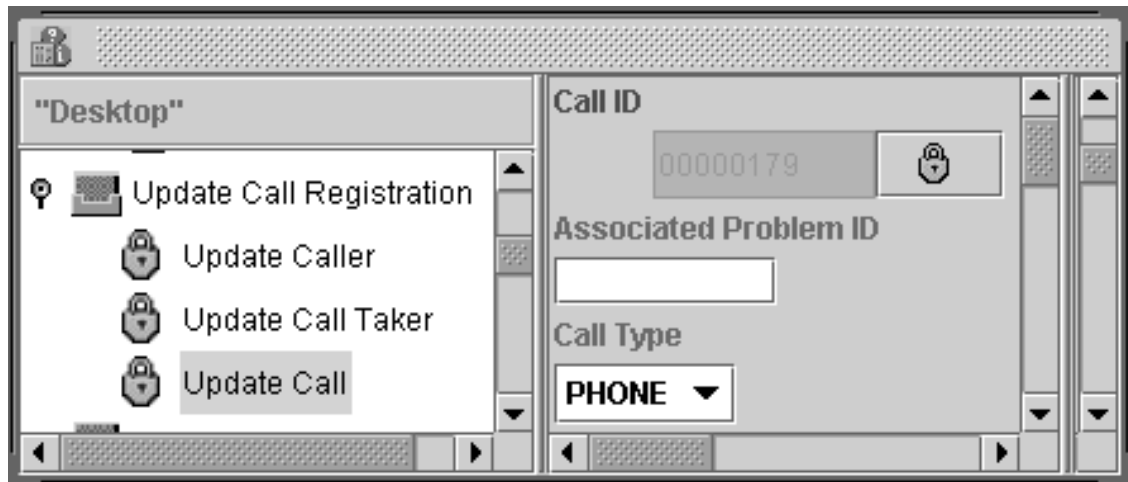


Figure 12. Locked RNID Field and Associated Panels

4. The **RNID** field is disabled, but fields that you are authorized to change are editable. Click on the icon next to the **RNID** field to toggle between locked and unlocked mode. The record is retrieved when you click the icon to lock it.
5. Make any updates to information.
6. Click **Update** to update the record. When the record is updated, the record is unlocked. The **RNID** field is enabled, data entry fields are disabled, and the unlocked icon appears next to the **RNID** field. In addition, the “lock” icons in the application hierarchy are replaced with normal task icons.

**Note:** A record that you locked may become unlocked if the record lock timed out before the record was updated or if the Desktop administrator checked the record back in before it was updated. The record will still display the “lock” icon and thus appear to be locked. However, if you attempt to unlock the record, a message will indicate that the record is already unlocked. In such a case, you will need to lock the record again before it can be updated. The changes you had previously made will be lost.

To unlock a record, perform one of the following actions:

- Click **Update**; the record is updated and unlocked.
- Click the lock icon to unlock the record without updating it.
- Click **Reset**. Data is cleared from all fields in Update panel type tasks associated with the data view record and the record is unlocked.

## Resetting Data

If you type data into fields (or copy data from existing records) and then wish to clear the data from the fields, click **Reset** on the center pane.

The **Reset** button clears data from all fields in the center pane. Data is cleared locally in the associated record. It also clears fields in other tasks that are common to the fields being cleared on this pane. In addition, if you have the record locked for update, the record will be unlocked. For example, if you begin typing text in the **Brief Description** field for a problem in the center pane associated with a task icon, and then change your mind and click **Reset**,

the data for the **Brief Description** field will be cleared from other tasks where it is contained. In addition, the data for any other fields appearing on the center pane that are common to other tasks will be cleared.

You can also use **Reset** to clear data that you drag into task work areas from the search results list pane.

The **Reset** button is defined in the application through use of the Toolkit, which enables you to assign buttons to task panes.

### Transacting with Tivoli Information Management for z/OS

You can check the status bar indicator and console message area displayed at the bottom of the window in order to see what transactions are occurring with Tivoli Information Management for z/OS. For example, the message area might show Ended transaction update successfully after you click a button in a task pane to update a record.

You can click the arrow button to the left of the message area to see a history of the messages displayed in the console message area. The most recent messages are displayed at the bottom of the list.

A log of your transactions with Tivoli Information Management for z/OS is kept in a trace file (DESKTOP.TRC) for Desktop problem analysis. Similarly, a trace file exists for the Toolkit (TOOLKIT.TRC). The trace files can be viewed on your workstation, in the InfoMan directory or in the directory where your jhd.properties file resides. If you have problems with the Desktop or Toolkit, you can use the trace file to communicate problems to your support personnel or Tivoli Customer Support. The trace file begins logging information when you start the application, and stops when you exit the application. When you start the application again, your previous session's transactions are stored in a trace file named DESKTOP.TRC.OLD or TOOLKIT.TRC.OLD. The old trace file is rewritten every time you restart the application and begin a new session with Tivoli Information Management for z/OS. You can also inspect the DESKTOP.ERR file and the TOOLKIT.ERR file for additional debugging information.

### Using the Calendar

The days of the month (date fields) are displayed with a calendar icon. As shown in Figure 13 on page 37, you can click the icon to the right of the **Date** field to see a date in a calendar month format. The current date is highlighted in the calendar. You can use the arrows at the top and bottom edges of the calendar to go to the desired month and year. To select a date, click the day of the month desired and click **OK**. The date information will be applied to the **Date** field.

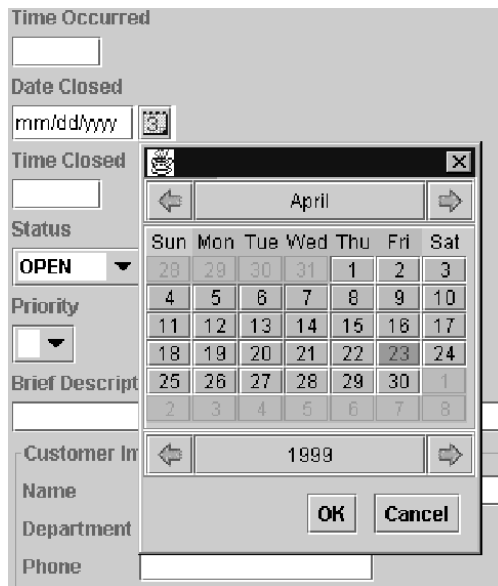


Figure 13. Calendar Icon and Resulting Calendar

## Attaching Files to Records

You can attach files to Tivoli Information Management for z/OS records under certain conditions. For example, you might want to attach a file to a Tivoli Information Management for z/OS problem record as an aid in diagnosing and resolving a problem. Error logs, error traces, even audio files that describe a particular problem are examples of files that can be attached.

You attach files either from one of your local directories or from remote files that were previously exported through the export facility and now reside on the HTTP Server.

To enable this feature, the following conditions must exist:

- The Tivoli Information Management for z/OS record that you want to attach to is in Create or Update mode.
- The Desktop administrator has enabled the User Export option (described in “Enabling the User Export Option” on page 162) for your Desktop application.

**Note:** The user must have a subdirectory under their home directory on OS/390 UNIX System Services that matches that specified by the Desktop administrator in the HTTP Server configuration file.

- You are modifying a freeform text field.

To attach a file to a Tivoli Information Management for z/OS record:

1. Place your cursor in the freeform text field that you are modifying.
2. Select **File** and then select **Attach**, or click the **Attach** icon on the Desktop toolbar. The Create Attachment dialog is displayed. Your default FTP information is provided from your Desktop configuration file.

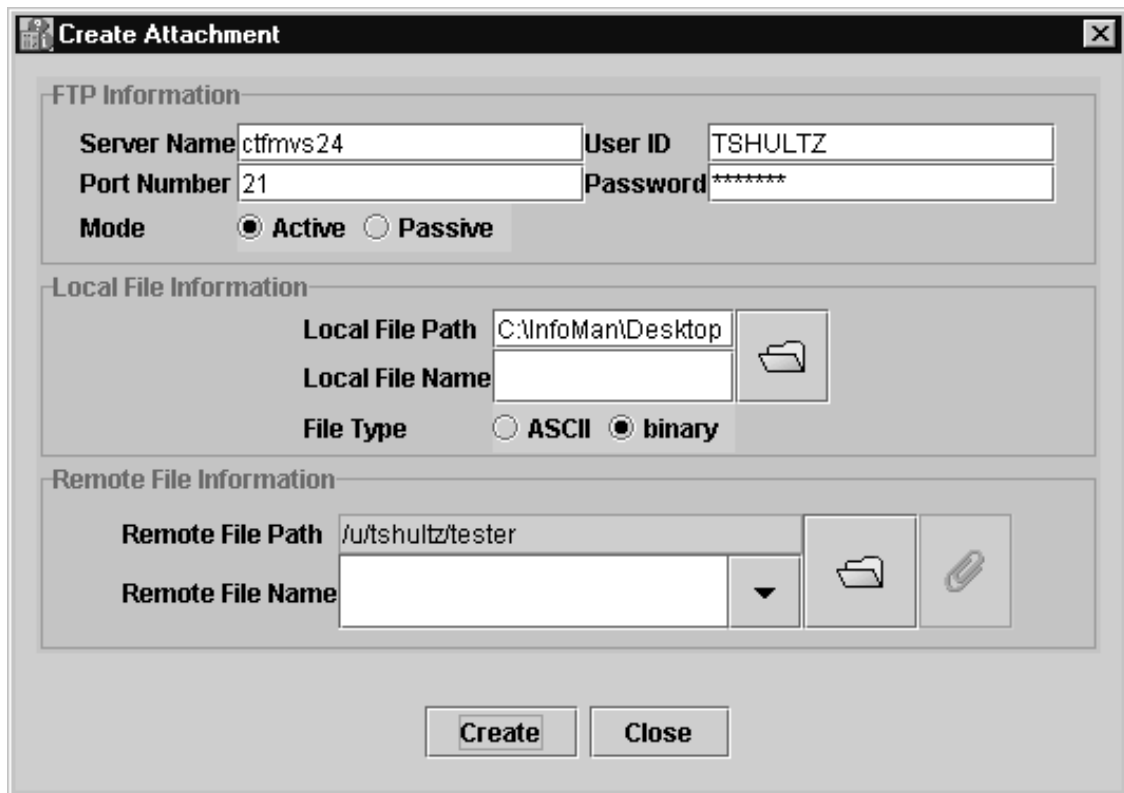


Figure 14. Create Attachment Window

3. If the file to be attached is local (that is, not previously exported):
  - a. Under **Local File** information, enter the local file path for the file you want to attach. The default is your current directory.
  - b. Enter the local file name or use the find file icon to locate the file.
  - c. Select the file type, ASCII or binary.
  - d. Enter the remote file name that you want for your exported file in the **Remote File Name** field.

**Note:** The file, when exported, will overlay an existing file of the same name on the HTTP Server.
  - e. Click **Create** to export the file and create the attachment. The attachment is identified by the insertion of an attachment hot link, a borderless button containing the file name, at the cursor position in the freeform text area. If the file existed previously in the remote directory, you are asked to confirm the attachment.
    - To launch the file, click the link with your left mouse button. Your preferred browser is launched with the attached file displayed.
    - To detach the file, click the link with your right mouse button and select the **Detach file** option from the resulting pop-up window.

**Note:** Detaching the file removes the link from the freeform text areas and does not delete the file.
4. If the file to be attached is remote (that is, previously exported to the HTTP Server):

**Note:** This option does not re-export the file.

- a. Under Remote File information, the remote file path where the attached file resides is displayed but is disabled for update.
- b. Click the find file icon to get a list of files for the remote directory. This list will be used to populate the Remote File Name combo box. Click the down arrow on the Remote File Name combo box. The list of files for the remote directory is displayed in a pop-up window. Select the file that you want to attach from the list of exported files.
- c. The **Attach File** button to the right of the remote file name is enabled.
- d. Click the **Attach File** button to attach the file. The attachment is identified by the insertion of an attachment hot link, a borderless button containing the file name, at the cursor position in the freeform text area.
  - To launch the file, click the link with your left mouse button. Your preferred browser is launched with the attached file displayed.
  - To detach the file, click the link with your right mouse button and select the **Detach File** option from the resulting pop-up window.

**Note:** Detaching the file removes the link from the freeform text areas and does not delete the file.

## Completing and Filing Records

The Desktop enables you to enter data into fields associated with a given task, and file the record in the Tivoli Information Management for z/OS database by clicking a button at the bottom of the center pane of a task.

**Note:** The Desktop allows you the freedom to work within more than one task at a time. That is, it does not force you to complete a task before clicking on another icon for some other task. For instance, you can click the Call Registration **Caller** icon and begin to fill in fields, and then click the **Update Detail Desc** icon under Update Problem Registration and fill in fields there. If you then click the **Update Problem Record** button on the **Update Detail Desc** work pane, the record associated with that pane is filed at the host. The entries you initially typed in the **Caller** task pane remain on that pane and are not filed as part of the record until you click the **Create** button associated with the **Caller** task.

## Summary of Tasks You Can Perform

The sample Desktop application provides basic functions common to many help desk applications. The following is a summary of the basic tasks you can perform with the sample application and the icons used in the tree view to perform those tasks. The order in which you perform these help desk tasks can vary depending on the actual call situation and how work is performed at your location. In all likelihood, the Desktop application you will actually use in your environment will be customized to suit the needs of your enterprise by your Desktop or Tivoli Information Management for z/OS administrator.

More information about how to perform these tasks is provided later in this chapter.

- Register the call (**Call Registration** icon)
  - Identify the caller. Create a people record if the caller does not already exist in the database.

- Identify the call taker. Create a people record if the call taker does not already exist in the database.
- Create a call record. If necessary, also create a problem record.
- Update a call (**Update Call Registration** icon)
  - Update information about a caller in an existing call record.
  - Update information about a call taker in an existing call record.
  - Update information about a call in an existing call record.
- Register the problem (**Problem Registration** icon)
  - Record general information about a problem, such as its priority and when it occurred.
  - Provide a detailed description of the problem.
  - Identify the problem assignee for a problem. Create a people record if the assignee doesn't already exist in the database.
  - Create a problem record.
  - Associate the problem record to a call so that the call record identifies what if any problems were related to the call.
- Update a problem (**Update Problem Registration** icon)
  - Update general information about an existing problem in a problem record.
  - Update the detailed description about an existing problem in a problem record.
  - Update information about a problem assignee in an existing problem record.
- Register a change (**Change Registration** icon)
  - Identify the change requester and record details about the request and change. If necessary, you can also create activity records for the change record from any of the task panes under the Change Registration process.
  - Identify an assignee and coordinator for the change.
  - Provide data about the completion of the change.
  - Create a list of approvers for the change.
  - Provide freeform text information about the change.
- Update a change (**Update Change Registration** icon)
  - Update information about the change requester. Also, view the history of the change record. If necessary, you can create or update activity records for the change record from any of the task panes under the Update Change Registration process.
  - Update information about the assignee and coordinator for the change.
  - Update information about the completion of the change.
  - Update the list of approvers for the change.
  - Update freeform text information about the change.
- Register customers or help desk personnel (**People Registration** icon)

- Create people records to identify your customers and help desk personnel in advance, so that you can later enter their identifiers to retrieve information about them and avoid unnecessary typing when creating new call or problem records.
- Update information in existing people records.
- Create a solution record (**Solutions** icon)
- Search records in the Tivoli Information Management for z/OS database (**Search** icon)
- Search existing call records, problem records, change records, activity records, people records, or solution records. Drag the search results, if desired, to a new record you are creating to save typing if the information for the new record is the same.

## Call Registration

This section describes how you can use the Desktop to do the following:

- Capture information about incoming calls, such as the caller identification and location.
- Identify who is taking the call.
- Create a call record.
- Create a problem record if the call is associated with a problem.

### Caller

To identify a caller, double-click the **Call Registration** icon to expand the tree, then follow these steps:

1. Click the **Caller** icon (see Figure 15 on page 42).
2. Ask the caller for his or her identifier. An identifier is a people record ID in the Tivoli Information Management for z/OS database that uniquely identifies this person. The identifier can be up to 8 characters long, and the first character must be alphabetic.
  - If the caller is new and an identifier does not exist, specify a caller identifier in the **Identifier** text box. Enter the caller's name in the **Name** text box and select a **Person Role** of **CUSTOMER** to identify the person as a customer of your help desk services. Complete other fields as necessary to provide address and contact information. Fields shown with red labels are required fields.

Click **Create** to create a people record for the caller. The status bar blinks to indicate a create transaction is in progress.

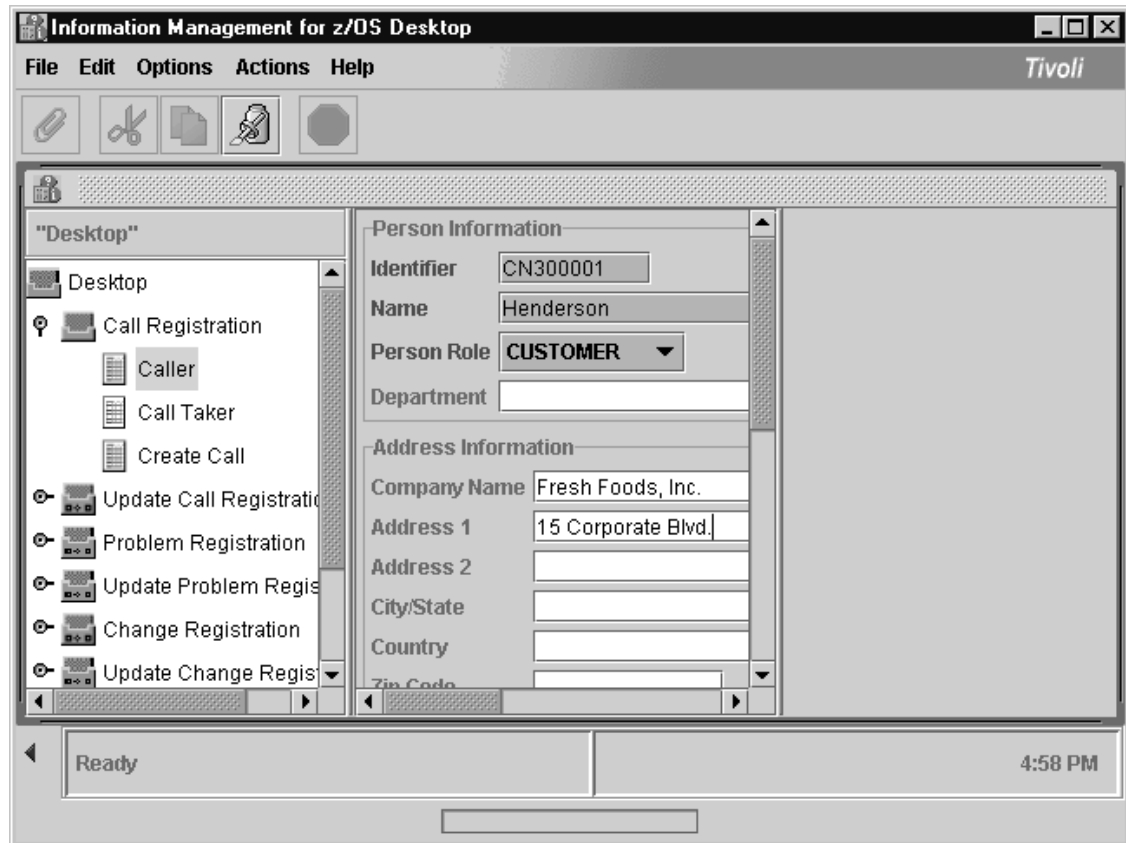


Figure 15. Caller Task Pane

- If the caller has an identifier, enter the identifier in the **Identifier** text box and tab to the next field. As you tab to the next field, the Desktop begins a transaction to get the caller information from the Desktop database. If the identifier exists in the database, information about the caller is retrieved from the people record in Tivoli Information Management for z/OS and is displayed in the center pane. If the identifier does not exist, a message is displayed in the message console area to inform you.

You can also use a **Search** icon to search on fields other than the identifier. After you perform a search and results appear in the third pane in the search results list area, you can drag and drop information about a person into matching fields in the **Caller** task pane.

3. Click **Next** to move to the **Call Taker** task pane where you can complete information for the call taker.

## Call Taker

The **Call Taker** task pane can be accessed by clicking the **Next** button from the **Caller** task pane, or by clicking the **Call Taker** icon under **Call Registration** (see Figure 16 on page 43). To identify who is taking (handling) an incoming call, follow these steps:

1. On the **Call Taker** task pane, click **Reset** to remove data shown in the task pane if necessary so that you have a clean task pane to begin identifying the call taker. Data may have been carried over from previous work in another pane. (If you obtain new data from the host, the data on the task pane will be overlaid.)
2. Enter an identifier number in the **Identifier** text box for the person taking the call.



- If the call taker is new and an identifier does not exist, specify a caller identifier in the **Identifier** text box. Enter the call taker's name in the **Name** text box and select a **Person Role** of **TSD390** to identify the person as someone in your organization. Complete other fields as necessary to provide address and contact information. Fields shown with red labels are required fields.

Click **Create** to create a people record for the call taker. The status bar blinks to indicate a create transaction is in progress.

- If the call taker has an identifier, enter the identifier in the **Identifier** text box and tab to the next field. As you tab to the next field, the Desktop begins a transaction to get the call taker information from the Desktop database. If the identifier exists in the database, information about the call taker is retrieved from the people record in Tivoli Information Management for z/OS and is displayed in the center pane. If the identifier does not exist, a message is displayed in the message console area to inform you.

You can also use a **Search** icon to search on fields other than the identifier. After you perform a search and results appear in the third pane in the search results list area, you can drag and drop information about a person into matching fields in the **Call Taker** task pane.

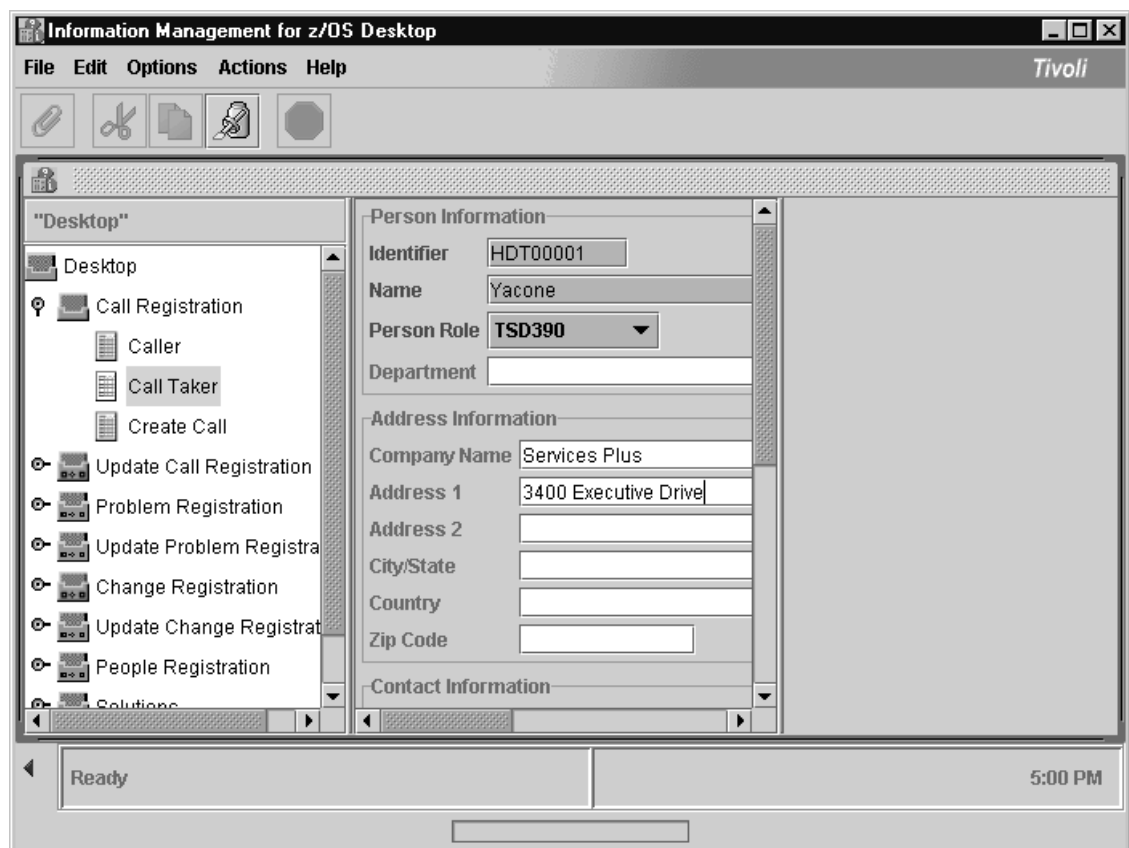


Figure 16. Call Taker Task Pane

3. Click **Next** to move to the **Create Call** task pane where you can fill in more information about the call.

### Create Call

The **Create Call** task pane can be accessed by clicking the **Next** button from the **Call Taker** task pane, or by clicking the **Create Call** icon under **Call Registration** (see Figure 17 on page 45).

If you arrive at the **Create Call** task pane by clicking **Next** from the **Call Taker** task pane, some fields may be prefilled with data that was carried over from other Call Registration task panes. Caller information and call taker information are already displayed for you.

To complete information about the call and create a call record, follow these steps:

1. Enter information (or make a selection from a drop-down list) for fields such as the call type (phone, e-mail, fax), start date, start time, status, and brief description. You can click the calendar icon to select a particular date for the **Start Date** field. Complete information for the required fields and additional text boxes as appropriate. You can type a detailed explanation of the call in the Detail Description box.

**Note:** If you are using prefilled data about the caller or call taker, do not modify or add information in the text boxes associated with the caller or call taker. If you do, the information you add or modify in those text boxes will not be reflected in the people records in the Tivoli Information Management for z/OS host database. The **Create Call** task pane is intended to capture information about the call; it is not intended to update existing people records.

2. Determine if the call is actually a problem that should be assigned to someone for resolution.
  - If the call is simply a call and not a problem (for example, it could be a request for information), click **Create** to create a call record in the Tivoli Information Management for z/OS database. A record number ID is generated and displayed in the **Call ID** field on the **Create Call** task pane to indicate a call record was automatically created.  
Once a call record is created, you can begin working on another call. To clear the task pane, click **Reset**.
  - If the call is about a problem, click **Create as Problem**. A record number ID is generated and displayed in the **Call ID** field on the **Create Call** task pane to indicate a call record was automatically created. The **General Information** task pane is automatically displayed so that you can begin entering information about the problem.

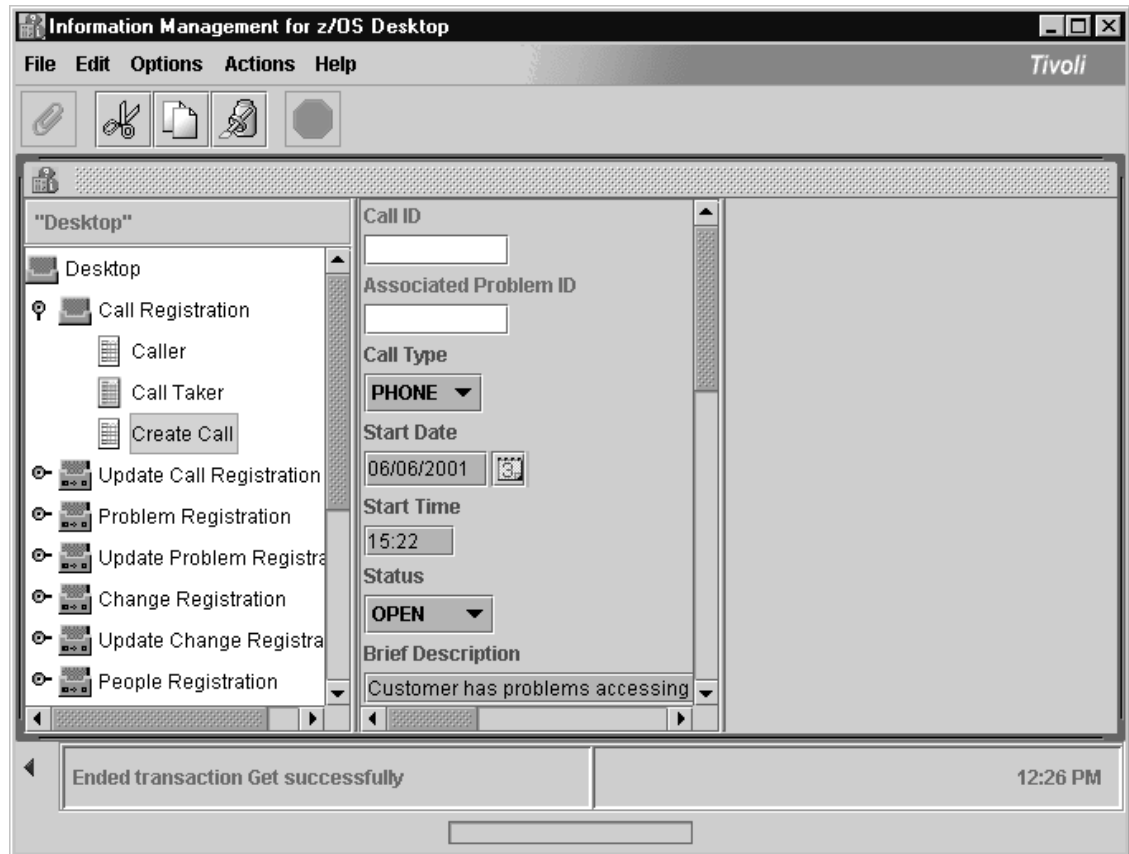


Figure 17. Create Call Task Pane

## Update Call Registration

This section describes how you can use the Desktop to update existing call records in the Tivoli Information Management for z/OS database. Since call records contain information about the caller, call taker, and details of the call, you can follow these procedures to update this type of information in the call records.

**Note:** When a record is retrieved for one of the tasks available under Update Call Registration, a “lock” icon appears, indicating that the record is locked (the lock icon also appears next to the other update functions in the application hierarchy). The lock icon indicates that other users cannot update the call record. While you have the record locked in update mode, the **Call ID** field is disabled and the input fields that you are authorized to update are enabled so that you can make any modifications. You can then select **Update** to update and unlock the record in the Tivoli Information Management for z/OS database. If you do not want to update the record, you should unlock it. To unlock the record, you can click the lock button next to the **Call ID** field. You can also click **Reset** which, in addition to unlocking the record, clears all the data from fields associated with the Update Call Registration tasks. If you are not able to unlock the record, your Desktop administrator can use the Check In procedure described in the *Tivoli Information Management for z/OS Program Administration Guide and Reference*.

### Update Caller

The **Update Caller** task pane can be accessed by clicking the **Update Caller** icon under **Update Call Registration**.

## Update Call Registration

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To update information about a caller so that updates appear in an existing call record in the Tivoli Information Management for z/OS database, follow these steps.

**Note:** Updates you make to caller information flow to the call record only. To ensure that caller information changes are reflected in the people record, you must use the People Registration update task and make corresponding updates in that task pane.

1. Enter a record number ID for a call record in the **Call ID** text box and tab to the next field. (You can also search for the Call ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the call record does not exist, a message is displayed in the message console area to inform you.
2. Update the information for the caller and caller location as needed by supplying the correct information in the text boxes.
3. Click **Update** to update the call record.

To clear the fields on all task panes associated with an update of a Call record, click **Reset**, which also unlocks the record.

## Update Call Taker

The **Update Call Taker** task pane can be accessed by clicking the **Update Call Taker** icon under **Update Call Registration**.

To update information about a call taker so that updates appear in an existing call record in the Tivoli Information Management for z/OS database, follow these steps.

**Note:** Updates you make to call taker information flow to the call record only. To ensure that call taker information changes are reflected in the people record, you must use the People Registration update task and make corresponding updates in that task pane.

1. Enter a record number ID for a call record in the **Call ID** text box and tab to the next field. (You can also search for the Call ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the call record does not exist, a message is displayed in the message console area to inform you.
2. Update the information for the call taker as needed by supplying the correct information in the text boxes.
3. Click **Update** to update the call record.

To clear the fields on all task panes associated with an update of a Call record, click **Reset**, which also unlocks the record.

## Update Call

The **Update Call** task pane can be accessed by clicking the **Update Call** icon under **Update Call Registration**.

To update information about a call so that updates appear in an existing call record in the Tivoli Information Management for z/OS database, follow these steps.

**Note:** Updates you make to call information flow to the call record only.

1. Enter a record number ID for a call record in the **Call ID** text box and then tab to the next field. (You can also search for the Call ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the call record does not exist, a message is displayed in the message console area to inform you.
2. Update the information for the call as needed by supplying the correct information in the text boxes or by making the appropriate selections from the drop-down lists.
3. Click **Update** to update the call record.

To clear the fields on all task panes associated with an update of a Call record, click **Reset**. If the record is locked, clicking **Reset** also unlocks the record.

## Problem Registration

This section describes how you can use the Desktop to do the following:

- Capture information about a problem and assign a problem severity.
- Provide details about the problem such as the system and component affected.
- Assign someone to resolve the problem.
- Create a problem record in the Tivoli Information Management for z/OS database.
- Associate a problem record with a call record.

## General Information

The **General Information** task pane can be accessed by clicking the **Create as Problem** button from the Call Registration **Create Call** task pane, or by clicking the **General Information** icon under **Problem Registration** (see Figure 18 on page 48).

If you arrive at the **General Information** task pane by clicking **Create as Problem** from the **Create Call** task pane, some fields may be prefilled with data that was carried over from the Call Registration task panes. Data is prefilled in the text boxes based on call record information.

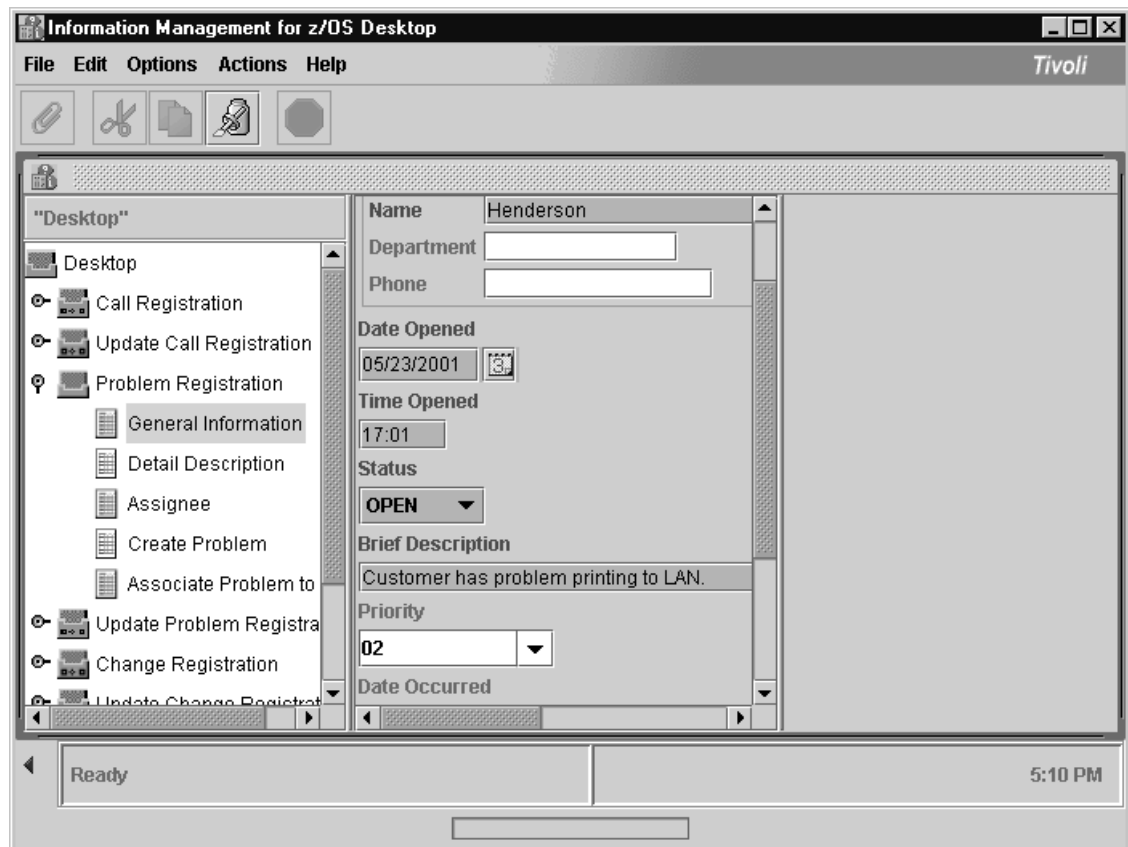


Figure 18. General Information Task Pane

To provide general information about a problem, follow these steps:

1. Select the status of the problem (initial, open, closed) and priority of the problem by choosing a selection from the drop-down lists for those fields. You can also enter information about when the problem occurred, and indicate whether a work-around solution or bypass is available.

The **Problem ID** text box will be blank until you create the problem record.

2. Click **Next** to proceed to the **Detail Description** task pane, where you can enter more data.

## Detail Description

The **Detail Description** task pane can be accessed by clicking the **Next** button from the Problem Registration **General Information** task pane, or by clicking the **Detail Description** icon under **Problem Registration** (see Figure 19 on page 49).

If you arrive at the **Detail Description** task pane by clicking **Next** from the **General Information** task pane, fields may be prefilled with data that was carried over from other task panes. These fields are prefilled from the **Create Call** task when the **Create Call as Problem** button is clicked.

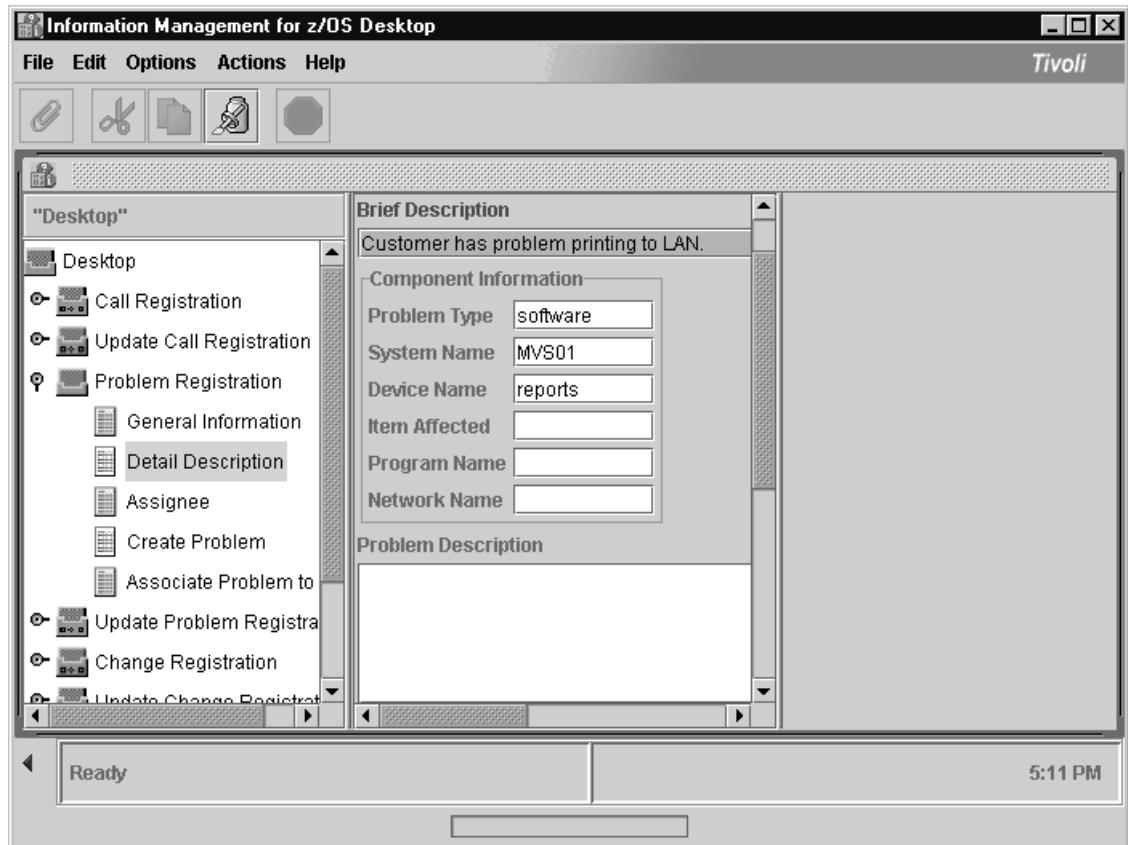


Figure 19. Detail Description Information Task Pane

To enter detailed information about a problem, follow these steps:

1. Enter information about the components associated with the problem. Enter the type of problem (for example, hardware, software), and relevant information about the system, device, item affected, program, or network in the text boxes provided. You can also enter additional comments about the current status of the problem and resolution description. The **Problem ID** text box will be blank until you create the problem record.
2. Click **Next** to proceed to the **Assignee** task pane where you can assign someone to the problem.

## Assignee

The **Assignee** task pane can be accessed by clicking the **Next** button from the Problem Registration **Detail Description** task pane, or by clicking the **Assignee** icon under **Problem Registration** (see Figure 20 on page 50).

If you arrive at the **Assignee** task pane by clicking **Next** from the **Detail Description** task pane, some fields may be prefilled with data that was carried over from other task panes. Click **Reset** to remove data shown in the task pane if necessary so that you have a clean task pane to use to identify the assignee. If you obtain new data from the host, the data on the task pane will be overlaid with the new data.

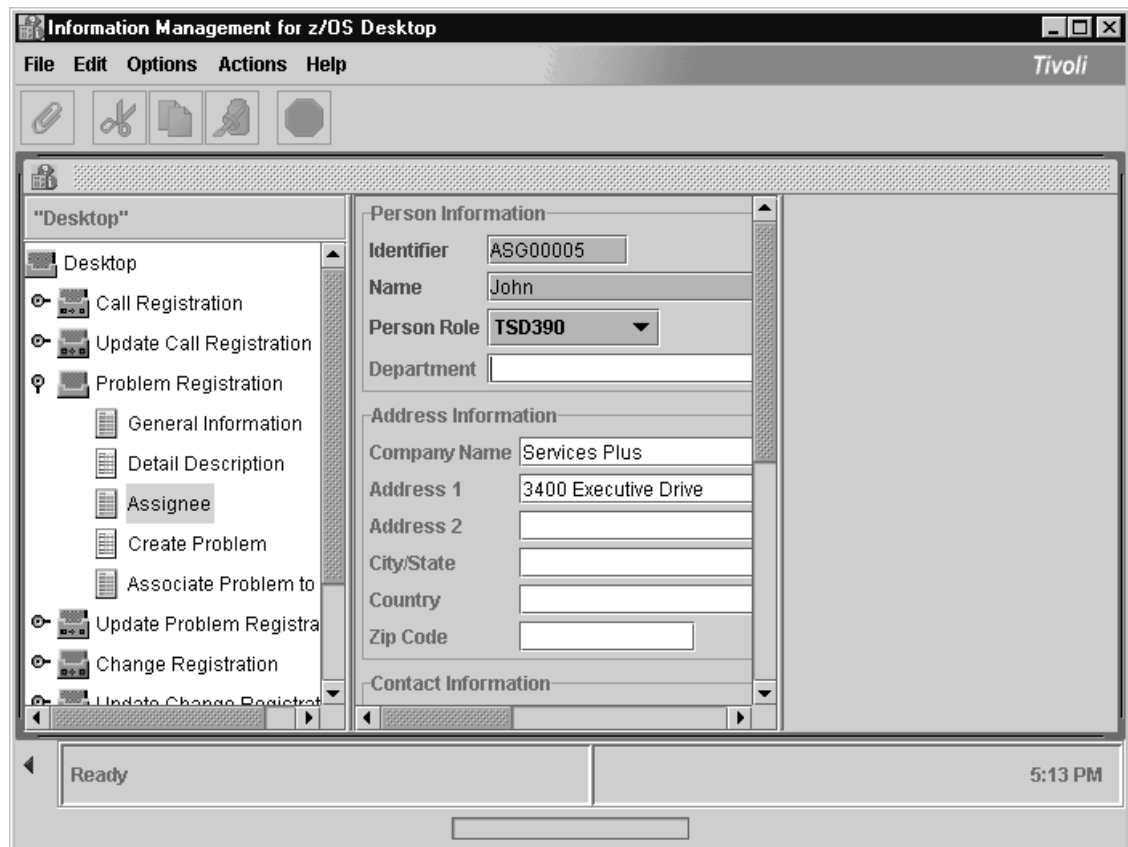


Figure 20. Assignee Task Pane

To assign the problem to someone, follow these steps:

1. Enter an identifier for a problem assignee in the **Identifier** text box.
  - If the problem assignee is new and an identifier does not exist, specify an identifier in the **Identifier** text box. Enter the problem assignee's name in the **Name** text box. The **Person Role** of **TSD390** is already specified. Complete other fields as necessary to provide address and contact information. Fields shown with red labels are required fields.

Click **Create** to create a people record for the problem assignee. The status bar blinks to indicate a create transaction is in progress.

  - If the problem assignee has an identifier, enter the identifier in the **Identifier** text box and tab to the next field. As you tab to the next field, the Desktop begins a transaction to get the problem assignee information from the Desktop database. If the identifier exists in the database, information about the problem assignee is retrieved from the people record in Tivoli Information Management for z/OS and is displayed in the center pane.

You can also use a **Search** icon to search on fields other than the identifier. After you perform a search and results appear in the third pane in the search results list area, you can drag and drop information about a person into matching fields in the **Assignee** task pane.
2. Click **Next** to proceed to the **Create Problem** task pane where you can specify when the problem was assigned and create a problem record.



## Create Problem

The **Create Problem** task pane can be accessed by clicking the **Next** button from the **Assignee** task pane, or by clicking the **Create Problem** icon under **Problem Registration** (see Figure 21).

If you arrive at the **Create Problem** task pane by clicking **Next** from the **Assignee** task pane, fields may be prefilled with data that was carried over from the **Create Call** and **Assignee** task panes.

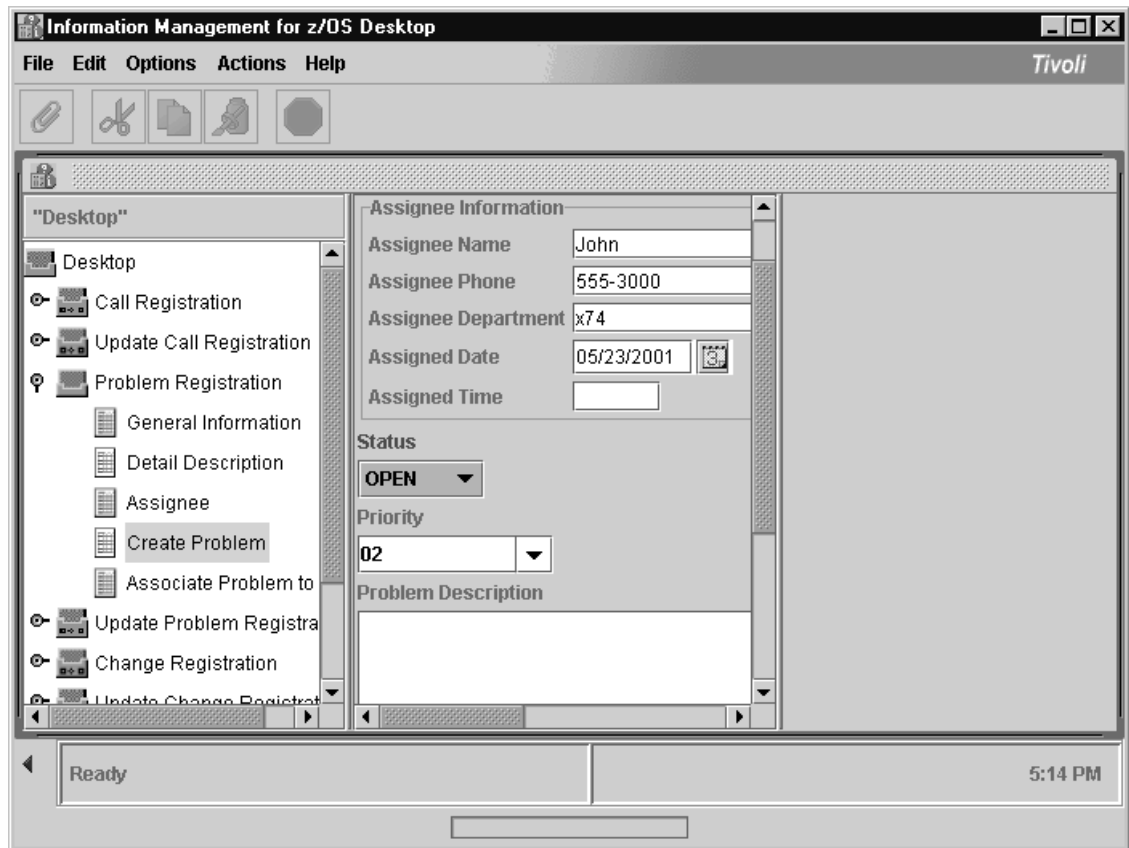


Figure 21. Create Problem Task Pane

To complete information about the problem and create a problem record, follow these steps:

1. Enter information about when the problem was assigned and complete any other additional fields relevant to the problem if they have not already been completed.

**Note:** If you are using prefilled data about the problem assignee, do not modify or add information in the text boxes associated with the problem assignee. If you do, the information you add or modify in those text boxes will not be reflected in the people records in the Tivoli Information Management for z/OS host database. The **Create Problem** task pane is intended to capture information about the problem; it is not intended to update existing people records.

2. Click **Create** to create a problem record. A record number ID is generated and displayed in the **Problem ID** field on the **Create Problem** task pane to indicate a problem record was automatically created.

3. You can associate the problem record you just created with a call record, if desired. To do this, click **Next** to proceed to the **Associate Problem to Call** task pane.

### Associate Problem to Call

The **Associate Problem to Call** task pane can be accessed by clicking the **Next** button from the **Create Problem** task pane, or by clicking the **Associate Problem to Call** icon under **Problem Registration** (see Figure 22).

If you arrive at the **Associate Problem to Call** task pane by clicking **Next** from the **Create Problem** task pane, some fields may be prefilled with data that was carried over from other task panes.

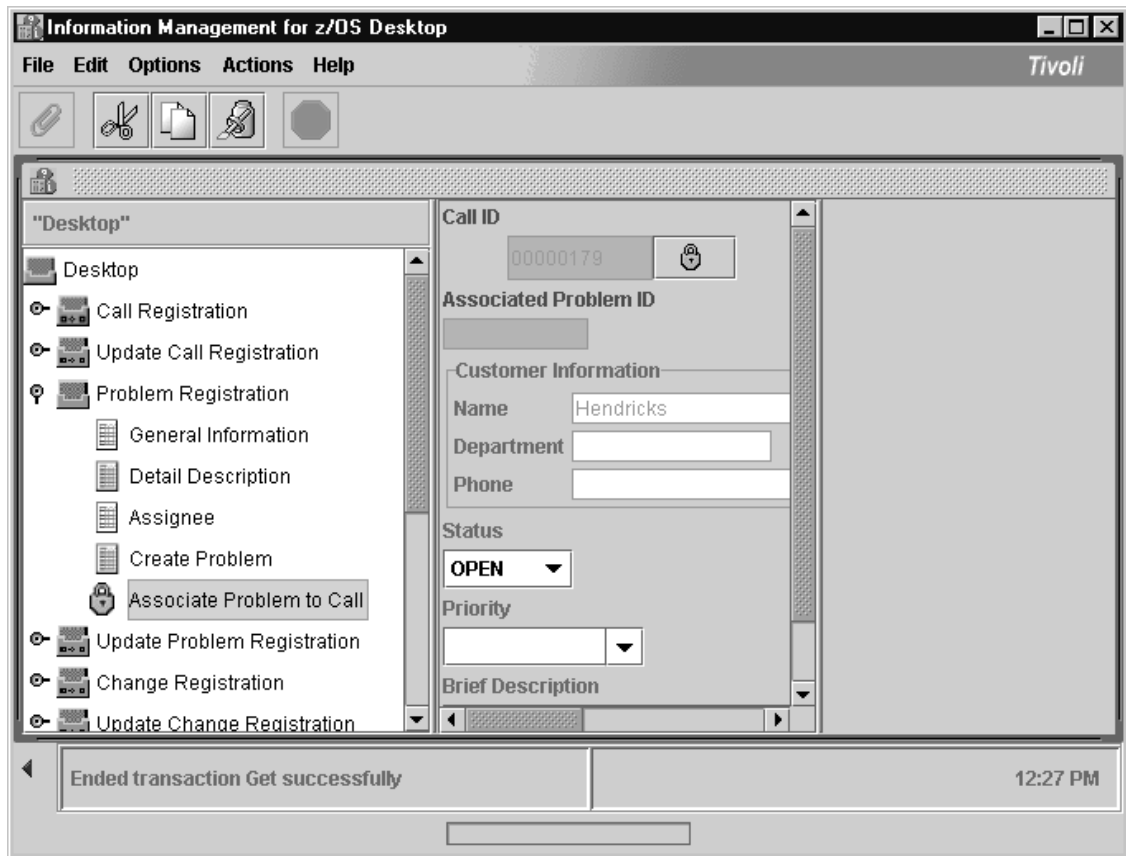


Figure 22. Associate Problem to Call Task Pane

To associate a problem record with a call record, click the **Associate Problem to Call** button. On the host, the call record is updated with the record number ID of the problem. If you do not associate a problem record with a call, no association takes place. If you were to display the call record interactively on Tivoli Information Management for z/OS, you would not see what problem is associated with the call.

**Note:** When a call record is retrieved for the Associate Problem to Call task, a “lock” icon appears next to the **Call ID** field, indicating that the record is locked (the lock icon also appears next to the other update tasks for Update Call Registration and next to the Associate Problem to Call task in the application hierarchy). The lock icon indicates that other users cannot update the record. While you have the record locked, the **Call ID** field is disabled and the input fields are enabled so that you can make any modifications. You can then select the **Associate Problem to Call** button which

will perform the association and unlock the call record. If you do not want to associate the problem to a call, you can click the lock icon next to the **Call ID** field to unlock the call record. If you are not able to unlock the record, your Desktop administrator can use the Check In procedure described in the *Tivoli Information Management for z/OS Program Administration Guide and Reference*.

At this point, the process of capturing call information and problem information is complete. You can update call information and problem information as needed, create or update additional people records, or search on calls, problems, or people records in your Tivoli Information Management for z/OS database.

## Update Problem Registration

This section describes how you can use the Desktop to update existing problem records in the Tivoli Information Management for z/OS database. You can update general information about a problem, specific details related to the problem, and problem assignee information in the problem records.

**Note:** When a record is retrieved for one of the tasks available under Update Problem Registration, a “lock” icon appears next to the **Problem ID** field, indicating that the record is locked (the lock icon also appears next to the other update functions in the application hierarchy). The lock icon indicates that other users cannot update the problem record. While you have the record locked in update mode, the **Problem ID** field is disabled and the input fields that you are authorized to update are enabled. You can then select **Update** to update and unlock the record in the Tivoli Information Management for z/OS database. If you do not want to update the record, you should unlock it. To unlock the record, you can click the lock button next to the **Problem ID** field. You can also click **Reset Problem Record** which, in addition to unlocking the record, clears all the data from fields associated with the Update Problem Registration tasks. If you are not able to unlock the record, your Desktop administrator can use the Check In procedure described in the *Tivoli Information Management for z/OS Program Administration Guide and Reference*.

## Update General Information

The **Update General Info** task pane can be accessed by clicking the **Update General Info** icon under **Update Problem Registration**.

To update general information about a problem so that updates appear in an existing problem record in the Tivoli Information Management for z/OS database, follow these steps.

**Note:** Updates you make to general information flow to the problem record only. To ensure that customer information changes are reflected in the people record, you must use the People Registration update task and make corresponding updates in that task pane.

1. Enter a record number ID for a problem record in the **Problem ID** text box and tab to the next field. (You can also search for the Problem ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the problem record does not exist, a message is displayed in the message console area to inform you.
2. Update the general information for the problem as needed by supplying the correct information in the text boxes or by selecting the appropriate item from a drop-down list.
3. Click **Update Problem Record** to update the problem record.

## Update Problem Registration

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To clear the fields on all task panes associated with an update of a Problem record, click **Reset Problem Record**. If the record is locked, clicking **Reset Problem Record** also unlocks the record.

### Update Detail Description

The **Update Detail Desc** task pane can be accessed by clicking the **Update Detail Desc** icon under **Update Problem Registration**.

To update details about a problem so that updates appear in an existing problem record in the Tivoli Information Management for z/OS database, follow these steps.

**Note:** Updates you make to the problem details flow to the problem record only.

1. Enter a record number ID for a problem record in the **Problem ID** text box and tab to the next field. (You can also search for the Problem ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the problem record does not exist, a message is displayed in the message console area to inform you.
2. Update the detailed information about the problem as needed by supplying the correct information in the text boxes.
3. Click **Update Problem Record** to update the problem record.

To clear the fields on all task panes associated with an update of a Problem record, click **Reset Problem Record**. If the record is locked, clicking **Reset Problem Record** also unlocks the record.

To create a solution record from the current problem record, click **Create Solution**. The Create Solution button invokes the CreateSolProb function. The problem record does not have to be locked in order to create a solution record associated with it, but the problem record status must be **closed** and the problem record must contain text in the Problem Description freeform text and Resolution Description freeform text fields.

For more information about solution records, see “Creating Solution Records” on page 66.

### Update Assignee

The **Update Assignee** task pane can be accessed by clicking the **Update Assignee** icon under **Update Problem Registration**.

To update details about a problem assignee so that updates appear in an existing problem record in the Tivoli Information Management for z/OS database, follow these steps.

**Note:** Updates you make to the problem details flow to the problem record only. To ensure that changes to problem assignee data such as the assignee’s phone and department number are reflected in the people record, you must use the People Registration update task and make corresponding updates in that task pane.

1. Enter a record number ID for a problem record in the **Problem ID** text box and tab to the next field. (You can also search for the Problem ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the problem record does not exist, a message is displayed in the message console area to inform you.

2. Update the problem assignee information by supplying the correct information in the text boxes.
3. Click **Update Problem Record** to update the problem record.

To clear the fields on all task panes associated with an update of a Problem record, click **Reset Problem Record**. If the record is locked, clicking **Reset Problem Record** also unlocks the record.

## Change Registration

This section describes how you can use the Desktop to capture information about a particular change, such as the person who requested the change, the person assigned to enact the change, and data concerning the close, impacts, and approval of the change.

The Change Registration and Update Change Registration processes are unique among the processes included in the sample Desktop application because these processes allow you to create subtasks, called activity records, for change records. For example, if the change required is that a new workstation be installed, you can assign the subtasks of the change (for example, installing a phone line, procuring a computer, licensing the software) to different people. For more information on activity records, see “Activity Records” on page 63.

## Requester Data

The **Requester Data** task pane can be accessed by clicking the **Requester Data** icon under **Change Registration**.

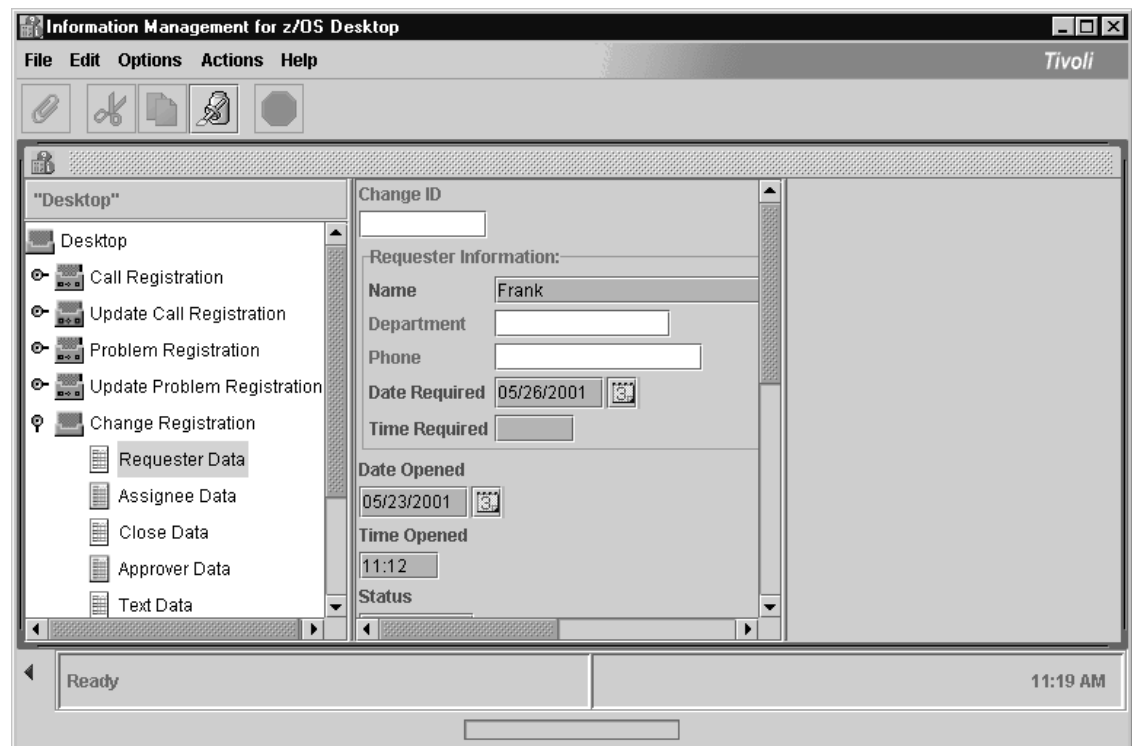


Figure 23. Requester Data Task Pane

To provide requester data about a change, follow these steps:

## Change Registration

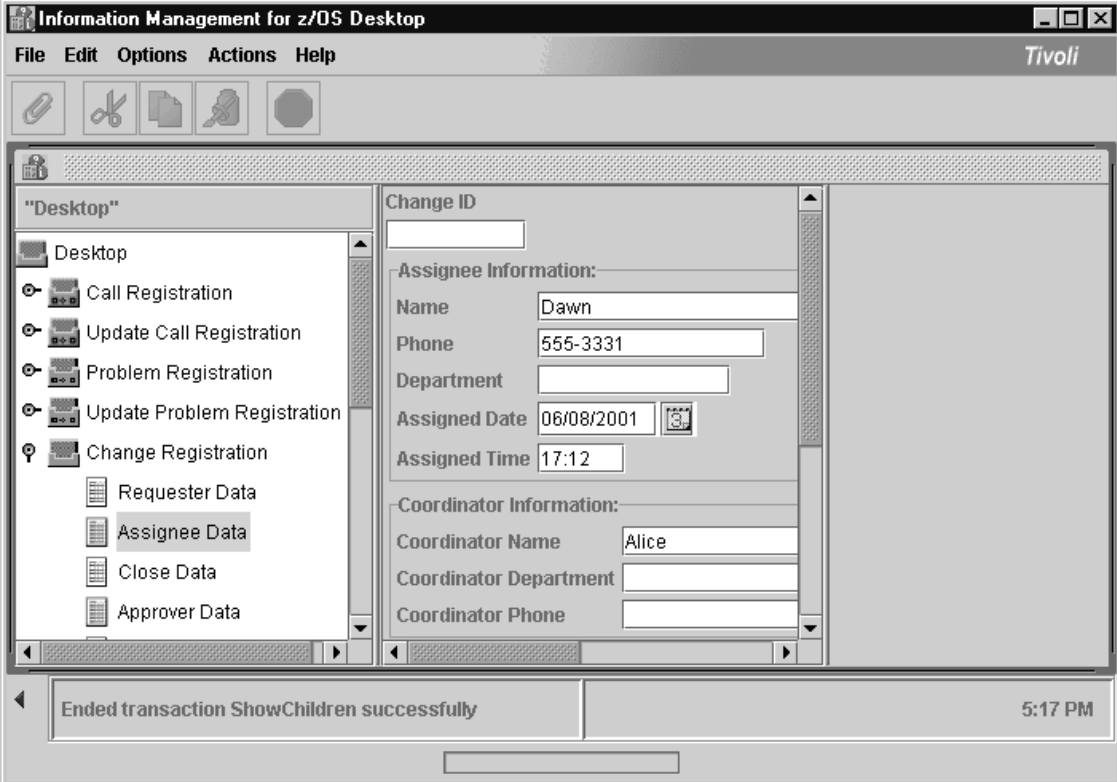
1. Provide requester information for the required fields (Name, Date Required, Time Required, Date Opened, Time Opened, Status, Brief Description). You can click **Reset** to clear the fields.

The **Change ID** text box will remain blank until you file the change record.

2. If you want to provide information about the assignee for the change, click **Next** to proceed to the **Assignee Data** task pane. If you do not want to provide assignee data, click **File** to file the record.
3. After you have filed the record, if desired, click **Activities** to create activities for the change record. For information on activities, see “Activity Records” on page 63.

## Assignee Data

The **Assignee Data** task pane can be accessed by clicking the **Next** button from the Change Registration **Requester Data** task pane, or by clicking the **Assignee Data** icon under **Change Registration**.



The screenshot shows the 'Information Management for z/OS Desktop' application window. The title bar includes the text 'Information Management for z/OS Desktop' and 'Tivoli'. The menu bar contains 'File', 'Edit', 'Options', 'Actions', and 'Help'. Below the menu bar is a toolbar with icons for file operations. The main window is divided into two panes. The left pane, titled '"Desktop"', contains a tree view with the following items: Desktop, Call Registration, Update Call Registration, Problem Registration, Update Problem Registration, Change Registration (with sub-items: Requester Data, Assignee Data, Close Data, Approver Data). The right pane, titled 'Change ID', contains a form with the following fields: Change ID (empty), Assignee Information: Name (Dawn), Phone (555-3331), Department (empty), Assigned Date (06/08/2001), Assigned Time (17:12), Coordinator Information: Coordinator Name (Alice), Coordinator Department (empty), and Coordinator Phone (empty). At the bottom of the window, a status bar displays 'Ended transaction ShowChildren successfully' and the time '5:17 PM'.

Figure 24. Assignee Data Task Pane

To assign the change to someone, follow these steps:

1. Provide information about the assignee, coordinator, and planned dates and times.
2. Click **File** to file the change record.
3. After you have filed the record, if desired, click **Activities** to create activities for the change record. For information on activities, see “Activity Records” on page 63.

## Close Data

The **Close Data** task pane can be accessed by clicking the **Close Data** icon under **Change Registration**. Some fields in the Close Data task pane may be prefilled with data from the Requester Data task pane.

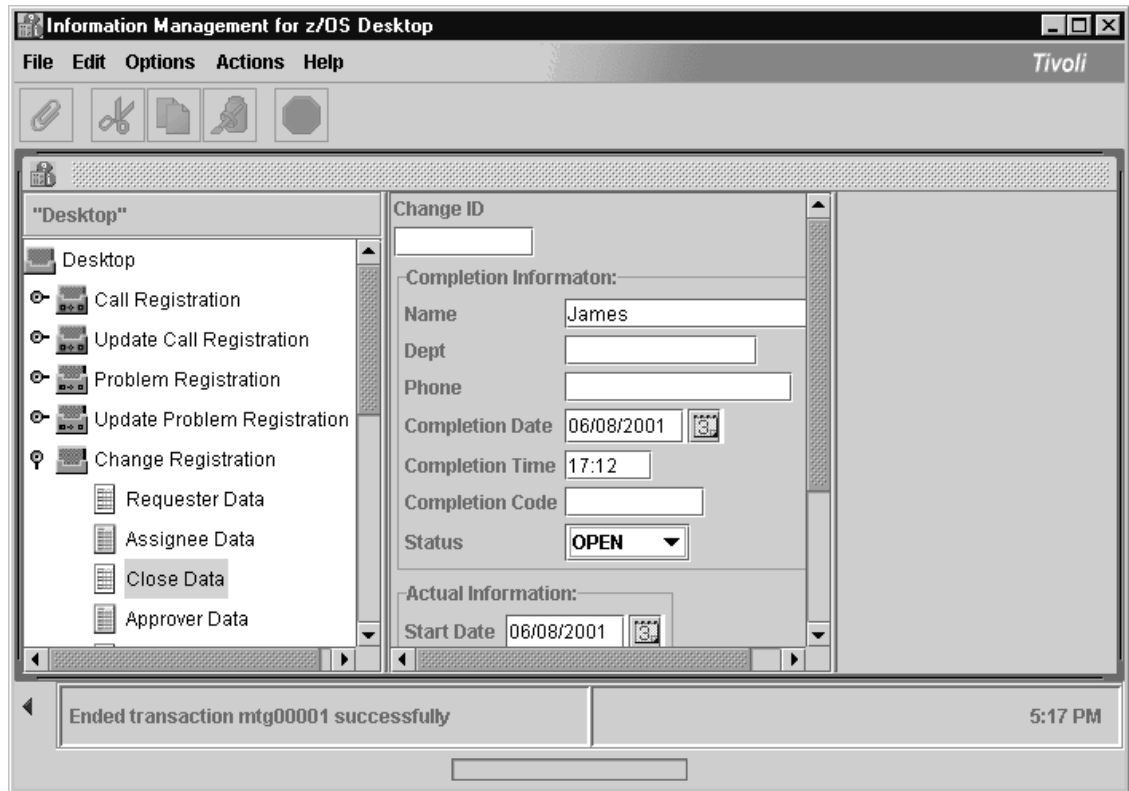


Figure 25. Close Data Task Pane

To enter information about the completion and effects of a change, follow these steps:

1. Provide the desired information in the text boxes on the Close Data task pane.
2. Click **File** to file the change record.
3. After you have filed the record, if desired, click **Activities** to create activities for the change record. For information on activities, see “Activity Records” on page 63.

## Approver Data

The **Approver Data** task pane can be accessed by clicking the **Approver Data** icon under **Change Registration**.

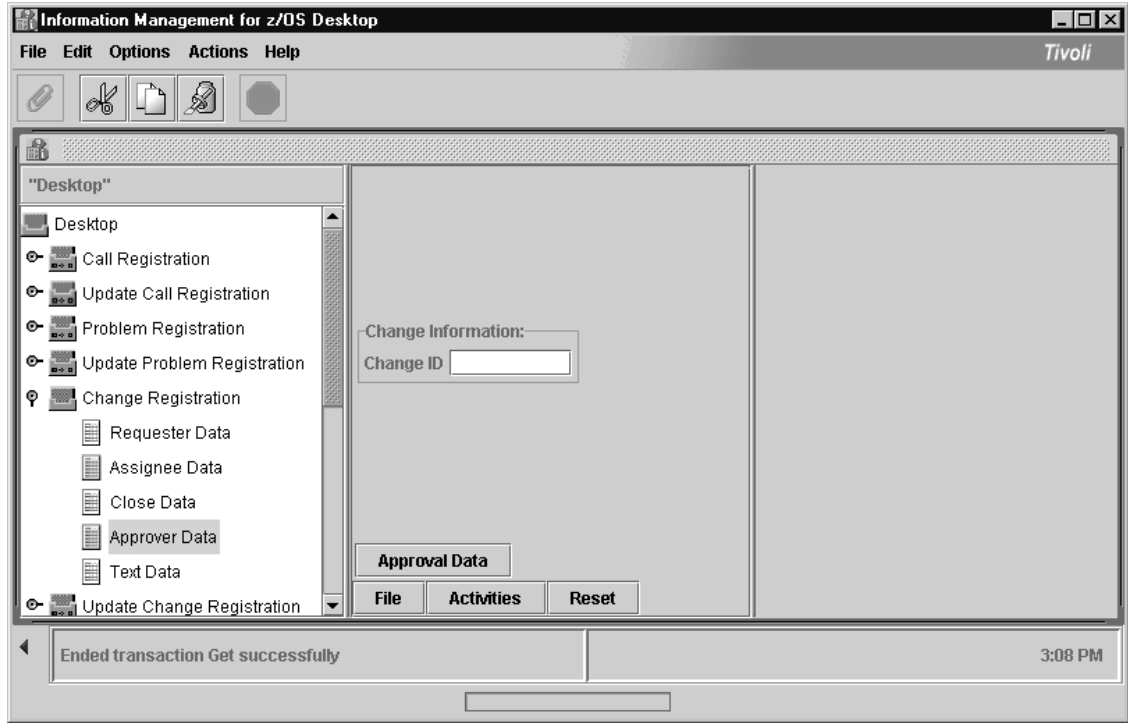


Figure 26. Approver Data Task Pane

To enter information about the approver or approvers of a change, click **Approval Data**.

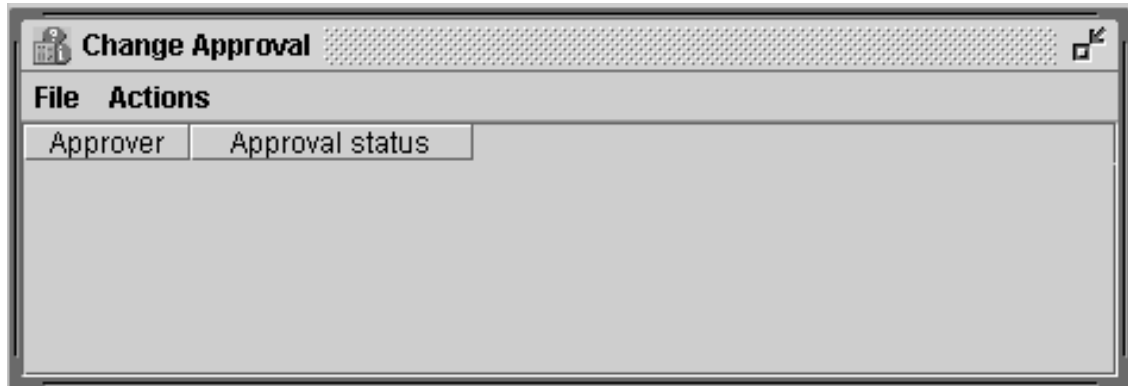


Figure 27. Approval Data Window

In the Approval Data window that opens, you can create and modify a list of approvers with the menu choices available under **Actions**. Select **Actions** and then **Add Row** to create an approver.



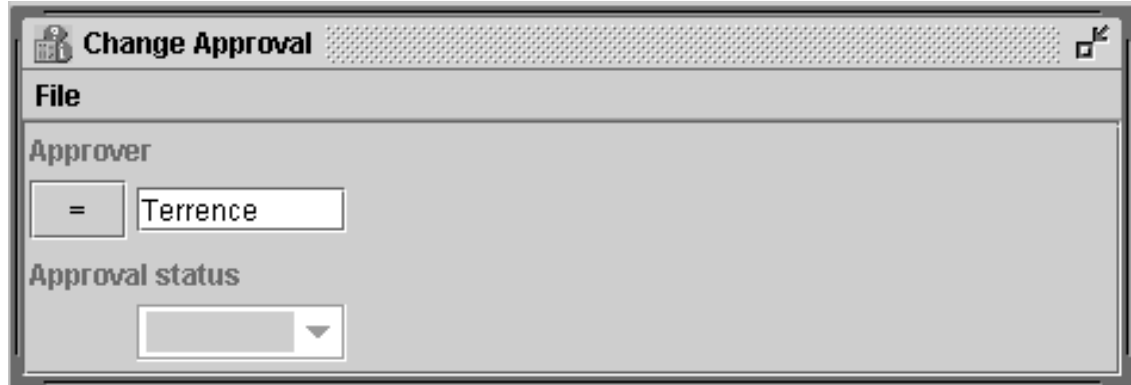


Figure 28. Change Approval Window

Using the **Actions** menu item, you can add more rows of approvers. You can also update, move, or delete rows. When you have completed the list of approvers, click **File** and **Close** to save the list. If desired, you can also click **Activities** to create activity records for the change record. For information on activities, see “Activity Records” on page 63.

**Note:** The Change Approval table is an example of a “list” that has been defined for the sample Desktop application. If you are using a customized Desktop application, you may be able to work with other types of lists that have been defined by your Desktop administrator. For more information on working with lists, see “Working with List Data Fields in the Desktop” on page 211.

## Text Data

The **Text Data** task pane can be accessed by clicking the **Text Data** icon under **Change Registration**.

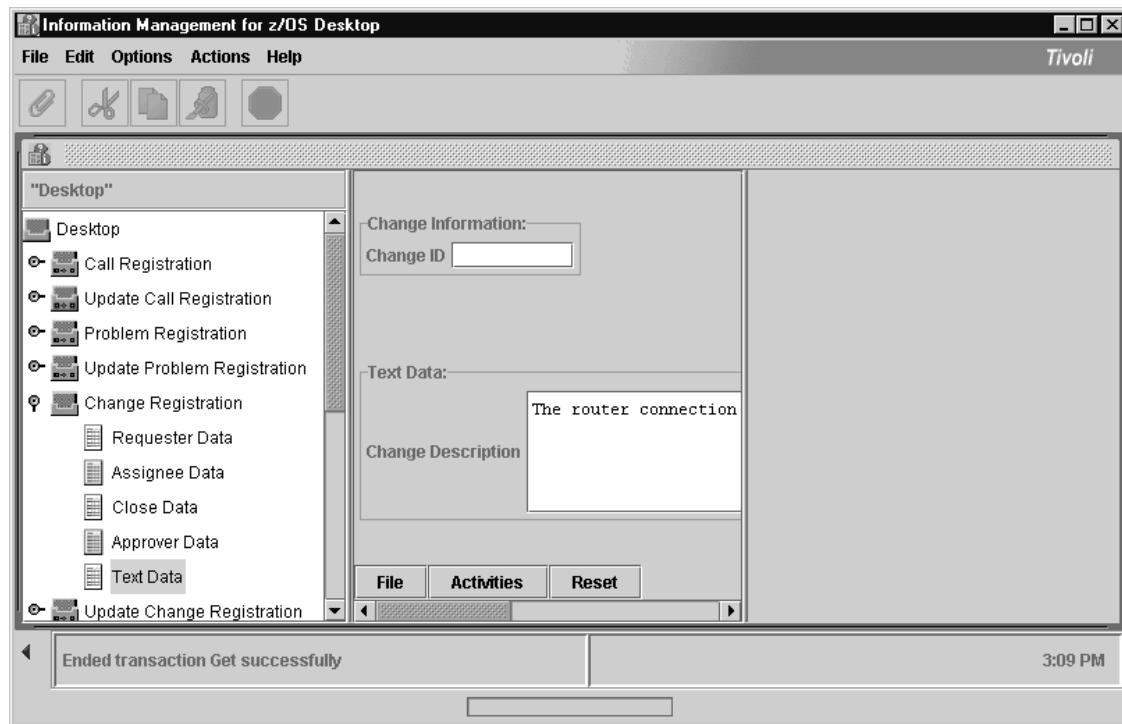


Figure 29. Text Data Task Pane

To enter freeform text about a change, type the text in the **Change Description** text box. When finished, click **File** to file the change record.

If desired, click **Activities** to create subtasks for the change. For information on activities, see “Activity Records” on page 63.

## Update Change Registration

This section describes how you can use the Desktop to update existing change records in the Tivoli Information Management for z/OS database. Since change records contain information about the person who requested the change, the person assigned to enact the change, and data concerning the close and approval of the change, you can follow these procedures to update this type of information in the change records.

**Note:** When a record is retrieved for one of the tasks available under Update Change Registration, a “lock” icon appears next to the **Change ID** field, indicating that the record is locked (the lock icon also appears next to the other update functions in the application hierarchy). The lock icon indicates that other users cannot update the Change record. While you have the record locked in update mode, the **Change ID** field is disabled and the input fields that you are authorized to update are enabled. You can then select **Update** to update and unlock the record in the Tivoli Information Management for z/OS database. If you do not want to update the record, you should unlock it. To unlock the record, you can click the lock button next to the **Change ID** field. You can also click **Reset** which, in addition to unlocking the record, clears all the data from fields associated with the Update Change Registration tasks. If you are not able to unlock the record, your Desktop administrator can use the Check In procedure described in the *Tivoli Information Management for z/OS Program Administration Guide and Reference*.

## Update Requester Data

The **Update Requester Data** task pane can be accessed by clicking the **Update Requester Data** icon under **Update Change Registration**.

To update information about a change so that updates appear in an existing change record in the Tivoli Information Management for z/OS database, follow these steps.

1. Enter a record number ID for a change record in the **Change ID** text box and tab to the next field. (You can also search for the Change ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the call record does not exist, a message is displayed in the message console area to inform you.

After the change record has been retrieved, you can click **History** to display a history of the change record in the right pane.

2. Update the information for the change record as needed by supplying the correct information in the text boxes.
3. Click **Update** to update the call record. Or, if desired, click **Activities** to create subtasks for the change. For information on activities, see “Activity Records” on page 63.

To clear the fields on all task panes associated with an update of a Change record, click **Reset**. If the record is locked, clicking **Reset** also unlocks the record.

## Update Assignee Data

The **Update Assignee Data** task pane can be accessed by clicking the **Update Assignee Data** icon under **Update Change Registration**.

To update information about a change so that updates appear in an existing change record in the Tivoli Information Management for z/OS database, follow these steps.

1. Enter a record number ID for a change record in the **Change ID** text box and tab to the next field. (You can also search for the Change ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the call record does not exist, a message is displayed in the message console area to inform you.

2. Update the information for the change record as needed by supplying the correct information in the text boxes.

3. Click **File** to update the call record. Or, if desired, click **Activities** to create subtasks for the change. For information on activities, see “Activity Records” on page 63.

## Update Close Data

The **Update Close Data** task pane can be accessed by clicking the **Update Close Data** icon under **Update Change Registration**.

To update information about a change so that updates appear in an existing change record in the Tivoli Information Management for z/OS database, follow these steps.

1. Enter a record number ID for a change record in the **Change ID** text box and tab to the next field. (You can also search for the Change ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the call record does not exist, a message is displayed in the message console area to inform you.

## Update Change Registration

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2. Update the information for the change record as needed by supplying the correct information in the text boxes.
3. Click **File** to update the call record. Or, if desired, click **Activities** to create subtasks for the change. For information on activities, see “Activity Records” on page 63.

### Update Approver Data

The **Update Approver Data** task pane can be accessed by clicking the **Update Approver Data** icon under **Update Change Registration**.

To update information about a change so that updates appear in an existing change record in the Tivoli Information Management for z/OS database, follow these steps.

1. Click the Update Requester Data task. Enter a record number ID for a change record in the **Change ID** text box and tab to the next field. (You can also search for the Change ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the call record does not exist, a message is displayed in the message console area to inform you.
2. Click the Update Approver Data task. Click **Change Approval**.
3. Update the information for the Approver list as needed using the **Action** menu options. For more information on this process, see “Approver Data” on page 57.
4. Click **File** and then **Close** to save the updated Approver list.

If desired, click **Activities** to create subtasks for the change. For information on activities, see “Activity Records” on page 63.

### Update Text Data

The **Update Text Data** task pane can be accessed by clicking the **Update Text Data** icon under **Update Change Registration**.

To update information about a change so that updates appear in an existing change record in the Tivoli Information Management for z/OS database, follow these steps.

1. Click the Update Requester Data task. Enter a record number ID for a change record in the **Change ID** text box and tab to the next field. (You can also search for the Change ID and then drag the appropriate information into the task pane.) The Desktop initiates a transaction to retrieve the record from the Tivoli Information Management for z/OS database. If the call record does not exist, a message is displayed in the message console area to inform you.
2. Click the Update Text Data task.
3. Update the information in the **Change Description** text box as needed.
4. Click **File** to save the updated text.

If desired, click **Activities** to create subtasks for the change. For information on activities, see “Activity Records” on page 63.

## Activity Records

Activity records describe the activities associated with a change record. Change activities can include ordering, installing, testing, or updating documentation as you update software. In creating an activity record, you establish a parent/child relationship between the change (parent) record and the activity (child) record. Each activity entry is a separate record with a unique number and name. It is linked to the parent change record through this number and name. You can create as many activity records as necessary for each change request record. You can create activity records at the same time you create the change request record, or later, by updating the change request record.

The Change Registration and Update Change Registration processes are unique among the Desktop processes because only these two processes allow you to create activity records. From any task within these two processes, you can click **Activities** to create activity records for a change record.

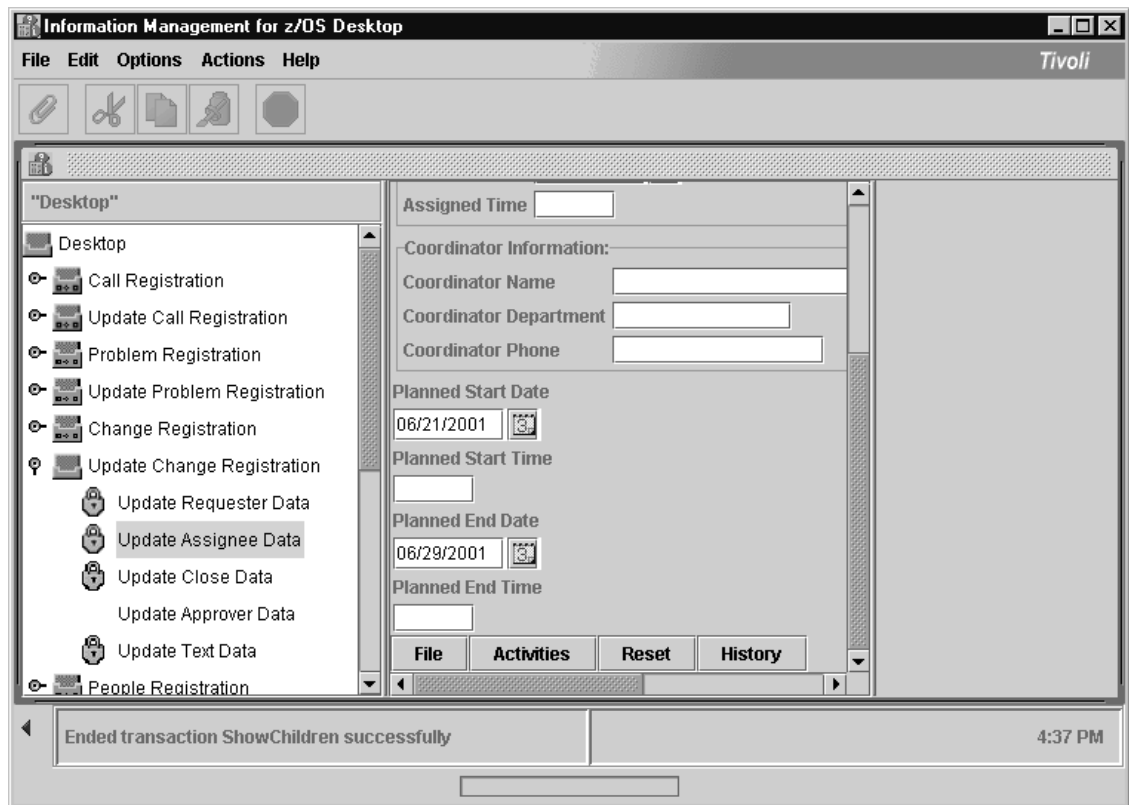
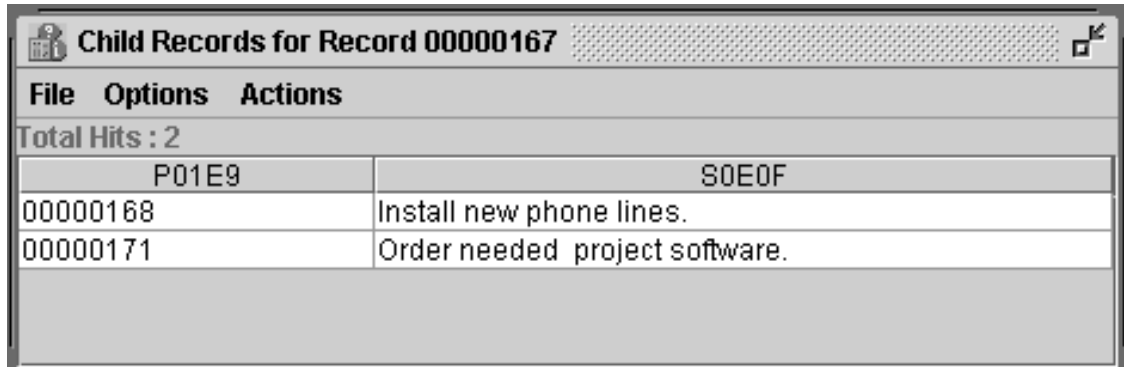


Figure 30. Update Assignee Data Task Pane

Click **Activities** and you can create or update activity records for the change record.



The screenshot shows a window titled "Child Records for Record 00000167". Below the title bar is a menu bar with "File", "Options", and "Actions". Underneath is a status bar that says "Total Hits : 2". The main area contains a table with two columns: "P01E9" and "S0E0F".

P01E9	S0E0F
00000168	Install new phone lines.
00000171	Order needed project software.

Figure 31. Child Records Task Pane

For more detail on working with activity records, also called child records, see “Parent and Child Records” on page 213.

## People Registration

This section describes how you can use the Desktop to register individuals as either customers or internal support personnel in your database so that you can more readily retrieve details about an individual that can be applied to incoming calls or problem records. For information about administering the creation of people records, see “Setting Up People Records” on page 15.

### Create

To create a record in the Tivoli Information Management for z/OS database that can be used to identify either your help desk customers or the people who work internally in your organization to provide service to your customers (such as help desk call takers or problem assignees), click the **Create** icon under the **People Registration** icon (see Figure 32 on page 65), and then follow these steps:

1. Enter an identifier for the person in the Identifier text box. The identifier is a record number ID in the Tivoli Information Management for z/OS database that will uniquely identify this person. The identifier can be up to 8 characters long, and the first character must be alphabetic. Enter the person’s name in the **Name** text box. Select a **Person Role** from the drop-down list to specify whether this person is a customer or someone who provides internal support (TSD390). Complete other fields as necessary to provide address and contact information. Fields shown with red labels are required fields.
2. Click **Create Person** to create a people record in the Tivoli Information Management for z/OS database.

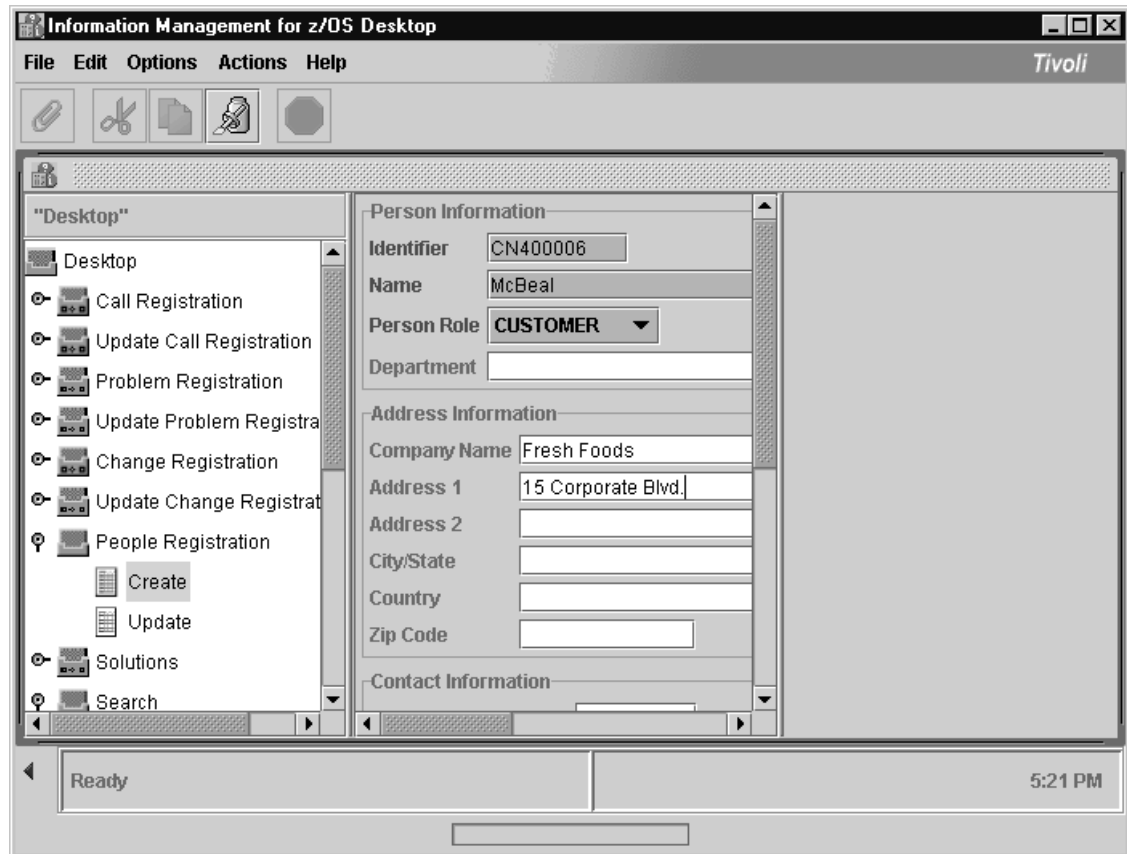


Figure 32. Create (People Registration) Task Pane

To clear the fields on the task pane, click **Reset People Record**. If the record is locked, clicking **Reset People Record** also unlocks the record.

## Update

To update a people record in the Tivoli Information Management for z/OS database, click the **Update** icon under the **People Registration** icon, and then follow these steps:

1. Enter an identifier for the person in the **Identifier** field, and tab to the next field. The identifier is a record number ID in the Tivoli Information Management for z/OS database that will uniquely identify this person. The identifier can be up to 8 characters long, and the first character must be alphabetic. As you tab to the next field, the Desktop begins a transaction to get the people record information from the Desktop database. If the identifier exists in the database, information about the person is retrieved from the people record in Tivoli Information Management for z/OS and is displayed in the center pane.

**Note:** When a record is retrieved for the Update function of People Registration, a “lock” icon appears next to the **Identifier** field, indicating that the record is locked (the lock icon also appears next to the other update functions in the application hierarchy). The lock icon indicates that other users cannot update the people record. While you have the record locked, the **Identifier** field is disabled and the input fields are enabled so that you can make any modifications. You can then select **Update Person** to make the modifications and unlock the record. If you do not want to modify the record, you should unlock it. To unlock the record, click the lock button or else click **Reset People Record**. If you are not able to

unlock the record, your Desktop administrator can use the Check In procedure described in the *Tivoli Information Management for z/OS Program Administration Guide and Reference*.

2. Update the information by changing the data in the text fields or by making the appropriate selection from the drop-down lists.
3. Click **Update Person** to update the people record in the Tivoli Information Management for z/OS database.

To clear the fields on the task pane, click **Reset People Record**.

## Creating Solution Records

This section describes how you can use the Desktop to create solution records. A solution record preserves knowledge about the resolution of a problem. By saving this knowledge, you can use it to resolve future problems.

You can create a solution record in two ways:

- By retrieving information from a problem record and using that information as the basis for creating a solution record related to the problem.
- By specifying the solution information directly and creating a "stand-alone" solution (one which does not have its origins in any particular problem).

For more information about solution records, see *Tivoli Information Management for z/OS Program Administration Guide and Reference*.

## Problem Solution Data

The **Problem Solution Data** task pane can be accessed by clicking the **Problem Solution Data** icon under **Solutions**.



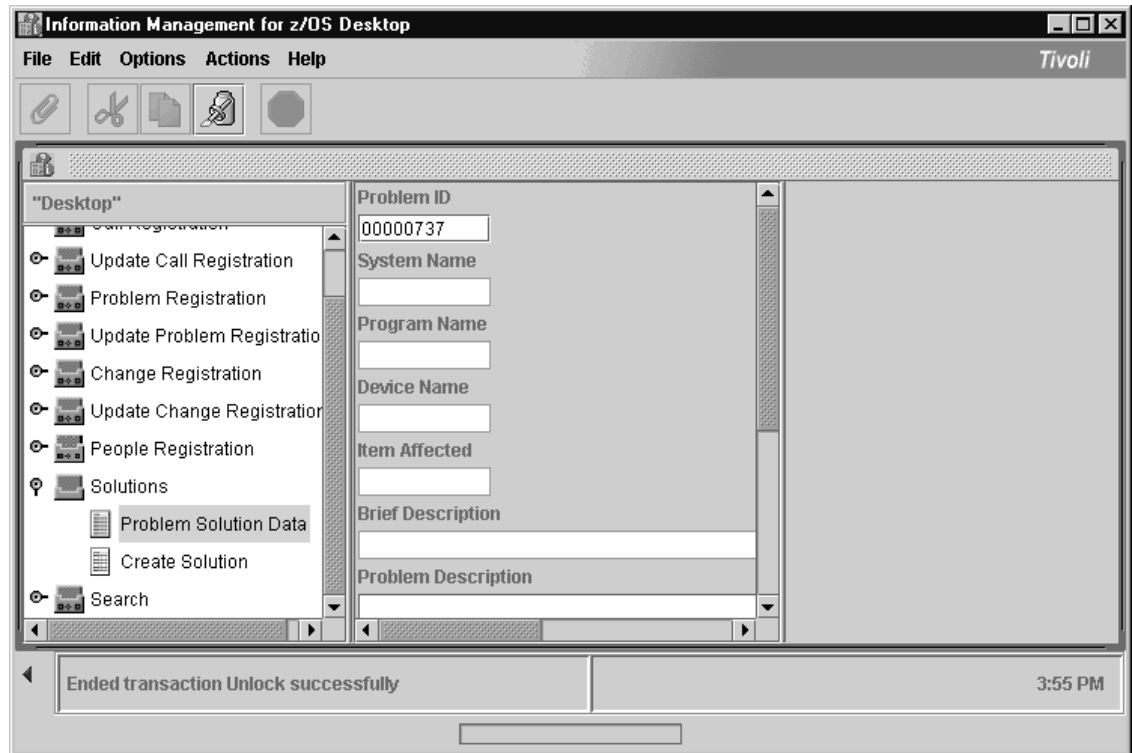


Figure 33. Problem Solution Data Task Pane

To create a solution record from a problem record, the problem record status must be **closed** and the problem record must contain data in the **Problem Description** and **Resolution Description** freeform text fields.

To retrieve solution information from a problem record, expand the **Solutions** process icon and follow these steps:

1. Click the **Problem Solution Data** task icon.
2. Type a problem number in the **Problem ID** field.
3. Click **Get** to retrieve the solution information from the problem record. The **Get** button invokes the GetSolutionData function.
4. Click the **Create Solution** task icon. The problem information is smart mapped from the Problem Solution Data task pane to the Create Solution task pane.
5. Add information to solution record as desired.

## Create Solution

The **Create Solution** task pane can be accessed by clicking the **Create Solution** icon under **Solutions**.

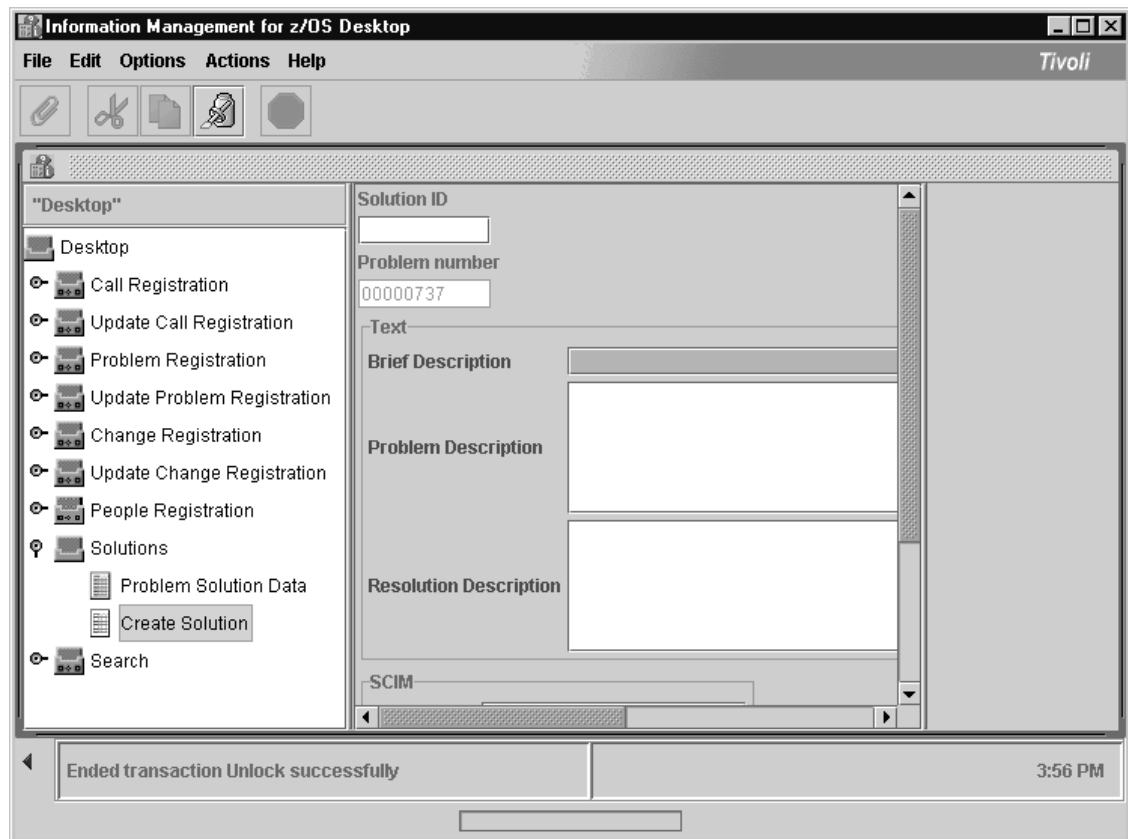


Figure 34. Create Solution Task Pane

To create a "stand-alone" solution record, the following information is required:

- Description abstract
- Problem Description freeform text
- Resolution Description freeform text

You can either retrieve the information for these fields from a closed problem record or you can type the required information. To create a "stand-alone" solution, expand the **Solutions** process icon and follow these steps:

1. Click the **Create Solution** task icon.
2. Make sure that required information and any other desired information has been specified.
3. Click **Create** to create the solution record. The **Create** button invokes the CreateSolution function.

## Searching for Data

This section describes how you can use the Desktop to search the Tivoli Information Management for z/OS database for the following:

- Information about call records, such as when a call came in, what it was about, and who took the call

- Information about problem records, such as when the problem occurred, what the problem was, and to whom it was assigned
- Information about change records, such as who requested the change, who was assigned to enact the change, who approved the change, when was the change completed, and what impacts the change had
- Information about activity records, such the activity requester, assignee, approver, and so on
- Information about callers, call takers, or problem assignees, such as their preferred method of contact or physical location
- Information about solution records, such as related problems, SCIM information, and descriptions of the solutions

Information on how to retrieve and copy data from a previous problem record in the database to a new problem is also provided.

With the Desktop, you can perform searches two ways:

#### From the Center Pane

You can enter a search from the center pane of the Desktop by filling in one or more fields on the task pane and clicking a search button. As you fill in the blank fields, the search argument is built for you. Results of the search are displayed in a list in the right pane of the Desktop window as shown in Figure 36 on page 73. You can double-click a record in the list to see more details about the record, as shown in Figure 37 on page 73. You can also copy the data into a new record by dragging the record information from the search results list pane into a task pane. Additionally, you can sort and print the data displayed in the table list.

#### From the Actions Menu

You can enter a search by selecting the **Freeform Search** option under **Actions** on the menu bar and typing in a search argument (such as pers/Henderson stac/closed) in the freeform search dialog, as shown in Figure 38 on page 75. Results of the search are displayed in a list table in the right pane of the Desktop window. You can double-click a record in the list to see more details about the record. You can also copy the data into a new record by dragging the record information from the search results list pane into a task pane. Additionally, you can sort and print the data displayed in the list table.

Prior to running a search of records in the database, you can choose the table panels and specify the columns you want to appear in your search results by selecting **Search** from the **Options** menu and then either **Table Panels** or **Table Columns**, respectively.

## Selecting a Table Panel

A table panel is a scrollable panel in Tivoli Information Management for z/OS that displays data generated in the course of doing work in Tivoli Information Management for z/OS. There are various types of table panels available, some of which are specifically designed for displaying data from records retrieved by a search of the database. The default table panel used for search results lists is typically BLG1TSRL. This table panel includes the record number ID and description of the record, but your Tivoli Information Management for z/OS administrator may have modified this table to include other fields or may have set up additional table panels in addition to those normally provided with Tivoli Information

Management for z/OS. If additional table panels are available on your system, you can select the one to use in displaying a search results list.

To specify a table panel for the Desktop, do the following:

1. Click **Options** on the menu bar.
2. Click **Search** and then click **Table Panels**. A list of table panels set up by your administrator for Tivoli Information Management for z/OS is displayed. The first time you see this list, BLG1TSRL is selected for you. To view the hover help description of a table panel, place your cursor over the table panel name.
3. Click the desired table panel. A radio button appears to mark your selection and the table panel selected is highlighted as red text.

**Note:** If you are unsure of what table panel to specify, contact your Tivoli Information Management for z/OS administrator.

Proceed with specifying columns.

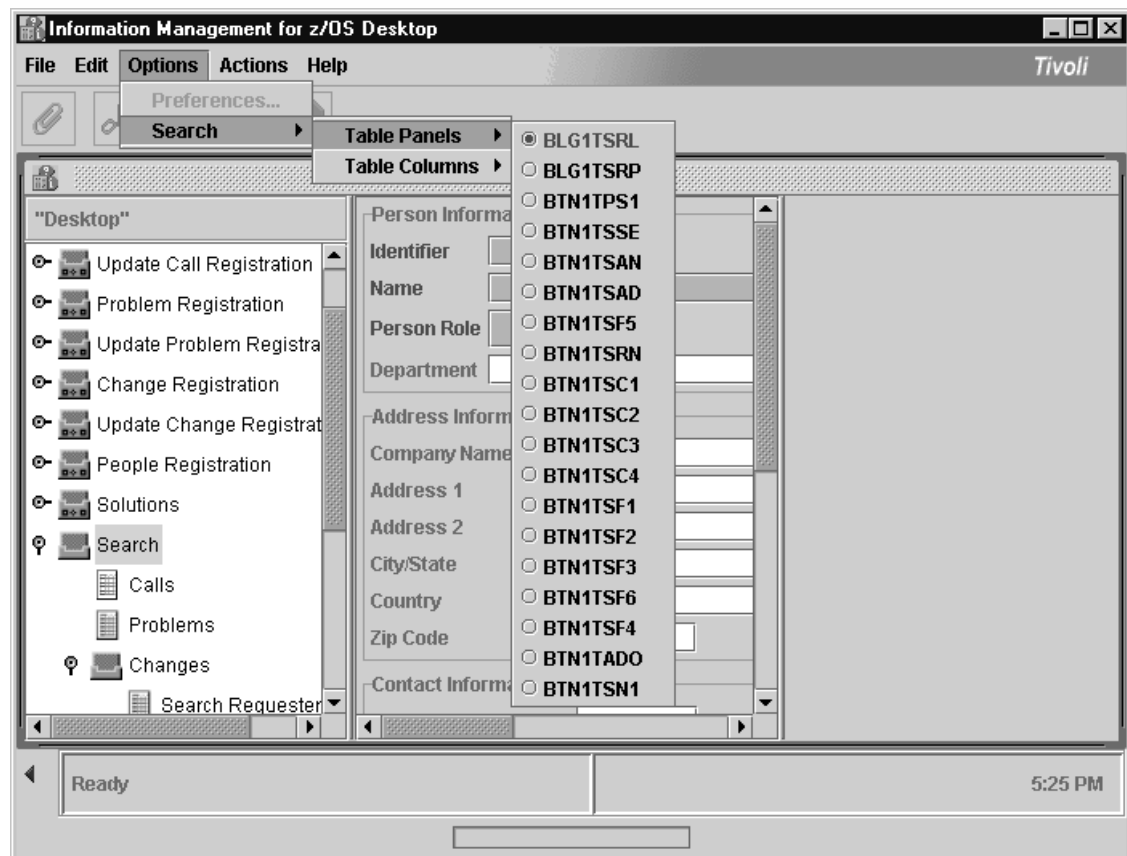


Figure 35. Selecting a Table Panel for Searches

## Specifying Columns

Once a table is selected, you can specify the columns that should appear in the right pane when you do a keyword search. To specify the columns, do the following:

1. Click **Options** on the menu bar.

2. Click **Search** and then click **Table Columns**. A list of available table panels is displayed. If you previously selected a table panel, your selection is noted in red text. Click the arrow for your table panel selection. A list of available columns is displayed. (If you forgot to first specify a table panel, you are prompted to select a default table panel.)
3. By default, all columns are selected for display. If you do not want to include a column in the resulting table, click the check box next to the column to deselect it.

**Note:** It is suggested that you leave the Record Number Identifier as the first column in the search results list table. A retrieval or print of a record in the right pane of the Desktop will fail unless the RNID is specified as the first column of the table.

A history of the table panel selections you made is kept in the table panel list. Table panels previously selected are listed in black text. You can proceed with performing a search.

## Searching from the Center Pane

This section describes how to enter searches from the center pane of the Desktop.

### Calls

From an expanded tree for the **Search** icon, follow these steps to enter a quick search for call records in the Tivoli Information Management for z/OS database:

1. Click the **Calls** icon.
2. Enter your search criteria by typing information into the desired text boxes (or making drop-down list selections) on the center pane.
3. When complete, click **Search Calls**. A database search transaction takes place. Records that were found that match your search criteria are listed in the search results list area in the right pane in the Desktop.

### Problems

From an expanded tree for the **Search** icon, follow these steps to enter a quick search for problem records in the Tivoli Information Management for z/OS database:

1. Click the **Problems** icon.
2. Enter your search criteria by typing information into the desired text boxes (or making drop-down list selections) on the center pane.
3. When complete, click **Search Problems**. A database search transaction takes place. Records that were found that match your search criteria are listed in the search results list area in the right pane in the Desktop.

### Changes

From an expanded tree for the **Search** icon, follow these steps to enter a quick search for problem records in the Tivoli Information Management for z/OS database:

1. Click the **Changes** icon.
2. Select the type of change record information you would like to search: Search Requester Data, Search Assignee Data, Search Close Data.
3. Enter your search criteria by typing information into the desired text boxes (or making drop-down list selections) on the center pane.

4. When complete, click **Search**. A database search transaction takes place. Records that were found that match your search criteria are listed in the search results list area in the right pane in the Desktop.

### Activities

You can limit your search to activities, the subtasks created within change records. For information on activities, see “Activity Records” on page 63.

From an expanded tree for the **Search** icon, follow these steps to enter a quick search for problem records in the Tivoli Information Management for z/OS database:

1. Click the **Activities** icon.
2. Select the type of change record information you would like to search: Search Activity Requester, Search Activity Assignee, Search Activity Close.
3. Enter your search criteria by typing information into the desired text boxes (or making drop-down list selections) on the center pane.
4. When complete, click **Search**. A database search transaction takes place. Records that were found that match your search criteria are listed in the search results list area in the right pane in the Desktop.

### People

From an expanded tree for the **Search** icon, follow these steps to enter a quick search for people records in the Tivoli Information Management for z/OS database:

1. Click the **People** icon.
2. Enter information into each field on the center pane.
3. When complete, click the **Search People**. A database search transaction takes place. Records that were found that match your search criteria are listed in the search results list area in the right pane in the Desktop.

### Solution

From an expanded tree for the **Search** icon, follow these steps to enter a quick search for people records in the Tivoli Information Management for z/OS database:

1. Click the **Solution** icon.
2. Enter information into each field on the center pane.
3. When complete, click the **Search Solutions**. A database search transaction takes place. Records that were found that match your search criteria are listed in the search results list area in the right pane in the Desktop.

### Using the Search Results List

When you search on records in the Tivoli Information Management for z/OS database, the search results are displayed in a summarized list in the right pane of the sample application’s window. The search results list is based on the selections you made for displaying table panels and columns when you selected **Search** from the **Options** menu and then either **Table Panels** or **Table Columns**, respectively. If no matches result, the list is empty.

You can see the details of a record in the summarized list by double-clicking the record in the summary list in the right pane:

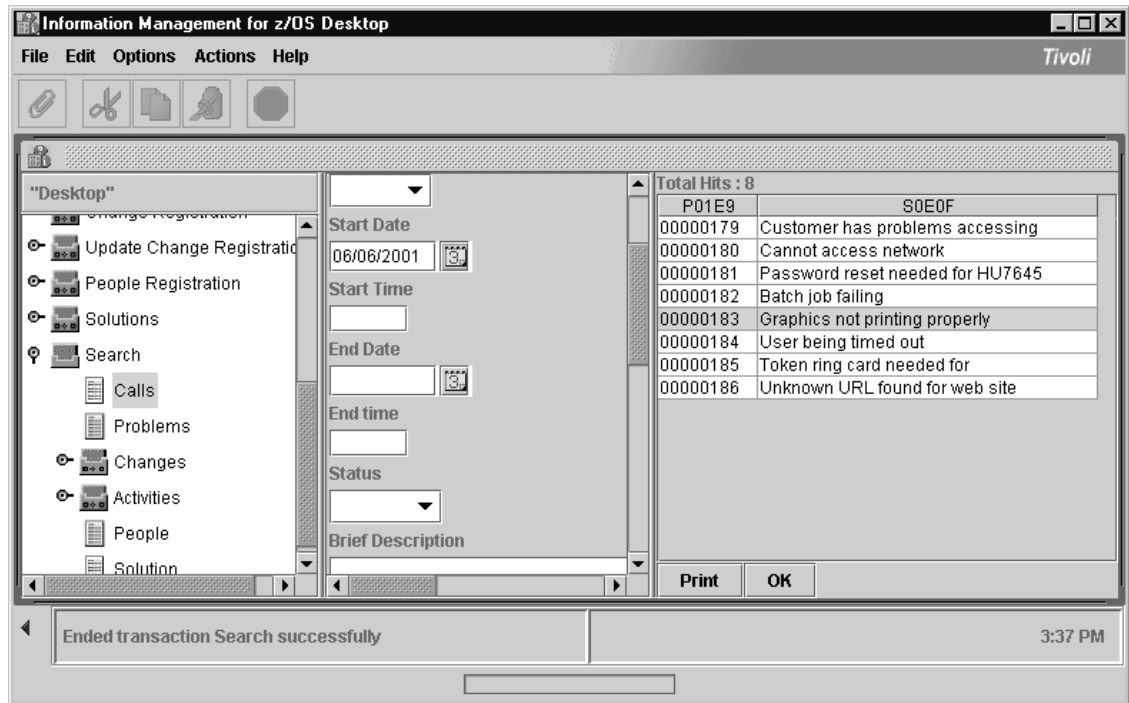


Figure 36. Double-click an item in the search results list to see its details.

The pane is refreshed with data for that record as illustrated in Figure 37.

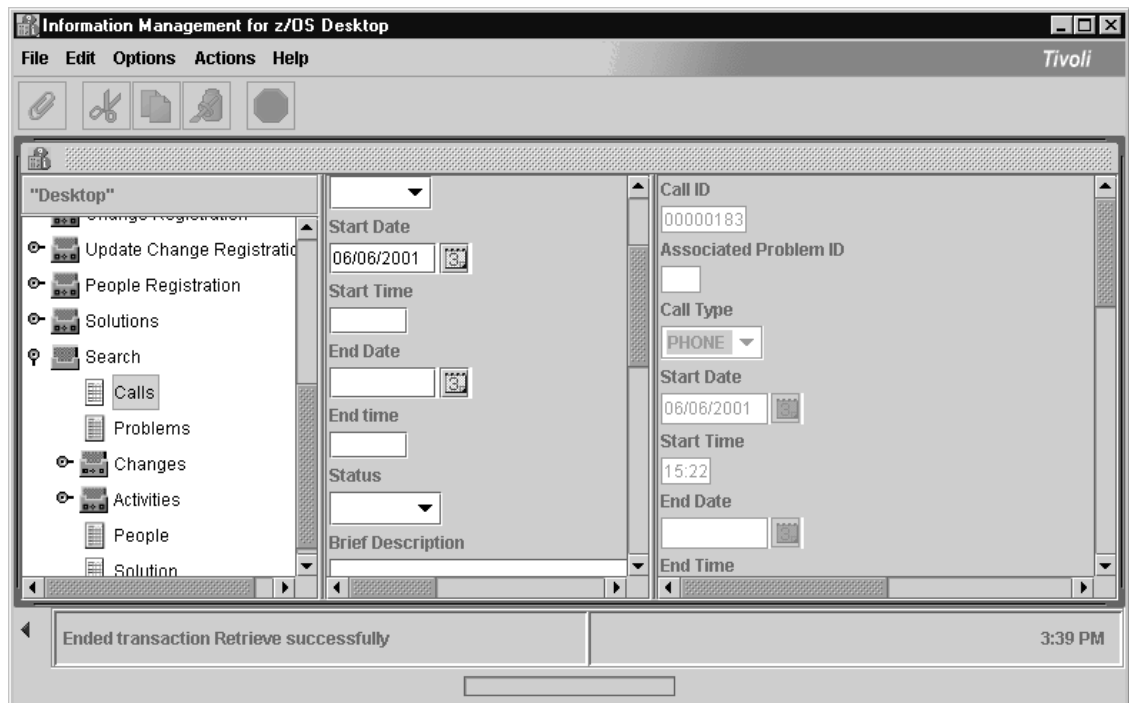


Figure 37. Search Results List Details from Quick Search

The data that is presented for a record in the detailed search results list display is specified in a data view record, as described in "Customizing the Detailed Search Results List Display" on page 120. To return to the summary list, click **OK** at the bottom of the search results list pane.

To drag the details of an item selected from the search results list to the fields associated with another task, highlight the record in the list with your mouse. Press and hold the left or right mouse button and drag the mouse to the tree view to the text label for the task you want to have prefilled with data and then release the mouse button.

### Searching from the Actions Menu

As previously described, you can search for records in the Desktop by clicking on the search buttons provided in the sample application. By entering searches in the center pane of the Desktop, you perform searches of the Tivoli Information Management for z/OS database.

Another way to search for records is to use the **Freeform Search...** option available under **Actions** on the menu bar. Both search options provide greater flexibility in tailoring your searches to your specific needs. Before performing your search, you should first specify a table panel and then the columns of data you want displayed in the search results list.

### Entering a Freeform Search

To enter a freeform search from the **Actions** menu, follow these steps:

1. Click **Actions** on the menu bar.
2. Click **Freeform Search...**
3. In the resulting dialog, a radio button selection is displayed for every data view record used by your Desktop's application hierarchy. Click the radio button for the data view record you want to search. For example, click the radio button **BLMPROB** to search on problem records. Type in a freeform search argument. For example, if you are searching for a record with a problem reporter name of Henderson, type `pers/Henderson` in the dialog. Click **Search** to initiate a search of the Tivoli Information Management for z/OS database.

Records found that match your freeform search are displayed in the search results list table in the right pane. The number of matches is displayed at the top of the table as **Total Hits**. If no matches are found, the value of total hits is zero.

The search results list table shows the p-word index and s-word index values associated with the table panel (and columns) selected in the **Options→Search** function on the menu bar. A field label is also shown for the s-word index. If you did not explicitly select a specific table panel, the **BLG1TSRL** table panel and its associated columns (p-word index **P01E9** and s-word index **S0E0F**) are displayed by default, as shown in this example:

Total Hits : 3

P01E9      S0E0F : Brief Description

```
00001304 Cannot print to printer in building 500
00001307 Customer has problem with software pkg
00001308 Upgrade to V2 of IDBB package failed
```

If no field label is displayed to the right of the s-word index, it is possible that the table panel you specified contains an s-word index that is not found in the type of record you selected for searching within your application hierarchy.



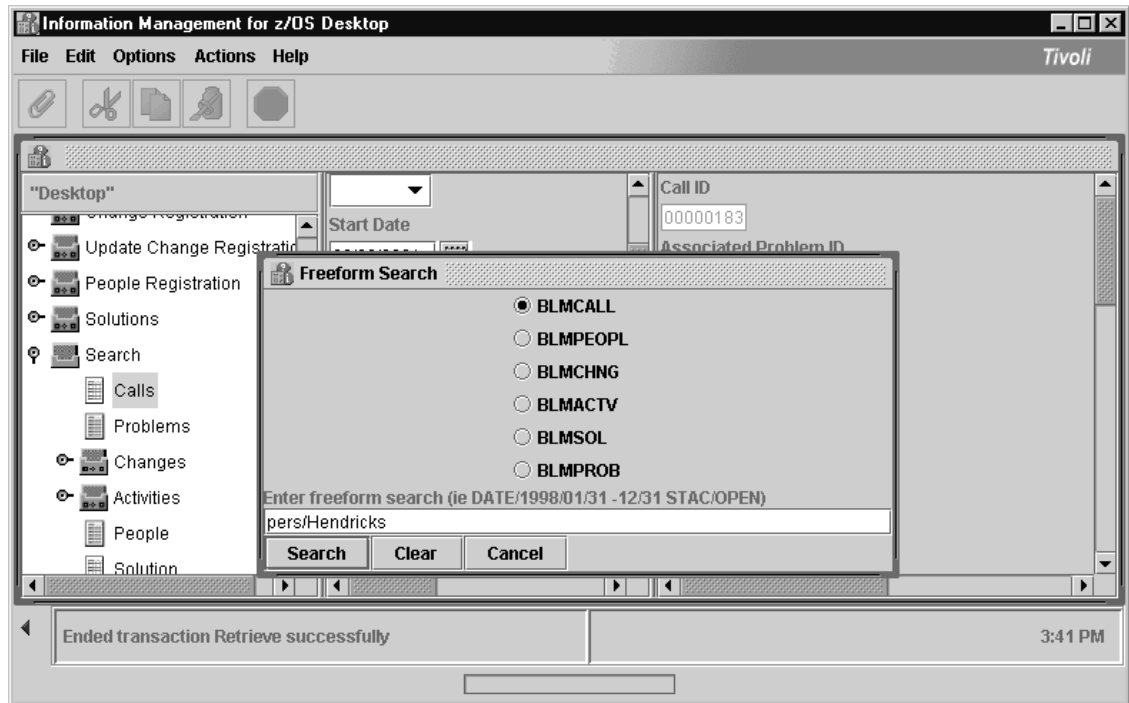


Figure 38. Freeform Search Dialog

You cannot click a record in the table display to see further information related to that record. Only the data that matches your search criteria for the requested columns in the table panel specified is displayed.

To clear the data shown in the keyword entry field, click the **Reset** button. To exit the freeform search dialog, click **Cancel**.

Enter your freeform search arguments as you would on Tivoli Information Management for z/OS.

#### Notes:

1. If you include a field in your search criteria that is not contained in the data view record you select, your search results list table will not contain records.
2. To search on a field that contains a blank separator character, such as in a **Name** field (De Leon) or **Address** field (15 Corporate Lane), use an asterisk (\*) where the blanks would go:  
pernm/De\*Leon addr/15\*Corporate\*Lane

If you enter blanks, the words will be treated as separate arguments and you will not get correct results.

**Note:** When performing a quick search from the center pane in the Desktop, you should not use an asterisk to signify a space. For quick searches, enter the data with spaces.

3. If you need to use the NOT operator to search for records not containing a particular value, use the caret symbol (^) on your keyboard instead of the logical not symbol (¬). For example, to search for problem records that are not closed that are associated with the person Henderson, type the following:

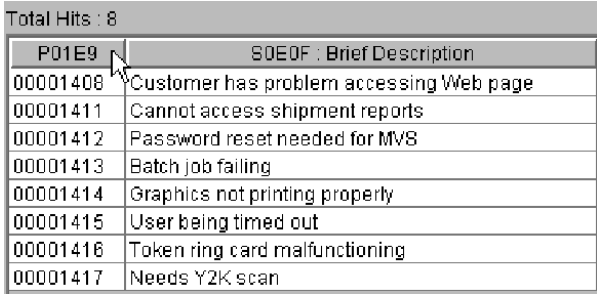
pers/Henderson ^stac/closed

4. To increase your ability to eliminate unwanted records from the results of freeform searches, you can use parentheses within freeform search arguments to specify the order in which arguments should be evaluated. Arguments placed within parentheses will be evaluated first. The parentheses can adjoin the arguments or be separated by one or more spaces.

For more information about entering freeform searches to obtain information from the Tivoli Information Management for z/OS database, refer to the *Tivoli Information Management for z/OS User's Guide*.

## Sorting the Search Data

Once the data appears in the right pane, you can specify how the data should be sorted in the table. To sort on a particular column, double-click the desired column heading in the table display. Data will be sorted in ascending order on that column.



P01E9	SOE0F: Brief Description
00001408	Customer has problem accessing Web page
00001411	Cannot access shipment reports
00001412	Password reset needed for MVS
00001413	Batch job failing
00001414	Graphics not printing properly
00001415	User being timed out
00001416	Token ring card malfunctioning
00001417	Needs Y2K scan

Figure 39. Sorting Data in the Search Results Table

## Rearranging Columns from a Search

To rearrange the columns in the table resulting from a freeform search, drag the column title to the desired column location.

## Printing the Search Results List Table Display

To print the entire table of the search results list displayed in the right pane, click the **Print** button in the right pane. The table is printed using the operating system's default print panel.

You can also print the details of one or more records from the search results list. To print individual records from the table list:

1. Select the records to be printed by highlighting the records with the mouse.
2. Right click on any selected record. A pop-up menu appears with the option **Print Detail**.
3. Click on this option and the File Print window associated with your operating system appears.
4. Click **OK** and the details for each highlighted record are printed.

Printing is enabled to devices supported by the default graphics object used by your native platform facilities.

## Resetting the Search Results List Table Display

To clear the table, click **OK** in the table in the right pane.

## Change Approval

When you display a change record for which the Desktop administrator has enabled Change Approval processing, a button for the Change Approval table appears. You can begin Change Approval processing by clicking the **Change Approval** button. When the button is clicked, the Change Approval window displays. The table shows the list of approvers and each approver's approval status. To approve or reject a change for a particular approver, select that approver and then select the appropriate action. You can approve or reject a change for any authorized approver privilege class.

The following panels present an overview of what you will see as you perform Change Approval processing. For this example, the Desktop administrator must have enabled Change Approval processing for the Display R task in the data view record.

In this example, a Desktop user began by doing a search for change records, and then double-clicked on a record in the search results lists. This uses the hidden task named Display R to retrieve and display the record.



Figure 40. The Change Record Is Displayed

When the change record is displayed, the **Change Approval** table button also appears.

Click the **Change Approval** button to display the change approval table. The table includes the list of approvers and each approver's approval status.

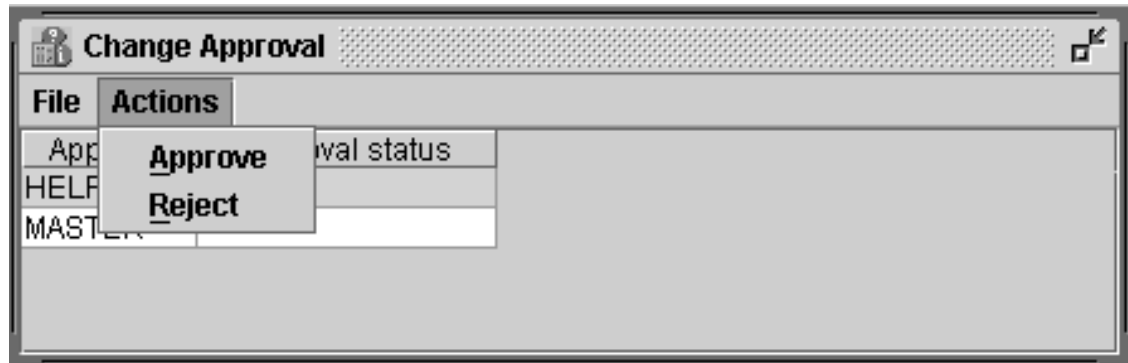


Figure 41. Change Approval Window

Select the approver(s) that you wish to approve the change for; then select **Actions** and **Approve**. Or select the approver(s) that you wish to reject the change for, then select **Actions** and **Reject**.

If Change Approval processing completes successfully, the table will reflect the status requested for the selected approver. If Change Approval processing for the selected approver fails, a message appears.

## Mapping Smart Fields

The sample Desktop application uses *smart fields* to automatically map data from one field into another similar field in another type of record. For example, in the Call Registration Caller task, information about the caller from the people record is mapped to similar fields in the call record. The fields that are mapped in the application are:

- **Caller task** (people record) – maps Caller Information to **Caller** fields in call records
- **Call Taker task** (people record) – maps Call Taker information to **Call Taker** fields in call records
- **Create Call task** (call record) – maps Customer Information, Date Opened, Time Opened, Brief Description to problem records
- **Assignee task** (people record) – maps Assignee information to **Assignee** fields in problem records

You can see the smart maps associated with each task in the Desktop Toolkit. (See “Mapping Smart Fields” on page 153 for more information on viewing maps in the Toolkit.)

As a Desktop user, you should be aware if your application uses smart mapping. Because the Desktop application can be customized, your Desktop administrator should inform you if your application has been constructed to use this function to map fields from one type of record to another.

Mapping can occur automatically when you click on a field or button in a task that has data filled in a defined smart map field for that task. At times, you may also want to click **Actions** and then **Map** on the menu bar to invoke smart mapping. For example, you can invoke the smart map in the following scenario:

1. You want to create a problem record (not a call record).

2. You want to take advantage of the ability to map people information from the call record to the problem record.
3. You also want to take advantage of the people record information already in the database, rather than type this information into the problem record that will be created.
4. You can do the following:
  - a. Click the Call Registration **Caller** task.
  - b. Type information into the **Identifier** field. Or, you can search people records and drag the information into the **Caller** task.
  - c. Click the **Create Call** task.
  - d. Select **Actions** on the menu bar and click **Map**.
  - e. The Caller Information and Location Information fields are mapped to the Customer Information fields in the problem record, so you do not have to type in any other information into the **Create Call** task.

## Viewing the History of a Record

You can use the Desktop to view history data about a record. “Setting User Preferences” on page 28 provides a means of choosing between viewing a brief history (date, time, user) of the record or a detailed history (date, time, user, all journalized fields) of the record. In order to view history data for a Tivoli Information Management for z/OS record, use either of these two methods:

- When you perform a quick search of records in the Desktop, the search results list is displayed in the right pane. Double-click on a record in the list to see the record detail. This record detail temporarily overlays the search results in the right pane. Then click the **History** button on the record detail display. History data for the current record is retrieved from the Tivoli Information Management for z/OS database and displayed in table format in the right pane of the Desktop.
- Your Desktop administrator can use the Toolkit to add a button for viewing history data. If your Desktop administrator has added a button to view history data on a task in your application hierarchy, the button will appear in the center pane when that task is selected. Click the button to display the history data. The history data is retrieved from the Tivoli Information Management for z/OS database and displayed in table format in the right pane of the Desktop.

To remove the history data from the right pane, click **OK**.

**Note:** If Universal Time processing has been enabled for your application, a **Date Modified** history entry is only built if the local date of the user making the change is different than it was for the previous change. Therefore, a U.S. Pacific Time user who makes a change at 18:00 on 2/20/01 and another change at 23:00 the same night will not have a second **Date Modified** entry generated for the second change. However, to a U.S. Eastern Time user, the history data for the Pacific Time user’s changes will appear as follows:

```
02/20/2001  21:00
             02:00
```

The date for the second change, when viewed in U.S. Eastern Time, should be 02/21/2001; but because the Pacific Time user’s date did not turn between changes,

## Viewing the History of a Record

the Eastern Time user's view does not display a date change either. However, because history entries are always listed in chronological order, you can tell when a date change should occur when viewing histories of records originating in another time zone.

## Importing and Exporting Files

A user can import files from the HTTP Server or export files to the HTTP Server. For example, Help Desk personnel could use the Export function to supplement a problem record with a system dump as part of the **Problem Details** field or even a customer's recorded message as part of a problem description.

**Note:** A user can perform an Export only if authorized to do so by the Desktop administrator.

### Importing Files from the HTTP Server

Follow these steps to import a file from the HTTP Server:

1. Select **File** and then select **Import**. On the **Import File** dialog (shown in Figure 42), the **FTP Server Name**, **Port Number**, and **User ID** are retrieved from your configuration file and displayed.

The screenshot shows the 'Import File' dialog box with the following fields and values:

- FTP Information:**
  - Server Name: WEBSVR
  - User ID: CORTEZ
  - Port Number: 8888
  - Password: \*\*\*\*\*
  - Mode:  Active  Passive
- Local File Information:**
  - Local File Path: C:\InfoMan\Desktop
  - Local File Name: HELPDESK
- Remote File Information:**
  - Remote File Path: /u/kdean
  - Remote File Name: HELPDESK
  - File Type:  ASCII  binary

Buttons: Import, Close

Figure 42. Importing an Application Hierarchy

#### Password

Enter the password of your MVS TSO user ID.

**Mode** The default FTP mode is Active. It is suggested you do not change the Mode setting unless instructed by a service representative.

**Local File Path**

Enter the local file path on your system where the imported file will reside.

**Local File Name**

Enter the name that you want the file to have on your system.

**Remote File Path**

Enter the remote file path of the file to be imported.

**Remote File Name**

Enter the remote file name or click on the find file icon for a list of files in the Remote File Path. This list will be used to populate the Remote File Name combo box. Click the down arrow on the Remote File Name combo box. From the pop-up window that appears, select the file name of the file you want to import.

**File Type**

Select the file type, ASCII or binary.

2. Press the **Import** button to receive the file from the HTTP Server. A message displays to inform you of the file transfer.

## Exporting Files to the HTTP Server

Your Desktop administrator must enable the User Export function and authorize you to use it before you can export a file to the HTTP Server. Information on how to enable the function can be found in “Enabling the User Export Option” on page 162. If this function is enabled, you must have a valid MVS TSO user ID and you must have write access to the remote file path in OS/390 UNIX System Services to export a file to the HTTP Server.

Follow these steps to export a file to the HTTP Server:

1. Select **File** and then select **Export**. On the **Export File** dialog (shown in Figure 43 on page 82), the **FTP Server Name**, **Port Number**, and **User ID** are retrieved from your configuration file and displayed.

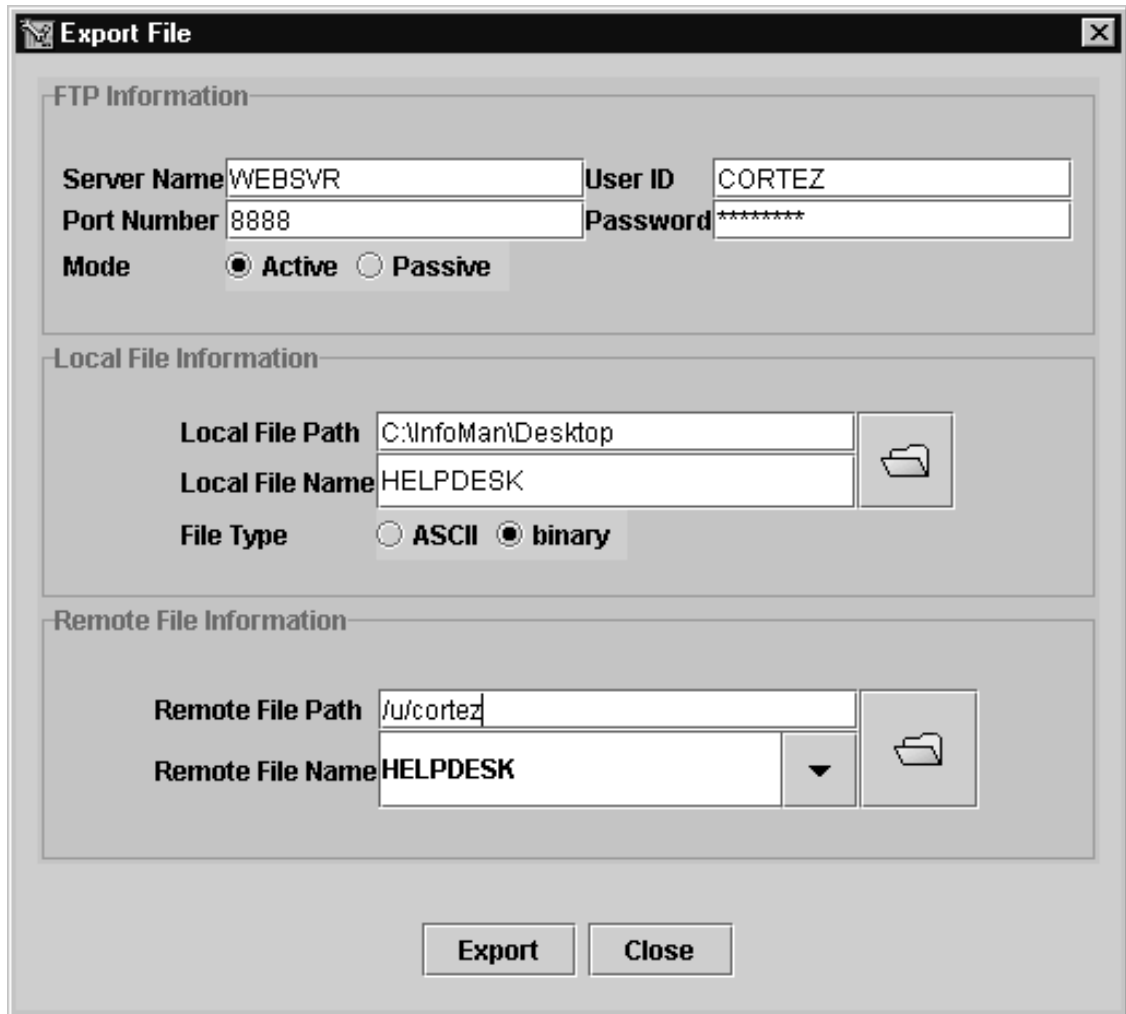


Figure 43. Exporting a File

**Password**

Enter the password of your MVS TSO user ID.

**Mode** The default FTP mode is Active. It is suggested you do not change the Mode setting unless instructed by a service representative.

**Local File Path**

Enter the file path associated with the file that you wish to send. The default is your current directory. If you are doing multiple exports, the local file path is saved.

**Local File Name**

Enter the local file name, or else use the find file icon to locate the file you want to send.

**File Type**

Select the file type, ASCII or binary.

**Remote File Path**

Enter the target destination of the file on the HTTP Server.



**Note:** The default remote directory is controlled by information supplied by the Desktop administrator.

### **Remote File Name**

Enter the remote file name or click on the find file icon for a list of files in the Remote File Path. This list will be used to populate the Remote File Name combo box. Click the down arrow on the Remote File Name combo box. From the pop-up window that appears, select the file name of your exported file. If you type over the remote file path you selected, click the **Find File** button to the right of the remote file name to recreate the contents of the combo box.

**Note:** The exported file will overlay the existing file on the HTTP Server.

2. Click **Export** to send the file to the HTTP Server. A message informs you of the file transfer.



# 4

## Designing a Desktop Application

---

This section describes how to modify or create data model records in Tivoli Information Management for z/OS to support a customized Desktop application. **If you are not an administrator for the Desktop application, or the Tivoli Information Management for z/OS administrator, you can skip this chapter.**

### Data Model Records

In the past, the design of Tivoli Information Management for z/OS interactive panels typically required specialized skills in the use of the Panel Modification Facility. The only way you could design data-entry panels was to use PMF. With PMF, you could create assisted-entry panels to validate the data entered into each field on a panel. The assisted-entry panel defined the characteristics of the data for collection and storage. Characteristics include the field length, validation criteria, and indication of whether the data can be searched in the database.

The Desktop uses an alternative host-centric approach to present the design of the application on your workstation. The model of the application is defined through data model records rather than traditional host panels. Data model records are built in Tivoli Information Management for z/OS and used to generate data-entry, display, and inquiry panels on the workstation. They describe what is on the database, and therefore, what is displayed in the Desktop.

The panels in the Desktop are dynamically built from two types of data model records:

#### Data attribute records

Data attribute records describe the field data and characteristics (attributes). The data attributes are stored in records on the database (rather than in panels), and used instead of assisted-entry panels. Basically, each field in the Desktop is represented by a data attribute record on the host.

If you need to add fields or change existing fields in the Desktop, you simply add or update a data attribute record in Tivoli Information Management for z/OS. In most cases, these changes can be done by someone who is not an expert in PMF.

Data attribute records are then summarized in one or more data view records.

#### Data view records

Data view records are used by distributed applications to exchange data with Tivoli Information Management for z/OS. They contain the fields that an API application processes and information needed to perform transactions with the database. In a Desktop environment, data view records are used to do the following:

- Logically group the data fields.

- Group related list data fields
- Design the layout of the fields in the user interface and names of tasks.
- Identify the display characteristics of a data field (required, update, display, or no display)

Normally, a data view record contains all the fields found in a particular type of record on the Tivoli Information Management for z/OS database. For example, all the fields a problem record would contain are represented in one data view record.

The *Tivoli Information Management for z/OS Panel Modification Facility Guide* provides more information on the basic tasks involved in setting up data model records on Tivoli Information Management for z/OS. If you are unfamiliar with setting up data model records, you should review the section on data model records in that manual for an explanation of how data model records are generally used by Tivoli Information Management for z/OS.

The following section describes how data model records built to support the Desktop are constructed on the host. You should familiarize yourself with this material if you plan to modify the sample Desktop application or create your own application. In addition, a tool (the BLGTDMBL TSX) is available to help you build data model records. Depending on your application construction and needs, use of the tool can potentially simplify the task of building data model records. Refer to the “Building Data Model Records with the BLGTDMBL TSX” on page 130 for more information.

## Understanding the Desktop Data Model Records

Before building a data model record to support usage of the Desktop, you should already be somewhat familiar with setting up data attribute and data view records. It is beyond the scope of this document to tell you everything there is to know about creating data model records in Tivoli Information Management for z/OS. For information on how to create data model records, refer to the *Tivoli Information Management for z/OS Panel Modification Facility Guide*. The following information describes the additional enhancements you need to make to data attribute and data view records to support the Desktop.

To summarize the process, you need to do the following:

1. Create data attribute records.
2. Enhance the data attribute records to support the Desktop (supply the field prompt labels and functions or TSX names associated with fields).
3. Create data view records.
4. Associate data attribute records with one or more data view records.
5. Enhance the data view records to support the Desktop.

## Understanding the Field and Panel Design

Before creating or enhancing data model records to use with the Desktop, you should know how fields will be displayed in Desktop panels. As described in the following list, the appearance of a field in a Desktop window is determined by its data attribute record contents in Tivoli Information Management for z/OS:

### Entry fields

A basic data field on the host appears as a data-entry field on the workstation. Fields that can be updated have default colors and are enabled.

**Freeform text fields**

A freeform text field is displayed to the user as a multi-line text area. The width of the freeform text field can range from 30 to 130 single byte characters; the default is 80. The height of the freeform text field can range from 5 to 20 lines; the default is 5 lines. Scroll bars are provided to scroll up or down as necessary. You can change the size of the freeform text area by updating your user preferences. For more information, see “Setting User Preferences” on page 28.

**Fields with literal string values**

If a data field in Tivoli Information Management for z/OS has an assisted-entry panel with a validation pattern that accepts more than one specific character string value as an acceptable response, the field is presented to the user in a combo box. For example, if the only valid entries for a problem Severity field in Tivoli Information Management for z/OS were the following:

```
<sev1>
<sev2>
<sev3>
<sev4>
<sev5>
```

The Desktop displays the field as a combo box.

If a data field has a data validation pattern for a specific character string value and some other validation pattern (such as CCV7, AR4, or CR8), the field also becomes editable.

**Date fields**

The Desktop automatically provides a calendar button next to date fields (see “Using the Calendar” on page 36). Click the calendar button to display a monthly calendar and highlighted date. You can scroll to previous or future months or years.

**Required fields**

A field that is specified as required is displayed to the user with default colors of red for text labels and blue for the background in the Desktop window pane. You can change these colors by updating your user preferences. See “Setting User Preferences” on page 28 for more information on changing your user preferences. (Required fields are specified on BLGLFGFL, the Field Group Field List Entry panel as shown on page 99 or BLGLTSFL, the Desktop Panel Field List Entry panel as shown on page 111.)

**List data fields**

A list data field (or a group of related list data fields) is presented to the user as a button. The user must click the button to view the list data associated with it. When the user clicks the button, the list data is displayed to the user in a scrollable table. See “Working with List Data Fields in the Desktop” on page 211 for more information on how to process list data on the Desktop.

The Desktop automatically provides scroll bars in the center window pane if more groups or fields were selected than could normally fit on one pane.

If a TSP or TSX name is specified as part of the panel flow of a data attribute record, the Desktop runs the TSP or TSX specified in Tivoli Information Management for z/OS when the user adds new data or updates existing data in the field to some other value. The TSP or TSX is called when the user tabs or moves the cursor out of the field so that the field has lost focus.

### Creating the Data Attribute Records

The steps to create a data attribute record for use with the Desktop are summarized below. For more information on how to create a data attribute record, refer to the section on using data model records in the *Tivoli Information Management for z/OS Panel Modification Facility Guide*.

1. On the Tivoli Information Management for z/OS Primary Options Menu for the Management application (BLG0EN20), type **5** (for Entry) and press **Enter**.
2. On BLG00000, the Entry panel, type **5** (for Data Model) and press **Enter**.
3. On BLG00040, the Data Model Entry panel, type **2** (for Attribute) and press **Enter**.
4. On BLG0V700, the Data Attribute Record Entry panel, type in a name for the record (for example, ATR#DSAB) in the **Data attribute record name** field and a **Description**. The Description is text that simply describes the record; it is not displayed to the user in the graphical user interface of the Desktop.

**Note:** The data attribute records provided with Tivoli Information Management for z/OS to support the sample Desktop application all start with BLM& or BLH& as part of the record name; for example, BLM&DSAB for the Problem Description. If you are creating your own data attribute records, do not use BLM& or BLH& as the first part of the record name because it is reserved for use by Tivoli Information Management for z/OS. Additional screen examples in this document show use of BLM& and BLH& data attribute records to show you how the data model records are set up to support the sample Desktop application. You can use these BLM& and BLH& data attribute records in your own applications. If you need to modify the records shipped with Tivoli Information Management for z/OS, you should make a copy of them first.

In the **Copy assisted-entry panel** field, you can provide the name of an assisted-entry panel to copy information from that panel. You can only copy information if an assisted-entry panel already exists. The panel name you supply must contain an s-word.

**Note:** In the **Field prompt** field, type the text that you want to display as the field label in the Desktop on the workstation.

Type the text exactly as you want it to be displayed to the user on the workstation. For example, if you want the users to see a field label in all uppercase, type it in uppercase. If you want the users to see a closing colon as part of the field label, include the colon as part of the field prompt text (for example, Problem Description:). If the field is considered a required field, it is not necessary to type in a required field indicator such as {R}, although you can if desired. You can specify that a field is required in the Desktop by using a field usage indicator on a different panel. (See panel BLGLFGFL (Field Group Field List Entry), as described on page 99, or panel BLGLTSFL (Desktop Panel Field List Entry), as described on page 111.) In the Desktop, required fields are displayed on the workstation with default colors of red for text labels and blue for background. These default colors can be changed by updating your user preferences. Additional information can be found in “Setting User Preferences” on page 28.

Although field 6 (**Description**) is similar to field 9 (**Field prompt**), remember that field 6 is used for all data attribute records. All data attribute records must have a description,

regardless of how they are used. Field 9 is specific to use of data attribute records in the Desktop. The value supplied in field 6 for the Description is visible later on panel BLGLDATT, the Data Attribute Records Entry panel (see page 93). The value supplied in field 9 for Field prompt is visible as the Field Description on panels BLGLFGFL, BLGLTSFL, and BLGLTBDL.

```

BLG0V700                DATA ATTRIBUTE RECORD ENTRY                RECORD: _____

Enter data attribute record data; cursor placement or input line entry allowed.

1. Data attribute record name..<R> ATR#DSAB
2. Contact name..... _____
3. Contact phone..... _____
4. Contact department..... _____
5. Location code..... _____
6. Description.....<R> Brief Description_____

7. Copy assisted-entry panel..... BLG6DSAB

8. ODBC column name..... _____
9. Field prompt..... Brief Description_____

    When you finish, type END to save or CANCEL to discard any changes.

==> end
    
```

Type **end** and press **Enter** to flow to BLG0VU70, the Data Attribute Summary panel.

```

BLG0VU70                DATA ATTRIBUTE SUMMARY                RECORD: ATR#DSAB

Contact name..... _____      Entry priv. class..... MASTER
Contact phone..... _____      Date entered..... 02/12/1999
Contact dept..... _____      Time entered..... 14:05
Location code..... _____      Date last altered..... 03/04/1999

Description..... Brief Description
Field prompt..... Brief Description

    Select one of the following choices, or type END to save or CANCEL
    to discard any changes.

        1. Data attribute record.          6. Validation control data.
        2. Response processing.            7. Panel display.
        3. Structured word and            9. File record.
           validation collection.
        4. Panel flow.                    10. Help text.
        5. Validation data extended.      11. Validation data basic.

==> 4
    
```

- At this point, you could file the record (option 9). (If you did not supply a Copy assisted-entry panel name on BLG0V700, you should use option 3 to enter a valid

## Understanding the Desktop Data Model Records

s-word index before filing the record.) Instead, move on to the panel flow. Type **4** and press **Enter** (instead of filing the record) to flow to BLG0V730, the Panel Flow Update panel.

```
BLG0V730                PANEL FLOW UPDATE                RECORD: ATR#DSAB
Enter panel flow control data; cursor placement or input line entry allowed.

      1. Create target..... _____
      2. Inquiry target..... _____
      3. Return to caller..... YES
      4. Dialog end..... _____
      5. Force SRC generate end... _____
      6. Program exit name..... _____
      7. Help panel..... BLG0AAE0
      8. HTML help file..... _____
      9. Null reply..... _____
     10. Desktop associated TSP/TSX..... _____
     11. Desktop program exit..... _____

When you finish, type END to save or CANCEL to discard any changes.

====> end
```

The highlighted fields 8, 10, and 11 are unique to the Desktop.

In the optional **Desktop associated TSP/TSX** field, type the name of the terminal simulator panel (TSP) or terminal simulator EXEC (TSX) that is associated with the field. The TSP name must be exactly 8 characters. The TSX name can be 1–8 characters.

**Note:** Current TSPs or TSXs may not work if they reference panel flows. You should use only TSXs or TSPs that do not process panel data interactively in Tivoli Information Management for z/OS.

The TSX or TSP specified runs when the user does both of the following on any panel other than an Inquiry panel:

- Adds or updates data in the field in the Desktop application
- Causes the field to lose focus by tabbing or moving the cursor to a new field

Likewise, in the **Desktop program exit** field (optional), you can enter the name of a Desktop program exit. The program exit will run when the user does both of the following on any panel other than an Inquiry panel:

- Adds or updates data in the field in the Desktop application
- Causes the field to lose focus by tabbing or moving the cursor to a new field

For example, in the sample Desktop application, the **Identifier** field on the Call Registration **Create Call** task pane (data attribute record BLM&URN1) makes use of the GET program exit to automatically retrieve a people record when an identifier is entered and the user tabs out of the field. The program exits perform transactions with the Tivoli Information Management for z/OS database through HLAPI/REXX. The following program exits can be specified in the Desktop program exit field:



<b>CREATE</b>	Creates a record in Tivoli Information Management for z/OS
<b>GET</b>	Gets (retrieves) a record
<b>DELETE</b>	Deletes a record
<b>SEARCH</b>	Searches a record
<b>UPDATE</b>	Updates a record

Type **end** to save your changes and return to the Data Attribute Summary panel where you can file the record.

#### Notes:

1. All data attribute records referenced by a data view record that will be used by the Desktop must have a valid s-word. If an s-word does not exist for a data attribute record, an error message will be displayed to the Desktop user.
2. If you create your own data attribute records, ensure that your session-parameters member has a BLGPARMs MODELDB parameter specified with a valid trigger character. The trigger character enables Tivoli Information Management for z/OS to recognize your data attribute records; for example, MODELDB=(5,#). You do not need to specify a trigger character for data attribute records shipped with Tivoli Information Management for z/OS to support the Desktop. For more information about the BLGPARMs MODELDB parameter, refer to the *Tivoli Information Management for z/OS Planning and Installation Guide and Reference*.

## Creating the Data View Records

The steps to create a data view record for use with the Desktop are summarized below. For more information on how to create a data view record, refer to the section on using data model records in the steps outlined in the *Tivoli Information Management for z/OS Panel Modification Facility Guide*. Step 5 is unique to the Desktop.

1. On the Primary Options Menu for the Management application (BLG0EN20), type **5** (for Entry) and press **Enter**.
2. On BLG00000, the Entry panel, type **5** (for Data Model) and press **Enter**.
3. On BLG00040, the Data Model Entry panel, type **1** (for Data View) and press **Enter**.
4. On BLG0V600, the Data View Record Entry panel, type in a name for the data view record (for example, MYDVREC) and a Description.

Also, enter the record s-word index for the type of record that will be associated with the data view record (for example, 0032 for a problem record type). (The assisted-entry panel for the record s-word index field lists some of the values typically used in this field. You can also run the VIEW INTERNALS command on a record and browse the output to find the s-word index for that record type. Refer to the *Tivoli Information Management for z/OS User's Guide* for a description of the VIEW INTERNALS command.)

Then, type **end** and press **Enter** to flow to the Data View Summary panel.

5. On BLG0VU60, the Data View Summary panel, three options related to the Desktop are highlighted (options 4, 5, and 6). You will use these options later as described in "Using the Desktop Options" on page 95 to set up the design of the Desktop application on the host. For now, type **9** to file the record and press **Enter**.

## Understanding the Desktop Data Model Records

```
BLG0VU60          DATA VIEW SUMMARY          RECORD: MYDVREC

Contact name..... _____      Entry priv. class..... _____
Contact phone..... _____      Date entered..... _____
Contact dept..... _____        Time entered..... _____
Location code..... _____       Date last altered..... _____

Description..... Data View for Desktop

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.           4. Desktop tables.
    2. Authorization codes.       5. Desktop field groups.
    3. Data attribute records.    6. Desktop panel layouts.

                                9. File record.

===> 9
```

### Associating Data Attribute Records with a Data View Record

To associate data attribute records with a particular data view record, select option 3 on BLG0VU60, the Data View Summary panel, and press **Enter**. (You can get to this panel by updating an existing data view record, for example, UPD R MYDVREC.)

```
BLG0VU60          DATA VIEW SUMMARY          RECORD: MYDVREC

Contact name..... _____      Entry priv. class..... _____
Contact phone..... _____      Date entered..... _____
Contact dept..... _____        Time entered..... _____
Location code..... _____       Date last altered..... _____

Description..... Data View for Desktop

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.           4. Desktop tables.
    2. Authorization codes.       5. Desktop field groups.
    3. Data attribute records.    6. Desktop panel layouts.

                                9. File record.

====> 3
```

On panel BLGLDATT, enter the record IDs or names of the data attribute records previously created that you want to associate with this data view record. Typically, you would enter all fields used by a particular type of record in the data view record.

**Note:** The panel illustrations in the rest of this chapter show use of the data attribute records provided with Tivoli Information Management for z/OS for use by the Desktop. The data attribute record IDs show use of the ampersand (&) trigger character which is reserved for data attribute records shipped with Tivoli Information Management for z/OS. Data attribute records you create will have a different trigger character. You can associate data attribute records provided with Tivoli Information Management for z/OS, use your own data attribute records, or use a combination of both.

To verify that you are including the correct data attribute records, you can press **Enter** as you type in a data attribute record ID. The **Description** field displays the text that was entered in the **Description** field (field 6) on BLG0V700, the Data Attribute Record Entry panel, when the data attribute record was initially set up.

```

BLGLDATT                DATA ATTRIBUTE RECORDS ENTRY                LINE 1 OF 30
USE....Enter a list of data attribute records included in this data model.
FORM...Record ID of data attribute record.
                                                                    RECORD: MYDVREC

      Data
      Attribute Reply Not Auth      Description
      Record ID Req  Logic Code
'-----'
'-----' BLM&DSAB  ___  ___  ___  Brief Description_____ ABSTRACT_____
'-----' BLM&SYSN  ___  ___  ___  System Name_____ SYSTEM_NAME_____
'-----' BLM&OAPN  ___  ___  ___  Program Name_____ PROGRAM_NAME_____
'-----' BLM&REQN  ___  ___  ___  Name_____ NAME_____
'-----' BLM&STAT  ___  ___  ___  Status_____ STATUS_____
'-----' BLM&RQDP  ___  ___  ___  Department_____ DEPT_____

Line Cmds: A=After B=Before C=Copy D=Delete E=Erase I=Insert
           L=Line Entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

==> end
    
```

For data attribute records in general, the **Reply Req** field specifies whether or not users must enter data in the field. A field identified with a reply required value indicates that the field is required to perform a transaction. The **Reply Req** field can contain any combination of C, U, and I, or the value YES.

- C** Field is required for record creation.
- U** Field is required for record update.
- I** Field is required for record inquiry.
- YES** Field is required for all functions.

To keep from having to define a data view record for each type of Desktop function (for example, for Create, Update, Search, or Get), you should rely on field usage indicators on panel BLGLFGFL or BLGLTSFL (rather than the reply required field ) to determine what

## Understanding the Desktop Data Model Records

---

fields are required for different types of task panels. For example, you may not want to specify YES for some fields because you can unintentionally limit how a data view record is used if you use it in more than one type of function. For example, you may not want users to enter a Problem Description in a search transaction regardless of what is being searched. By using the field usage indicators on panel BLGLFGFL or BLGLTSFL, you can specify when a field is required under what circumstances. For more information on specifying field usage indicators on panel BLGLFGFL or BLGLTSFL, see pages 99 and 111.

What you type in the **Reply Req** field affects the default character displayed in the field usage indicator columns on panels BLGLFGFL and BLGLTSFL:

- For create transactions, the default field usage indicator is set to R if the reply required value is YES or any other value containing C.
- For update transactions, the default field usage indicator is set to R if the reply required value is YES or U.
- For inquiry transactions, the default field usage indicator is set to R if the reply required value is YES or I.

**Note:** To interactively search on records on the host which were entered by users from the Desktop, you must ensure that your data view records contain certain data attribute records. These special data attribute records are required by Tivoli Information Management for z/OS to supply audit data on new or updated records, such as the date or time the record was created or updated. The data attribute records and associated **Reply Req** values used are as follows:

Data Attribute Record	Reply Req Value	Description
BLH&DATE	C	Date created
BLH&TIME	C	Time created
BLH&CLAE	C	Privilege class created
BLH&DATM	CU	Date modified
BLH&TIMM	CU	Time modified
BLH&USER	CU	User last modified
BLM&002C	CI	Used to find records in interactive search

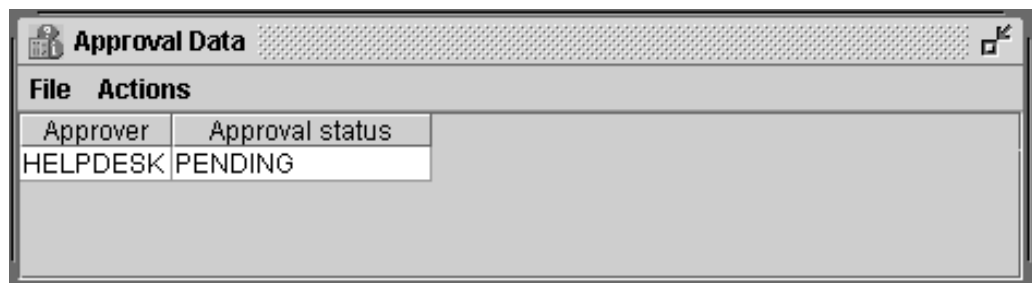
*A value of 'C' applies to record creation. 'CU' applies to record creation or updates. 'CI' applies to record creation or inquiry. Although not used in the data view records provided with the sample Desktop application, other values permitted are: I (inquiry), UI (update and inquiry), and CUI (all functions, equivalent to YES), and YES (all functions).*

These data attribute records are provided with Tivoli Information Management for z/OS to support the data view records used with the Desktop. Because it is an API application, the Desktop application bypasses “traditional” panel processing. Therefore, to automatically get audit data added to the records during file time, direct-add fields, such as those shown in this list, are required. If you create your own data view records for use with the Desktop, you should add these records to each of your data view records. If these records are not added, your interactive searches will be incorrect and no audit data will be applied to records created or updated from the Desktop.

The **Not Logic** field is not used by the Desktop; ignore this field.



are related, you should define a Desktop table that includes these list fields to ensure that the Desktop manages the relationship of the data in the lists. An example of this is shown in the following figure:

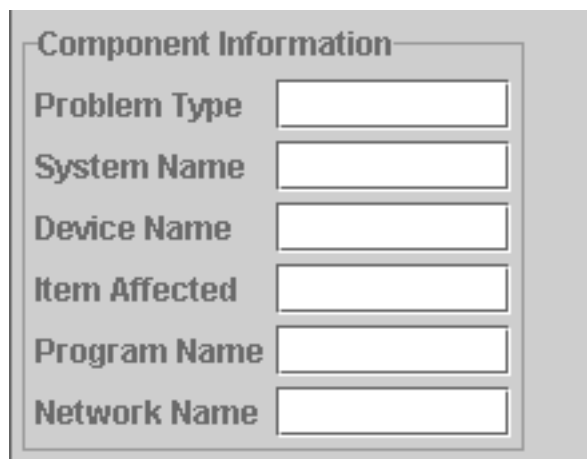


Approver	Approval status
HELPDESK	PENDING

### 5. Desktop field groups

Used to define which fields exist in a field group in the Desktop.

For example, a panel in the Desktop that collects information about a problem may contain a field group called Component Information. The Component Information field group may consist of six fields, as shown here:



Component Information

Problem Type

System Name

Device Name

Item Affected

Program Name

Network Name

This example of a group shows six fields, but you can define any number of fields to appear in a Desktop field group. A list data field can also be included in a field group if it is not already included in a Desktop table.

**Note:** If you are building a Desktop application that includes groups of related list data fields, use Option 4, **Desktop Tables**, to group the related list data fields. You should define the Desktop tables before you define the Desktop field groups.

### 6. Desktop panel layouts

Used to define which field groups, tables, or fields (if not contained in a field group or table), make up the center pane that displays on the user's workstation when the user clicks on a particular process or task icon.

For example, if a user clicks the **Problem Registration** icon in the Desktop application, and then clicks **Detail Description**, the center pane is displayed with two fields followed by a group of fields and three text fields. The following figure illustrates the layout:

The image shows a desktop application window with a form for entering problem records. The form is organized into several sections:

- Problem ID:** A single-line text input field.
- Brief Description:** A large text area for a short summary.
- Component Information:** A sub-section containing six fields:
  - Problem Type
  - System Name
  - Device Name
  - Item Affected
  - Program Name
  - Network Name
- Problem Description:** A large text area for a detailed description.
- Status Comments:** A large text area for notes on the problem's status.

The form includes a vertical scrollbar on the right side and a horizontal scrollbar at the bottom.

The Desktop tasks option enables you to associate the task name (for instance, Detail Description) with a particular set of field groups, tables, and fields. Only those groups, tables, and fields appear when the icon is selected. A list data field can also be associated with a task if it is not already included in a table.

A task name can be associated with groups of fields, tables, fields only (no groups or tables), or a combination of groups, tables, and fields. Because you construct the task, you can control what elements go into it.

The following sections describe how to use each of these options.

**Note:** If you are building a Desktop application, it will often be easier from a design perspective to first define the Desktop tables (option 4) and then define the Desktop field groups (option 5) before defining the Desktop panel layouts (option 6). If you

are updating an existing Desktop panel layout (task) definition, go to option 6. For guidance on how to develop an application, see “Designing the Application” on page 175.

### Define Desktop Tables (Option 4)

If you need to maintain the relationship of data in list data fields, you should group the related list data fields into a Desktop table. For example, you may need to collect abend information about a problem. Since there may be multiple abends, you collect the data in lists. The list data fields include the abend code, reason code, abending module, and offset. When you add an abend code, you want to ensure that the corresponding reason code, module, and offset are associated with it. To define the relationship, you should group the related list data fields into a Desktop table.

When the user displays a table on the Desktop, the list data fields appear as columns in the table. If the user is authorized, the user can add, update, move, copy, and delete lines in the table.

Using the Desktop Table option, you can:

- Specify a name for the table that is used in defining the Desktop panel layout.
- Specify which list data fields go into which table.
- Specify a label for the list data field to be seen by the user.
- Order the list data fields as you want them to appear in the table.

**Note:** If you have an individual list data field that is not related to other list data fields, you do not need to include it in a table. A list data field that is not included in a Desktop table can be included as an individual field in a group or task. The Desktop processes an individual list data field as a single-column table. Once a list data field is included in a group or task, it is not available to be included in a table. To include it in a table, you would first need to remove it from all groups and all tasks in which it is included.

To define the Desktop Tables, type **4** on BLG0VU60, the Data View Summary panel, and press **Enter**.



```

BLG0VU60                                DATA VIEW SUMMARY                                RECORD: MYDVREC

Contact name..... _____            Entry priv. class..... MASTER
Contact phone..... _____            Date entered..... 11/13/2000
Contact dept..... _____             Time entered..... 10:29
Location code..... _____             Date last altered..... 11/27/2000

Description..... Problem Record

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.                  4. Desktop tables.
    2. Authorization codes.              5. Desktop field groups.
    3. Data attribute records.           6. Desktop panel layouts.

                                         9. File record.

==> 4
    
```

```

BLGLTBDL                                Desktop Table Definition                                LINE 1 OF 20

USE....Assign list fields to tables.

                                         RECORD: MYDVREC

Table   Attribute  S-word
Name    Record ID  Index   S-word   Field Description
''''   _____ XYZ#ABND  8030_   -DKPABND  Abend code_____
''''   _____ XYZ#REAS  8031_   -DKPREAS  Reason code_____
''''   _____ XYZ#ROUT  8032_   -DKPROUT  Module_____
''''   _____ XYZ#OFFS  8033_   -DKPOFFS  Offset_____
''''   _____ XYZ#DEVN  8036_   -DKPDEVN  Device Name_____
''''   _____ XYZ#DTYP  8037_   -DKPDTYP  Device type_____
''''   _____ XYZ#DVSR  8038_   -DKPDVSR  Serial number_____
''''   _____ _____ _____ _____
''''   _____ _____ _____ _____
''''   _____ _____ _____ _____
''''   _____ _____ _____ _____
''''   _____ _____ _____ _____
''''   _____ _____ _____ _____

Line Cmds:  A=After  B=Before  E=Erase  L=Line entry  M=Move

Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

==>
    
```

A data attribute record represents a list data field when the **Data is list data** field on the data attribute record Response Processing panel, BLG0V710, is set to **YES**. When you select option 4 to define your Desktop tables, BLGLTBDL displays the list of data attribute records for available list data fields within this data view record. The corresponding s-word index, s-word, and Field Description are also shown.

## Understanding the Desktop Data Model Records

The list displays with attributes already included in tables followed by ones that are available to be included in tables. Each attribute is listed only once and can be included in only one table. To include a list data field in a table, specify the 1–8 character name of the table that you want it included in. Specify the same table name for all of the list data fields that you want to include in that table. The **Table Name** is a key that identifies the table and is not seen by the user. It is used later when defining the Desktop panel layouts.

In this example, four list data fields are included in the table named ABENDS and three list data fields are included in the table named DEVICES.

```

BLGLTBDL                Desktop Table Definition                LINE 1 OF 20
USE....Assign list fields to tables.                                RECORD: MYDVREC

      Table      Attribute  S-word
      Name       Record ID  Index    S-word    Field Description
'''' ABENDS_    XYZ#ABND  8030_   -DKPABND_  Abend code_____
'''' ABENDS_    XYZ#REAS  8031_   -DKPREAS_  Reason code_____
'''' ABENDS_    XYZ#ROUT  8032_   -DKPROUT_  Module_____
'''' ABENDS_    XYZ#OFFS  8033_   -DKPOFFS_  Offset_____
'''' DEVICES_  XYZ#DEVN  8036_   -DKPDEVN_  Device Name_____
'''' DEVICES_  XYZ#DTYP  8037_   -DKPDTYP_  Device type_____
'''' DEVICES_  XYZ#DVSR  8038_   -DKPDVSR_  Serial number_____
'''' _____  _____  _____  _____  _____
'''' _____  _____  _____  _____  _____
'''' _____  _____  _____  _____  _____
'''' _____  _____  _____  _____  _____
'''' _____  _____  _____  _____  _____

Line Cnds:  A=After  B=Before  E=Erase  L=Line entry  M=Move

Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

==> end

```

When the user displays a table on the Desktop, each list data field appears as a column in the table and the **Field Description** appears as the column heading. If the table is editable, the description is also the text label of the list data field.

Use the **M** (Move) line command to arrange the list data fields in the order you want them to appear in the table. Arrange them top to bottom to appear left to right in the table in the Desktop. (You may want to use the SORT command first to sort the list by **Table Name** so that the related list data fields appear together.)

If a list data field has not been included in a table, the **Field Description** contains the text that was previously entered in the **Field prompt** field on BLG0V700, the Data Attribute Record Entry panel. If the list data field is already included in a table, the **Field Description** contains your most recent change. You can overwrite this text, if necessary, to use a different field label.

When you are finished defining the Desktop tables, type **end** and press **Enter** to return to the Data View Summary panel.

```

BLG0VU60                                DATA VIEW SUMMARY                                RECORD: MYDVREC

Contact name..... _____            Entry priv. class..... MASTER
Contact phone..... _____            Date entered..... 11/13/2000
Contact dept..... _____            Time entered..... 10:29
Location code..... _____            Date last altered..... 11/27/2000

Description..... Data View for Desktop

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.                  4. Desktop tables.
    2. Authorization codes.              5. Desktop field groups.
    3. Data attribute records.           6. Desktop panel layouts.

                                         9. File record.

==>
    
```

On the Data View Summary panel you can select option 5 to define Desktop field groups or option 6 to build a Desktop panel layout. The panel layout represents a collection of groups, tables, and fields that form a Desktop task pane.

If you want to file the record, type **9** and press **Enter**.

### Define Desktop Field Groups (Option 5)

Typically, entry fields in an application are grouped so that similar data elements are kept together. You probably would not put a field displaying a failing software component under a field that is intended to accept the caller's name. You probably want to group the caller's name with other pertinent information, such as an identification number or location, so that all relevant information can be easily viewed or entered by the user of the Desktop application.

The Desktop Field Group option enables you to set up groups of fields in your Desktop application. It enables you to do the following:

- Specify an identifier for the group and a name (text label) that will be visible to Desktop users (for example, Contact Information). The identifier is used in defining the Desktop panel layout.
- Define the fields that should appear in a group (outlined by a box) on the workstation panel:
  - Specify a text label or field prompt for the field to be seen by the user.
  - Order the fields as you want the user to see them within the group in the application.
  - Specify the field usage behavior when data is created, updated, displayed, or inquired upon. For example, the field is required, optional, display only, or omitted in a function.

## Understanding the Desktop Data Model Records

---

**Note:** Although it is a common convention to set up fields in groups, it is not required. You can have individual fields that are not associated with a group displayed on a panel.

If your Desktop application needs to maintain the relationship of a set of list data fields, you should use option 4, **Desktop Tables**, to group the related list data fields into a table. For more information, see “Define Desktop Tables (Option 4)” on page 98.

To set up a group of fields, type **5** on BLG0VU60, the Data View Summary panel, and press **Enter**.

```
BLG0VU60                DATA VIEW SUMMARY                RECORD: MYDVREC

Contact name..... _____      Entry priv. class.... MASTER
Contact phone..... _____      Date entered..... 11/13/2000
Contact dept..... _____      Time entered..... 10:29
Location code..... _____      Date last altered.... 11/27/2000

Description..... Problem Record

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.              4. Desktop tables.
    2. Authorization codes.          5. Desktop field groups.
    3. Data attribute records.        6. Desktop panel layouts.

                                   9. File record.

==> 5
```



## Understanding the Desktop Data Model Records

to scroll forward to see all the possible selections. The fields are initially listed in the order in which they appear in the data attribute list associated with the data view record (selection 3 on panel BLG0VU60).

**Note:** If a list data field is already included in a Desktop table, the data attribute record for the list data field does not appear in the list of available data attribute records. List data fields that are not included in any tables do appear in the list.

```
BLGLFGFL                Field Group Field List Entry                LINE 1 OF 30
Select and order the fields included in the field group.
                                                                RECORD: MYDVREC
Attribute                Field Usage
S Record ID Field Description  Crt Upd Dsp Inq
'''' - BLM&PTYP  Problem Type_____  U  U  D  U
'''' - BLM&SYSN  System Name_____  U  U  D  U
'''' - BLM&DEVN  Device Name_____  U  U  D  U
'''' - BLM&KIAF  Item Affected_____  U  U  D  U
'''' - BLM&0APN  Program Name_____  U  U  D  U
'''' - BLM&NETN  Network Name_____  U  U  D  U
'''' - BLM&REQN  Name_____  U  U  D  U
'''' - BLM&STAT  Status_____  U  U  D  U
'''' - BLM&RQDP  Dept._____  U  U  D  U
'''' - BLM&OCCD  Date Occurred_____  U  U  D  U

Line Cnds:  A=After  B=Before  C=Copy  D=Delete  E=Erace  I=Insert
            L=Line entry  M=Move  R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.
F3=End      F5=Back      F6=Suspend  F9=Recall   F11=Init    F12=Cancel
==> end
```

The panel shows the record ID of the data attribute record, the text label that will appear for the field in the Desktop on a workstation (Field Description), and field usage information.

The **Field Description** is the text that was previously entered in the **Field prompt** field on BLG0V700, the Data Attribute Record Entry panel. You can overwrite this text, if necessary, to use a different field label. The same field can have a different label for different groups or tasks. Changes you make to the field description text (or field usage) will flow to the Desktop, but will not affect the actual data attribute record on the host.

If you change the field description for a selected field and save the field list, your most recent change is reflected the next time you update the list. The original field prompt text is displayed for a field only if the field is not selected when the list was last saved.

On this list processor panel, type an **S** to select the fields that should belong in the group. You may need to scroll down to see all the possible selections. A blank in the selection column means that you do not want the field in the group.

```

BLGLFGFL                Field Group Field List Entry                LINE 1 OF 30

Select and order the fields included in the field group.                RECORD: MYDVREC

      Attribute                Field Usage
      S Record ID Field Description  Crt Upd Dsp Inq
'''' s BLM&PTYP Problem Type_____ U  U  D  U
'''' s BLM&SYSN System Name_____ U  U  D  U
'''' s BLM&DEVN Device Name_____ U  U  D  U
'''' s BLM&KIAF Item Affected_____ U  U  D  U
'''' s BLM&QAPN Program Name_____ U  U  D  U
'''' s BLM&NETN Network Name_____ U  U  D  U
'''' - BLM&REQN Name_____ U  U  D  U
'''' - BLM&STAT Status_____ U  U  D  U
'''' - BLM&RQDP Dept._____ U  U  D  U
'''' - BLM&OCCD Date Occurred_____ U  U  D  U

Line Cmds: A=After B=Before C=Copy D=Delete E=Erase I=Insert
           L=Line entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

==> end
    
```

**Note:** The fields will be displayed in the Desktop in the order shown on this panel. To change the order, use the normal line commands to move (M) fields before (B) or after (A) a field in the list. For instance, to place **Network Name** following **Problem Type**, type **M** next to **Network Name**, type **A** next to **Problem Type**, and press Enter.

To change the field usage characteristics, type a 1-character value in the **Field Usage** columns. Because any given field can exist in more than one group, you can decide how the field should behave every time it appears in your application.

A designation of U means the user can update the field (add data) but is not required to supply data in that field when creating a record. You can change this to an R to make this a required field in the Desktop interface.

**Note:** The field usage column may contain an R the first time you see this panel if the **Reply Req** field on panel BLG0VU60 was set to YES for the field in the attribute list for the data view. By using the field usage indicators on this panel, you can specify when a field is required under what circumstances.

If you have a field in the group that you want to omit from a specific function, specify a blank in the field usage column for that function. For example, consider the **Date Created** field. You probably do not want to include the **Date Created** field on the Create panel because it is automatically entered when the record is filed. There is no need for the user to enter a value for it. You would specify a blank in the Create column. However, you may want the **Date Created** field to be displayed on the Update and Display panels. Enter a D in those columns. Also, because you may want to search on the **Date Created** field, you would specify U for the Inquiry function. This would allow the user to update a search entry panel to supply a date on which to search:

## Understanding the Desktop Data Model Records

---

	Field Usage			
	Crt	Upd	Dsp	Inq
Date Created	—	D	D	U

If a field is not searchable in the database (it is not cognized), you should not include it on an Inquiry panel because it cannot be searched on. In this case, enter a blank for the Inquiry column for the field.

- For **Crt** (create record) transactions the field usage indicators are:
  - U (optional update field)
  - R (required field)
  - D (display-only field)
  - Blank (field is not included)
- For **Upd** (update record) transactions the field usage indicators are:
  - U (optional update field) — the default
  - R (required field)
  - D (display-only field)
  - Blank (field is not included)
- For **Dsp** (display record) transactions the field usage indicators are:
  - D (display-only field) — the default
  - Blank (field is not included)
- For **Inq** (inquire upon record) transactions the field usage indicators are:
  - U (optional update field) — the default for searchable fields
  - R (required field)
  - D (display-only field)
  - Blank (field is not included)

Fields that are not searchable in the database should not be included on panels you construct to perform inquiry transactions because there is no searchable data for the field. In these cases, you should specify a blank for the Inquiry usage characteristic for these fields.

| In the Desktop interface, fields that can be updated are enabled. Display-only fields are  
| shown but are not enabled for data entry. Fields that are designated as blank are not  
| displayed to the Desktop user. Fields that are not required have default colors. Required  
| fields have default colors of red for text labels and blue for background. The default colors  
| for required fields can be changed by updating your user preferences. Additional information  
| can be found in “Setting User Preferences” on page 28.

In the example shown on page 105, only the following fields are selected to appear in the Component Information group: Problem Type, System Name, Device Name, Item Affected, Program Name, and Network Name. The user will not be required to supply data in these fields when creating a new record.





```
BLG0VU60                DATA VIEW SUMMARY                RECORD: MYDVREC

Contact name..... _____ Entry priv. class..... MASTER
Contact phone..... _____ Date entered..... 11/13/2000
Contact dept..... _____ Time entered..... 10:29
Location code..... _____ Date last altered..... 11/27/2000

Description..... Data View for Desktop

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.                4. Desktop tables.
    2. Authorization codes.            5. Desktop field groups.
    3. Data attribute records.         6. Desktop panel layouts.

                                     9. File record.

==>
```

On the Data View Summary panel, you can select option 6 to build a Desktop panel layout. The panel layout represents a collection of groups, tables, and fields that form a Desktop task pane.

If you want to file the record, type **9** and press **Enter**.

**Note on F line command:** If you use the F line command to access an existing sublist of fields, but do not add or change any lines in the sublist, a message is displayed when you file the record. The message indicates that the record is filed, even if no fields are changed.

### Define Desktop Panel Layouts (Option 6)

The Desktop panel layouts option on BLG0VU60, the Data View Summary panel, enables you to gather the data elements that make up the center pane for a task. The center pane is displayed when a user selects a *leaf-level* icon (task icon) from the tree structure in a Desktop application to perform a task. A leaf-level icon is the last selectable icon under a process.

A *Desktop task* is the work a user can perform in the *center* pane of the Desktop application. A task can involve data entry, browsing or inquiry, or updating of records on the Tivoli Information Management for z/OS database. A task can involve performing more than one transaction in a window pane. For example, you can have a data-entry area on a problem reassignment pane to collect the name of the new problem assignee, and a display area to show the status and severity of the problem on the same pane. The task pane overall is specified as a create, update, inquiry, or display task panel type in the Desktop Toolkit. (More information about defining a task panel type is provided in “Associating Tasks with Panel Types” on page 143.)

**Note:** Although you can create a task to design the contents of the center pane of the Desktop, you cannot, in a similar manner, create a task to build the contents of the

*right* pane in the Desktop. That portion of the Desktop window is reserved to display records retrieved when you search or submit an inquiry. You can set up a "hidden" task that determines which fields are displayed in a detailed search results list display, and in what order the fields should be shown. This hidden task is required for quick searches to enable users to see details when double-clicking a record in the search results list. The hidden task is not shown to the user as an icon. (See "Customizing the Detailed Search Results List Display" on page 120 for more information.) Desktop users can also tailor their view of the search results list by selecting an option from the menu bar as described in "Using the Search Results List" on page 72.

The Desktop panel layouts option enables you to do the following:

- Specify a panel name for the task.  
The text label for a task icon is actually defined when the application hierarchy is constructed in the Toolkit.
- Define the groups, tables, and any additional stand-alone fields that should appear in the center window pane. (Or, you can define a collection of stand-alone fields.) Additionally, you can do the following:
  - Order the groups, tables, or stand-alone fields, as you want the user to see them in the application.
  - Specify how the groups should behave when data is created, updated, displayed, or searched. For example, specify whether the group elements are required, optional, display only, or omitted in a function.
  - Specify how the list data fields in the tables should behave when data is created, updated, or displayed.

To define a Desktop panel layout for a particular task, type **6** and press **Enter** on BLG0VU60, the Data View Summary panel.

```

BLG0VU60                DATA VIEW SUMMARY                RECORD: MYDVREC

Contact name..... _____      Entry priv. class..... MASTER
Contact phone..... _____      Date entered..... 11/13/2000
Contact dept..... _____      Time entered..... 10:35
Location code..... _____      Date last altered..... 11/27/2000

Description..... Data View for Desktop

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.           4. Desktop tables.
    2. Authorization codes.       5. Desktop field groups.
    3. Data attribute records.    6. Desktop panel layouts.

                                9. File record.

==> 6
    
```



BLGLTSFL, the Desktop Panel Field List Entry panel, is displayed to enable you to select the field groups, tables, and fields (data attribute records) that should compose the Desktop panel for a task. A list of all available field groups, tables, and data attribute records available in the data view record displays for your selection. Data attribute records for list data fields appear only if they are not included in a table.

```

BLGLTSFL                Desktop Panel Field List Entry                LINE 1 OF 41

Select and order the fields, field groups and tables for the desktop panel.
                                                                RECORD: MYDVREC

      G  Group,      Group,
      T  Table, or  Table, or                Field Usage
S F  Attrib ID  Field Description          Cr t Upd Dsp Inq
'''' - F  BLM&URN0  Problem ID_____  U  U  D  U
'''' - F  BLM&DSAB  Brief Description_____  U  U  D  U
'''' - G  COMPONENT  Component Information_____  U  U  D  U
'''' - F  BLM&DTXT  Problem Description_____  U  U  D  U
'''' - F  BLM&STXT  Status Comments_____  U  U  D  U
'''' - F  BLM&RTXT  Resolution Description_____  U  U  D  U
'''' - G  REPORTER  Customer Information_____  U  U  D  U
'''' - G  ASSIGNEE  Problem Assignee Info_____  U  U  D  U
'''' - T  ABENDS_   ABENDS_____  U  U  D  _
'''' - F  BLM&SYSN  System Name_____  U  U  D  U
'''' - F  BLM&0APN  Program Name_____  U  U  D  U
'''' - F  BLM&REQN  Name_____  U  U  D  U
'''' - F  BLM&STAT  Status_____  U  U  D  U

Line Cmds:  A=After  B=Before  C=Copy  D=Delete  E=Erase  I=Insert
            L=Line entry  M=Move  R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

===>
    
```

G in the **GTF** column indicates that the element is a field group. T indicates that the element is a table of list data fields. F indicates that the element is a field.

**Note:** A data field can appear in this list as a stand-alone field, and yet be included in one or more field groups. A list data field appears in this list only if it is not included in a table.

The Desktop Panel Field List Entry panel shows the ID of the field group, table, or data attribute record (for a field), the text label that will appear for the selected group, table, or field on the Desktop workstation, and group, table, or field usage information.

The **Group, Table, or Field Description** is the text that was previously entered in BLGLFGIN, the Desktop Field Group Entry panel (for groups), or in the **Field prompt** field on BLG0V700, the Data Attribute Record Entry panel (for fields), or in the **Table name** field on BLGLTBDL, the Desktop Table Definition panel (for tables). You can modify the text to override the default value. Changes made here affect only the description for the field, table, or group on this panel.

```

BLGLTSFL                Desktop Panel Field List Entry                LINE 1 OF 41
Select and order the fields, field groups and tables for the desktop panel.
                                                                RECORD: MYDVREC
      G Group,      Group,
      T Table, or  Table, or
      S F Attrib ID Field Description      Crt Upd Dsp Inq
'''' s F BLM&URN0  Problem ID_____    U  U  D  U
'''' s F BLM&DSAB  Brief Description_____  U  U  D  U
'''' s G COMPONEN  Component Information_____  U  U  D  U
'''' s F BLM&DTXT  Problem Description_____  U  U  D  U
'''' s F BLM&STXT  Status Comments_____    U  U  D  U
'''' s F BLM&RTXT  Resolution Description_____  U  U  D  U
'''' - G REPORTER  Customer Information_____  U  U  D  U
'''' - G ASSIGNEE  Problem Assignee Info_____  U  U  D  U
'''' - T ABENDS___ ABENDS_____          U  U  D  _
'''' - F BLM&SYSN  System Name_____        U  U  D  U
'''' - F BLM&0APN  Program Name_____        U  U  D  U
'''' - F BLM&REQN  Name_____              U  U  D  U
'''' - F BLM&STAT  Status_____            U  U  D  U

Line Cnds:  A=After  B=Before  C=Copy  D=Delete  E=Erase  I=Insert
            L=Line entry  M=Move  R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

====>

```

On this list processor panel, type an **S** to select any group, table, or field that should belong in the center pane for a Desktop task. You may need to scroll down to see all the possible selections. A blank in the selection column means that you do not want the item to appear in the group in the center pane. You can modify the field usage characteristics, if necessary.

**Note:** The items will be displayed in the center pane of the graphical Desktop window in the order shown on this panel. To change the order, use the normal line commands to move (M) groups or fields before (B) or after (A) an item in the list. For example, to move the **Resolution Description** field before the **Status Comments** field, type **M** next to **Resolution Description**, type **A** next to **Problem Description**, and press **Enter**.

A data field can appear only once in any given Desktop task pane, but it can be used on multiple task panes. For example, if you construct a group that has a data field for a phone number, and then include that same phone number field as a stand-alone field after the group, the Desktop will use the last occurrence of the phone field. In the Desktop task pane, the phone number field would show as a stand-alone field and would not appear as part of the group.

To change the usage characteristics, type a 1-character value in the **Field Usage** columns. Because any given field can exist in more than one group, you can decide how it should behave every time it appears in your application.

The **Crt** column shows U as a default, meaning that the user is not required to enter data in that field when creating a record. You can change this to an R to specify the field or group is required.

**Note:** A value of R may initially appear for a field if you entered YES (or some other specific value) in the **Reply Req** field when setting up the data attribute record on BLGLDATT, the Data Attribute Record Entry panel. For a description of how the values in the **Reply Req** field relate to the field usage columns, see page 93. For a description of the BLGLDATT panel, refer to the *Tivoli Information Management for z/OS Panel Modification Facility Guide*.

A blank value specified in the field usage column on panel BLGLTSFL can be used to define a single group or field that you can use for create, update, display, and inquiry, but omit a field for some functions. For an explanation of why you may want to use a blank value, see the explanation provided previously for panel BLGLFGFL on page 105.

- For **Crt** (create record) transactions the field usage indicators are:
  - R (required)
  - U (optional update) — the default for groups
  - D (display-only)
  - Blank (group or field is not included)
- For **Upd** (update record) transactions the field usage indicators are:
  - R (required)
  - U (optional update) — the default
  - D (display-only)
  - Blank (group or field is not included)
- For **Dsp** (display record) transactions the field usage indicators are:
  - D (display-only field) — the default
  - Blank (group or field is not included)
- For **Inq** (inquire upon record) transactions the field usage indicators are:
  - R (required)
  - U (optional update) — the default for searchable fields
  - D (display-only field)
  - Blank (group or field is not included)

Fields that are not searchable in Tivoli Information Management for z/OS (not cognized) should not be included on panels you construct to perform inquiry transactions because there is no searchable data for the field.

**Note:** You may be wondering which element carries more weight, the group or the field, if the usage characteristics are not the same. The answer is that the most restrictive value is used for a field regardless of which element carries it for any given transaction. The order of restriction rules follows:

1. Blank (most restrictive)
2. Display
3. Required
4. Update (least restrictive)

A blank usage value, meaning that the field is not shown to the user, is more restrictive than display. A display usage value is more restrictive than update. A required usage value is a variation of update, but is more restrictive because it does not allow blanks as a value for the field.

For example, suppose that you had a **Component Information** field group with the following defined for an update transaction:

Field Group:                    D (Component Information)

Group Data Attributes:

U (Problem Type)  
U (System Name)  
U (Device Name)  
U (Item Affected)  
U (Program Name)  
U (Network Name)

When the user updates a record, the problem type, system name, and remaining fields in the group will be displayed but cannot be updated, although the data attributes are defined as having update (U) usage. In effect, the data attribute's usage value for the update transaction is compared to the group value. If the group value is more restrictive than the attribute's value, the group value is used for that attribute.

If the situation were reversed and the group was defined as U and the data attributes were D, the data attributes would still be display-only because D is more restrictive than U, regardless of the group value.

In the example shown on page 129, for the **Detail Description** task, two fields are followed by a group and three other fields.

The center window pane would look like this in the Desktop application for the **Detail Description** task:

Problem ID

Brief Description

Component Information

Problem Type  
System Name  
Device Name  
Item Affected  
Program Name  
Network Name

Problem Description

Status Comments

Resolution Description

When you have entered your selections on the Desktop Panel Field List Entry panel, type **end** and press Enter. If you have selected any tables on the Desktop Panel Field List Entry panel, you proceed to BLGLTSTL, the Desktop Table Field Usage Definition panel. Otherwise, you return to BLGLTSIN. See "Selecting a Table" on page 116 for more information on including a table in a Desktop task. In this example, there are no tables selected, so you return to BLGLTSIN.



As shown in the following example, you can add additional panel names on BLGLTSIN. You can select those panel names on BLGLTSFL so that your data view record can support multiple task panes.

```

BLGLTSIN           Desktop Panel Layout Definition           LINE 1 OF 12
Enter information for each panel layout in this data view record.
RECORD: MYDVREC

   Panel Name           Auth           Field
   Code   Help File   List ID
''' Detail Description_____ 00
''' General Information_____ 04
''' Create Problem_____ 05
''' Associate Problem to Call_____ 02
''' Update General Info_____ 06
''' Update Detail Desc_____ 07
''' Update Assignee_____ 08
''' Problems_____ 01
''' Display R_____ 03
''' _____
''' _____
''' _____

Line Cnds: A=After B=Before C=Copy D=Delete E=Erace F=Field List
           I=Insert L=Line entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

==> end
    
```

On BLGLTSIN, type **end** and press Enter to return to BLG0VU60, the Data View Summary panel.

On the Data View Summary panel, type **9** and press Enter to save your selections and file the data view record, complete with its Desktop table definitions, field group definitions, and panel layout definition.

```

BLG0VU60           DATA VIEW SUMMARY           RECORD: MYDVREC

Contact name..... _____ Entry priv. class..... MASTER
Contact phone..... _____ Date entered..... 11/13/2000
Contact dept..... _____ Time entered..... 10:40
Location code..... _____ Date last altered..... 11/27/2000

Description..... Data View for Desktop

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.           4. Desktop tables.
    2. Authorization codes.       5. Desktop field groups.
    3. Data attribute records.    6. Desktop panel layouts.

                                9. File record.

==> 9
    
```

You return to the Primary Options Menu and receive a confirmation message that indicates the data view record was stored successfully.

```
BLG0EN20          --- PRIMARY OPTIONS MENU ---      APPLICATION: MANAGEMENT

OPTIONS:

    1. OVERVIEW.....Display general information and product enhancements.
    2. PROFILE.....Display or alter invocation or session defaults.
    3. APPLICATION....Change application, list available applications.
    4. CLASS.....Change current class, list available classes.
    5. ENTRY.....Create a record.
    6. INQUIRY.....Search for records.
    7. UTILITY.....Copy, display, print, delete, and update records.
    8. GLOSSARY.....Display a list of searchable words in the database.
    9. PMF.....Modify or create panels.

        Select an option, enter a command, or type QUIT to exit.

        Tivoli Information Management for z/OS Version 7 Release 1
        5697-SD9 (C) Copyright IBM Corp., 1981, 2001.
BLG03058I Record MYDVREC was stored successfully.
==>
```

This concludes the process of adding Desktop table, field group, and task definitions to a data view record. You can now perform other tasks. You can customize the detailed search results list display, or use the Desktop Toolkit to add other necessary elements to your application, such as the following:

- The hierarchy of tasks to perform
- The buttons you can click
- The next action that is taken when a button is selected
- The mapping of values from one data view record to another

### Selecting a Table

When you select a table on the Desktop Field List Entry panel (BLGLTSFL) and type **end** and press **Enter**, you proceed to the Desktop Table Field Usage Definition panel (BLGLTSTL). On this panel, you can enter the text label (**Field Description**) and field usage information for the list data fields in the selected tables.

Continuing with the example of panel BLGLTSFL on page 112, select the ABENDS table. Since list data is not searchable through the HLAPI/REXX, leave the field usage for **Inq** blank.

```

BLGLTSFL           Desktop Panel Field List Entry           LINE 1 OF 41

Select and order the fields, field groups and tables for the desktop panel.
                                                                RECORD: MYDVREC

      G Group,      Group,
      T Table, or  Table, or
      S F Attrib ID Field Description      Cr t Upd Dsp Inq
    '''' s F BLM&URN0 Problem ID_____ U  U  D  U
    '''' s F BLM&DSAB Brief Description___ U  U  D  U
    '''' s G COMPONEN Component Information__ U  U  D  U
    '''' s F BLM&DTXT Problem Description___ U  U  D  U
    '''' s F BLM&STXT Status Comments_____ U  U  D  U
    '''' s F BLM&RTXT Resolution Description__ U  U  D  U
    '''' _ G REPORTER Customer Information___ U  U  D  U
    '''' _ G ASSIGNEE Problem Assignee Info___ U  U  D  U
    '''' s T ABENDS__ ABENDS_____ U  U  D  _
    '''' _ F BLM&SYSN System Name_____ U  U  D  U
    '''' _ F BLM&QAPN Program Name_____ U  U  D  U
    '''' _ F BLM&REQN Name_____ U  U  D  U
    '''' _ F BLM&STAT Status_____ U  U  D  U

Line Cnds: A=After B=Before C=Copy D=Delete E=Erase I=Insert
           L=Line entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

====>
    
```

A table is represented in the center pane of the Desktop by a button. The label of the button is defined by the text in the **Group, Table, or Field Description** field. Since the **Group, Table, or Field Description** for a table defaults to the name of the table, you may want to modify the **Group, Table, or Field Description** to override the default value for this task.

## Understanding the Desktop Data Model Records

```

BLGLTSFL                Desktop Panel Field List Entry                LINE 1 OF 41
RECORD: MYDVREC

Select and order the fields, field groups and tables for the desktop panel.

      G Group,      Group,
      T Table, or  Table, or
      S F Attrb ID Field Description      Crt Upd Dsp Inq
'''' S F BLM&URNØ Problem ID_____ U  U  D  U
'''' S F BLM&DSAB Brief Description_____ U  U  D  U
'''' S G COMPONEN Component Information___ U  U  D  U
'''' S F BLM&DTXT Problem Description_____ U  U  D  U
'''' S F BLM&STXT Status Comments_____ U  U  D  U
'''' S F BLM&RTXT Resolution Description___ U  U  D  U
'''' - G REPORTER Customer Information___ U  U  D  U
'''' - G ASSIGNEE Problem Assignee Info___ U  U  D  U
'''' S T ABENDS___ Abend Information_____ U  U  D  _
'''' - F BLM&SYSN System Name_____ U  U  D  U
'''' - F BLM&ØAPN Program Name_____ U  U  D  U
'''' - F BLM&REQN Name_____ U  U  D  U
'''' - F BLM&STAT Status_____ U  U  D  U

Line Cmds: A=After B=Before C=Copy D=Delete E=Erase I=Insert
           L=Line entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

====> end

```

When you have entered your selections on the Desktop Panel Field List Entry panel, type **end** and press **Enter**. Since a table is selected, you proceed to BLGLTSTL.

```

BLGLTSTL                Desktop Table Field Usage Definition          LINE 1 OF 21
RECORD: MYDVREC

USE....Set field usage and description for table fields in this panel layout

      Table      Attribute
      Name      Record ID Field Description      Field Usage
      Crt Upd Dsp
'''' ABENDS___ XYZ#ABND  Abend code_____ U  U  D
'''' ABENDS___ XYZ#RSNC  Reason Code_____ U  U  D
'''' ABENDS___ XYZ#PGMN  Module_____ U  U  D
'''' ABENDS___ XYZ#OFFS  Offset_____ U  U  D
'''' _____ _____ _____ -  -  -
'''' _____ _____ _____ -  -  -
'''' _____ _____ _____ -  -  -
'''' _____ _____ _____ -  -  -
'''' _____ _____ _____ -  -  -
'''' _____ _____ _____ -  -  -
'''' _____ _____ _____ -  -  -
'''' _____ _____ _____ -  -  -
'''' _____ _____ _____ -  -  -

Line Cmds: E=Erase L=Line entry

Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

====> end

```

Tables are presented in the order they are selected. If a table is selected multiple times on BLGLTSFL, only the first occurrence appears. Within the table, the list data fields are presented in the order they appear in the table definition. A blank line separates tables.

The **Field Description** contains the text that was previously entered for the list data fields on BLGLTBDL, the Desktop Table Definition panel. When you display the table on the Desktop, the description text is the heading of the column of list data. If the table is editable, the description is also the text label of the list data field. You can modify the text to override the default value. Changes made here only affect the description of the list data fields for this task.

The **Field Usage** values are set to those for the table on BLGLTSFL. Since list data searches are not supported by HLAPI/REXX, there is no **Inq** (Inquiry) usage. To change the usage characteristic, type a one-character value in the **Field Usage** columns. Because a table can be included in more than one task, you can decide how a list data field in a table should behave for every task. For example, you may have a table of contact information that you include in a task for the Desktop administrator. In this case, you want your administrator to have update access to each of the list data fields in the contact table. You may also have a help desk user who needs to be able to display the table, but who should not be able to update it. In this case you would define a task for the help desk user that includes the contact information table, but provides display-only access to the list data fields. In some cases, you may also want to prevent certain users from viewing certain columns of list data in a table; you can use the **blank** field usage to prevent those columns of list data from being displayed for that task.

■ For **Crt** (create record) transactions, the field usage indicators are:

- R (required)
- U (optional update) — the default
- D (display-only)
- Blank (list data field is not included)

■ For **Upd** (update record) transactions, the field usage indicators are:

- R (required)
- U (optional update) — the default
- D (display-only)
- Blank (list data field is not included)

■ For **Dsp** (display record) transactions, the field usage indicators are:

- D (display-only) — the default
- Blank (list data field is not included)

A usage value of **R** for **Crt** or **Upd** specifies that when a new line is entered in the table or a line is updated, data is required for that field. If the field usage value for the table is different than the field usage defined for a list data field in the table, the most restrictive value is used for that field. The order of restriction rules follows:

1. Blank (most restrictive)
2. Display

3. Required
4. Update (least restrictive)

When you have finished entering your information on the Desktop Table Field Usage Definition panel, BLGLTSTL, type **end** and press Enter to return to BLGLTSIN. On BLGLTSIN, you can create more tasks, update existing tasks, or return to BLG0VU60, the Data View Summary panel, to update other data in the record or to file the record.

### Customizing the Detailed Search Results List Display

In the sample Desktop, users can perform *quick searches* by clicking the **Search** icon in the Desktop and selecting a task icon. Quick searches can be performed against different types of records (call, problem, change, activity, people, and solution records) in the Tivoli Information Management for z/OS database. Users can also perform *freeform searches* by selecting **Freeform Search** from the **Actions** item on the menu bar.

A summary list of records that were found which meet the search value is displayed in the rightmost pane of the Desktop. If a quick search was performed, the list shows the record number ID and description of the record. To see the details behind a record, a user double-clicks the record in the list. Data fields for that record are then displayed in the same pane of the Desktop. If a freeform search was performed, the summary list of matching records is displayed in a table grid in the rightmost pane. Users cannot double-click a line in the table grid to see more details about the record. Any available matching data is already displayed.

In Tivoli Information Management for z/OS, a "hidden" task with a panel name of Display R is used to customize the appearance of the search results list. (This Display R task also defines the print detail list.) A hidden task is associated with each record type supported by the Desktop and is provided with the BLMCALL, BLMPROB, BLMCHNG, BLMACTV, BLMPEOPL, and BLMSOL data view records. If you are constructing a Desktop application, or modifying the sample, you can change the composition and ordering of elements in the Display R task to suit your needs. You can also create your own Display R "hidden" task.

**Note:** Do *not* remove the Display R "hidden" task from the data view records provided for use with the Desktop. Removing the Display R task from these records will prevent the Desktop from correctly displaying and printing detailed information about records in the rightmost pane of the Desktop. You should also be sure to include a Display R "hidden" task with your user data view records.

For quick searches, the Display R task defines the groups and fields that are displayed when a user selects an item in the search results list for detailed display. The Display R task enables you to reorder the data fields and groups shown in the detailed search results list display, or alter the composition of elements.

**Note:** For quick searches, a Display R task is required to enable users to see details when double-clicking a record in the search results list.

For freeform searches, the Display R task is used to display the text label shown to users as the field description for the columns requested in the freeform search. The field description is obtained from the BLGLFGFL or BLGLTSFL panels in Tivoli Information Management for z/OS.

The Display R task is not displayed as an icon in the application hierarchy. It is associated with each data view record associated with fields you can search in the Desktop.

To add a Display R task for a data view record, update the data view record and select option **6** (Desktop panel layouts) on panel BLG0VU60, the Data View Summary panel. On panel BLGLTSIN, the Desktop Panel Layout Definition, enter **Display R** as the panel name on a blank line in the list, and type the F line command to modify the field list.

```

BLGLTSIN          Desktop Panel Layout Definition          LINE 1 OF 12
Enter information for each panel layout in this data view record.
                                                    RECORD: MYDVREC
      Panel Name          Auth          Field
      Code  Help File    List ID
''' Detail Description_____ 00
''' General Information_____ 04
''' Create Problem_____ 05
''' Associate Problem to Call_____ 02
''' Update General Info_____ 06
''' Update Detail Desc_____ 07
''' Update Assignee_____ 08
''' Problems_____ 01
f''' Display R_____ 03
''' _____
''' _____
''' _____

Line Cmds: A=After B=Before C=Copy D=Delete E=Erase F=Field List
           I=Insert L=Line entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

====> end
    
```

To modify an existing Display R task, use the F line command to modify the field list.

The resulting field list (on panel BLGLTSFL, the Desktop Panel Field List Entry panel) shows the groups, tables, and fields that compose the detailed information a user sees for a record in the search results list.

In the next example, the Display R panel name is associated with a field list that contains three groups and individual fields (two of the three groups could be viewed by scrolling forward). You can change the order of data fields, tables, or groups by using line commands to move the selected items in the list. For example, you could move the **Priority** field after the **Problem ID** field by using the line commands, so that the priority of the problem is displayed near the top of the pane when the user double-clicks on a record in the search results list.

The fields, tables, and groups are listed with the field usage character D, indicating that they are display items. Because Display R is a special panel used only for display, only the display (Dsp) field usage column is meaningful. All other field usage columns are ignored.

## Understanding the Desktop Data Model Records

```

BLGLTSFL                Desktop Panel Field List Entry                LINE 1 OF 41
Select and order the fields, field groups and tables for the desktop panel.
                                                                RECORD: MYDVREC
      G Group,      Group,
      T Table, or  Table, or
      S F  attrib ID  Field Description      Crt Upd Dsp Inq
'''' S F BLM&URN0   Problem ID_____      U  U  D  U
'''' S F BLM&DATX   Date Opened_____      U  U  D  U
'''' S F BLM&TIMX   Time Opened_____      U  U  D  U
'''' S F BLM&OCCD   Date Occurred_____      U  U  D  U
'''' S F BLM&OCCT   Time Occurred_____      U  U  D  U
'''' S F BLM&00CD   Date Closed_____      U  U  D  U
'''' S F BLM&00CT   Time Closed_____      U  U  D  U
'''' S F BLM&STAT   Status_____      U  U  D  U
'''' S F BLM&CPRI   Priority_____      U  U  D  U
'''' S F BLM&BPAV   Bypass Available_____      U  U  D  U
'''' S F BLM&DSAB   Brief Description_____      U  U  D  U
'''' S G REPORTER  Customer Information_____      U  U  D  U

Line Cmds: A=After B=Before C=Copy D=Delete E=Erace I=Insert
           L=Line entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

===> end

```

Once you have completed your modifications on the Desktop Panel Field List Entry panel, type **end** and press **Enter** to save your selections. If you select a table on the Desktop Panel Field List Entry panel, you proceed to BLGLBTBL, the Desktop Field Usage Definition panel. Otherwise, you return to BLGLTSIN. See “Selecting a Table” on page 116 for more information on including a table in a Desktop task. In this example there are no tables selected, so you return to BLGLTSIN.

```

BLGLTSIN                Desktop Panel Layout Definition                LINE 1 OF 12
Enter information for each panel layout in this data view record.
                                                                RECORD: MYDVREC
      Panel Name      Auth      Field
      Code  Help File  List ID
'''' Detail Description_____      00
'''' General Information_____      04
'''' Create Problem_____      05
'''' Associate Problem to Call_____      02
'''' Update General Info_____      06
'''' Update Detail Desc_____      07
'''' Update Assignee_____      08
'''' Problems_____      01
'''' Display R_____      03
'''' _____      —
'''' _____      —
'''' _____      —

Line Cmds: A=After B=Before C=Copy D=Delete E=Erace F=Field List
           I=Insert L=Line entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

===> end

```

**Note:** If you construct a new application, or modify the application provided, you must still use the name **Display R** as the hidden task name associated with the search results list. If you change this name to something else or omit it entirely, an attempt to display the record in the search results list will result in an empty panel.



On BLGLTSIN, type end to return to BLG0VU60, the Data View Summary panel.

```

BLG0VU60                DATA VIEW SUMMARY                RECORD: MYDVREC

Contact name..... _____      Entry priv. class..... MASTER
Contact phone..... _____      Date entered..... 11/13/2000
Contact dept..... _____      Time entered..... 10:40
Location code..... _____      Date last altered..... 11/27/2000

Description..... Data View for Desktop

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.           4. Desktop tables.
    2. Authorization codes.       5. Desktop field groups.
    3. Data attribute records.    6. Desktop panel layouts.

                                9. File record.

==> 9
    
```

On BLG0VU60, type **9** and press **Enter** to file the modified data view record.

## Create R and Update R Tasks

In order to allow a parent/child relationship in your customized Desktop panels, you need to include the Create R and Update R tasks in your activity (child) data view record. The sample Desktop application includes one parent/child relationship, which is accessible to the user from the Change Registration and Update Change Registration processes. The child record is the activity record, and the parent record is the change record. In your customized Desktop application, you might want your users to be able to initiate parent/child processing for certain other tasks.

There are two basic steps to establish the parent/child capability for a process.

1. Create a child data view record in which you have defined Create R and Update R, as well as Display R. You can also add any other desired tasks, as shown in the following example.

## Understanding the Desktop Data Model Records

```

BLGLTSIN          Desktop Panel Layout Definition          LINE 1 OF 12

Enter information for each panel layout in this data view record.
RECORD: MYACTIV

Panel Name          Auth          Field
Code      Help File  List ID
f'' Search Activity Records__  _____  00
f'' Display R _____  _____  01
f'' Create R _____  _____  02
f'' Update R _____  _____  03
''' _____  _____  _____
''' _____  _____  _____
''' _____  _____  _____
''' _____  _____  _____
''' _____  _____  _____
''' _____  _____  _____
''' _____  _____  _____
''' _____  _____  _____
''' _____  _____  _____

Line Cmds: A=After B=Before C=Copy D=Delete E=Eraser F=Field List
           I=Insert L=Line entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

====> end

```

The Create R and Update R tasks are similar to Display R, but they instead allow the Desktop to create and update child records from the parent record. Configure the Create R and Update R tasks like any other task, adding fields, groups, or tables to the panel layout for display to the Desktop user.

2. Link the child data view record to the parent data view record, as shown in the following example. In the parent record, the name of your child data view record needs to be entered in the **Child data view record name** field.

```

BLG0VQ61          DATA VIEW RECORD DISPLAY          RECORD: MYDVREC

Data view record name..... MYDVREC
Contact name..... _____
Contact phone..... _____
Contact department..... _____
Location code..... _____
Record s-word index..... 0B06      Record s-word.... Z//S/TRSM
Product s-word index..... 0C20      Product s-word... XISSCP002
Default separator character... _      Product Acronym.. IS = INFO/MGT
Record access panel..... BLG1A125
Description..... Change Record

Create record file time TSP... BLGTX121
Update record file time TSP... BLGTX121
Allow ODBC access?..... _____
Child data view record name... MYACTIV

To return to the Summary Display panel, type End or Cancel.

====> end

```

For more information on creating the buttons to initiate parent/child processing, see “Enabling the Parent/child Function” on page 152.

## Enabling Change Approval Processing

To enable Change Approval processing on the Desktop, the Desktop administrator must include the change approval data attribute records in a data view record and define a change approval table that includes those data attribute records. Once the table is defined, the Desktop administrator must then include the table in any display tasks for the data view record from which the Desktop user should be able to invoke Change Approval processing. At a minimum, Change Approval should be enabled on the **Display R** task.

**Note:** The Desktop user invokes Change Approval processing in display mode, which is the same mode that it is invoked in when run on the Tivoli Information Management for z/OS host.

An attribute record for the approver and an attribute record for the approver status are shipped with the base data model records. When the Desktop administrator performs the Desktop host installation steps, the following two data attribute records will automatically be loaded into your Tivoli Information Management for z/OS database:

- BLG&APVR data attribute record for the **Approver** list, s-word index 12DE
- BLG&APST data attribute record for the **Approval status** list, s-word index 12DF

You must add these records to the data attribute records listed in your data view record before you can define a change approval table. When you define the change approval table in the data view, it must be named APPROVAL; the first column must be the Approver (BLG&APVR) and the second column must be the Approval status (BLG&APST). You may not use APPROVAL as the name of any table other than the Change Approval table in any of your data view records that are used by the Desktop.

Change Approval processing also resets the overall Approval status of the change record. If you want to display this data, you should include the data attribute record for it in the data view record and also include it in your display tasks. An attribute record for the overall Approval status is shipped with the base data model records. When you perform the Desktop host installation steps, the following data attribute record will automatically be loaded into your Tivoli Information Management for z/OS database:

- BLG&STAP data attribute record for the **Change Approval status** field, s-word index 0BF0

**Note:** You can use the same Change Approval table to create or update the list of change approvers for a change record. When you use the table in create or update mode, you should set the **Field Usage for the Approval status** field to D (display-mode) so the Desktop users cannot update the **Approval status** field. In the data view record, you should also specify TSX BLGTX121 in the fields **Create record file time TSP** and **Update record file time TSP** on panel BLG0V600. Then when you create or update the record from the Desktop, host processing invoked by this TSX at file time will automatically set the status for new change approvers to PENDING.

## Defining the Change Approval Table

The following steps illustrate an example of defining a Change Approval table.

Create or update the data view record to be used for Change Approval processing on the Desktop. On **BLG0VU60**, select **3. Data attribute records** to add data attribute records BLG&APVR and BLG&APST to the list.

## Understanding the Desktop Data Model Records

```

BLG0VU60                                DATA VIEW SUMMARY                                RECORD: DKCHANGE

Contact name..... _____          Entry priv. class..... _____
Contact phone..... _____          Date entered..... _____
Contact dept..... _____          Time entered..... _____
Location code..... _____          Date last altered..... _____

Description..... Desktop change record view example

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.                4. Desktop tables.
    2. Authorization codes.            5. Desktop field groups.
    3. Data attribute records.          6. Desktop panel layouts.

                                         9. File record.

==> 3
  
```

Add the Approver and Approval status data attributes records, BLG&APVR and BLG&APST, to the data attribute record list.

```

BLGLDATT                                DATA ATTRIBUTE RECORDS ENTRY                                LINE 1 OF 17

USE....Enter a list of data attribute records included in this data model.
FORM...Record ID of data attribute record.

RECORD: DKCHANGE

      Data                                     ODBC
      Attribute Reply Not Auth                Description                Column
      Record ID  Req  Logic Code
      ' ' ' ' '
      ' ' ' ' ' BLG&APVR  ___  ___  ___  Approver_____ APPROVER___
      ' ' ' ' ' BLG&APST  ___  ___  ___  Approval Status_____ APPROVAL_STAT
      ' ' ' ' '
      ' ' ' ' '
      ' ' ' ' '
      ' ' ' ' '
      ' ' ' ' '
      ' ' ' ' '

Line Cmds: A=After B=Before C=Copy D>Delete E=Erase I=Insert
           L=Line Entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

==> end
  
```

On BLG0VU60, select **4. Desktop tables** to define the change approval table.

```

BLG0VU60          DATA VIEW SUMMARY          RECORD: DKCHANGE

Contact name..... _____      Entry priv. class..... _____
Contact phone..... _____      Date entered..... _____
Contact dept..... _____        Time entered..... _____
Location code..... _____        Date last altered..... _____

Description..... Desktop change record view example

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.           4. Desktop tables.
    2. Authorization codes.        5. Desktop field groups.
    3. Data attribute records.      6. Desktop panel layouts.

                                   9. File record.

==> 4
    
```

The list data fields included in the data view appear on this panel. This example shows just the two change approval list data fields, but there could be more depending on what is in your data view. Assign the two change approval list data fields to a table. For change approval processing, the table must be named APPROVAL. In addition, the Approver must be listed as the first entry in the table and the Approval status must be listed as the second entry. The table name APPROVAL cannot be used for any table other than the one for change approval.

```

BLGLTBDL          Desktop Table Definition          LINE 1 OF 20

USE....Assign list fields to tables.

                                   RECORD: DKCHANGE

Table      Attribute  S-word
Name       Record ID  Index   S-word   Field Description
''''  APPROVAL  BLG&APVR  12DE   -IM0I0CC   Approver_____
''''  APPROVAL  BLG&APVR  12DF   -IM0APST   Approval Status___
''''  _____  _____  _____  _____  _____
''''  _____  _____  _____  _____  _____
''''  _____  _____  _____  _____  _____
''''  _____  _____  _____  _____  _____
''''  _____  _____  _____  _____  _____
''''  _____  _____  _____  _____  _____
''''  _____  _____  _____  _____  _____
''''  _____  _____  _____  _____  _____

Line Cmds:  A=After  B=Before  E=Erase  L=Line entry  M=Move

Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

==> end
    
```

## Understanding the Desktop Data Model Records

On **BLG0VU60**, select **6. Desktop panel layouts** to include the APPROVAL table in the Display R task and any other display tasks from which you want the Desktop user to be able to invoke Change Approval processing.

```

BLG0VU60                DATA VIEW SUMMARY                RECORD: DKCHANGE

Contact name..... _____      Entry priv. class..... _____
Contact phone..... _____      Date entered..... _____
Contact dept..... _____        Time entered..... _____
Location code..... _____        Date last altered..... _____

Description..... Desktop change record view example

Select one of the following choices, or type END to save or CANCEL
to discard any changes.

    1. Data view record.              4. Desktop tables.
    2. Authorization codes.           5. Desktop field groups.
    3. Data attribute records.         6. Desktop panel layouts.

                                   9. File record.

==> 6
  
```

Enter **f** by the **Display R** task and any other tasks from which you want the Desktop user to be able to invoke Change Approval processing.

```

BLGLTSIN                Desktop Panel Layout Definition        LINE 1 OF 20

Enter information for each panel in this data view record.

                                RECORD: DKCHANGE

Panel Name                    Auth      Field
                                Code      Help File  List ID
''' General Information_____  _____  _____  00
''' Assignee_____             _____  _____  01
''' Create Change_____         _____  _____  02
''' Update General Info_____   _____  _____  03
''' Update Assignee_____       _____  _____  04
''' Update Change_____         _____  _____  05
''' Changes_____               _____  _____  06
f'' Display R_____            _____  _____  07
'''                               _____  _____  _____
'''                               _____  _____  _____
'''                               _____  _____  _____
'''                               _____  _____  _____
'''                               _____  _____  _____

Line Cmds: A=After B=Before C=Copy D=Delete E=Erase F=Field List
           I=Insert L=Line entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.
====>
  
```

Select the APPROVAL table to include it in this task.

```

BLGLTSFL                Desktop Panel Field List Entry                LINE 1 OF 19

Select and order the fields, field groups and tables for the desktop panel.
                                                                RECORD: DKCHANGE

      G Group,      Group,
      T Table, or  Table, or
      S F  attrib ID Field Description      Crt Upd Dsp Inq
'''' S F  BLM&REQN Name_____            U  U  D  U
'''' S F  BLM&DSAB Brief Description_____ U  U  D  U
'''' S F  BLM&SYSN System Name_____       U  U  D  U
'''' S F  BLM&PTYP Change Type_____       U  U  D  U
'''' S F  BLM&00AA Assignee Name_____     U  U  D  U
'''' S F  BLM&DTXT Change Description_____ U  U  D  U
'''' S T  APPROVAL Change Approval_____  U  U  D  U
'''' - -  _____                       -  -  -  -
'''' - -  _____                       -  -  -  -
'''' - -  _____                       -  -  -  -
'''' - -  _____                       -  -  -  -

Line Cmds: A=After B=Before C=Copy D=Delete E=Erace I=Insert
           L=Line entry M=Move R=Repeat
Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

===> end
    
```

When you end off the preceding panel, the Desktop Table Field Usage panel appears. You can specify the column headings that you want to associate with the fields in the Change Approval table.

**Note:** If you want to allow users to update the list of change approvers, you should add the Change Approval table to the appropriate create or update tasks and set the **Crt** and **Upd Field Usage** for the **Approval status** field to D (display-mode) so the users cannot update the **Approval status** field. In the data view record, you should also specify TSX BLGTX121 in fields **Create record file time TSP** and **Update record file time TSP** on panel BLG0V600. When a user creates or updates a change record from the Desktop, BLGTX121 will automatically set the status for new approvers to PENDING when the record is filed.

```

BLGLTSTL          Desktop Table Field Usage Definition          LINE 1 OF 19

USE....Set field usage and description for table fields in this panel layout
                                           RECORD: MYDVREC

      Table      Attribute
      Name      Record ID      Field Description      Field Usage
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '
      ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' ' ' ' ' '   ' ' ' '

Line Cnds:      E=Erase  L=Line entry

Type DOWN, UP, LEFT, or RIGHT to scroll the panel, or type END to exit.

====> end
    
```

When you are finished, file the data view record.

### Building Data Model Records with the BLGTDMBL TSX

To help simplify the task of defining data model records for your application, a tool is available to help you create data model records. The tool is a terminal simulator EXEC (TSX) that is named BLGTDMBL (for data model builder). The BLGTDMBL TSX scans your application’s panel flow and creates data model records for your application. The TSX is available in the SBLMTSX data set library and is run by starting Tivoli Information Management for z/OS in batch mode.

Refer to the *Tivoli Information Management for z/OS Panel Modification Facility Guide* for instructions on how to run this TSX.



# 5

## The Desktop Toolkit

---

This chapter is intended for Desktop administrators. It describes how to customize the Desktop application or create a new Desktop application to suit the needs of a particular enterprise. **If you are not an administrator for the Tivoli Information Management for z/OS Desktop, you can skip this section.**

As an administrator, you can use the Toolkit to define certain operating characteristics of the Tivoli Information Management for z/OS Desktop application. For example, if you want to add more levels or icons in the first window pane of the Desktop application (in the tree structure), or change icon behavior, you can use the Toolkit to modify the Desktop application or to create an entirely new application.

The Toolkit does not work alone. It works with data model records on the Tivoli Information Management for z/OS host and relies on the presence of those records to define certain operating characteristics and the content of your application. You define the data elements used by your application by setting up data model records on the host, and then associate those records with task icons in an application hierarchy you build using the Toolkit.

When you have built or modified a hierarchy with the Toolkit and have set up the properties for the task icons, you can save the application hierarchy and/or send it through File Transfer Protocol (FTP) to a directory location in the UNIX System Services environment. After the file has been placed in an OS/390 UNIX System Services directory, it can be automatically accessed by other workstations that will need to run the application.

The application hierarchy that is accessed by the user's workstation is the name of the file in the server directory that matches the hierarchy name entered by the user through the configuration editor. If no name is found, the default HELPDESK application hierarchy is used if it is found in the server directory.

You can have multiple application hierarchies saved in the OS/390 UNIX System Services environment running the FTP server.

### Customizing the Desktop

The following summarizes the design elements you can control with the Toolkit and host data model records:

#### What you can define with the Toolkit

The Toolkit lets you control the following elements in your application:

- The hierarchy or "tree" structure that displays in the left side of the application's window and reflects your business process model.

- The data view records that should be included for a particular user task. The data view records selected determine the fields and groups that display in the center pane of your application.
- The buttons that display in the center pane of your application, the button caption (such as **OK** or **Close**), and the next action that is taken when the button is selected
- The panel type of the task (update, create, display, or inquiry)
- The mapping of data values from one record type to another

### What you can define at the host

The data model records on the Tivoli Information Management for z/OS host enable you to control other necessary elements in your application such as the following:

- Number of fields shown in the center pane of your application.
- Grouping and sequence of fields in the center pane. For example, a group could be:
  - Name
  - Customer ID
  - Phone
  - E-mail
- Field usage:
  - Required or optional
  - Updateable
  - Display only
  - Drop-down scroll box
  - Validated or not
  - Freeform text
  - Calendar
- Labels displayed for each field in the graphical window.

Because these items are controlled through the setup of data model records on the host, you cannot modify them through use of the Toolkit. For example, if you use the Toolkit to create a new application, and later decide that you want to add a new data field such as Fax number to an existing data grouping, you cannot use the Toolkit to add the new data field to the center pane. Rather, you must change the data model record on the Tivoli Information Management for z/OS host to include a new data attribute record for the new field. For instructions on how to enhance data model records on the host to support the Desktop, see “Designing a Desktop Application” on page 85.

## Logging on with the Toolkit

Once the Desktop components are successfully installed as described in “Installation” on page 7, you can start the Toolkit in any of the following ways:

### Start→Programs menu

In Windows, click **Start→Programs** and select **Information Management for z/OS Toolkit**. Click **Information Management for z/OS Toolkit**.

### Command line

To start the Toolkit from a command line, follow these steps:

1. Open a workstation command window.
2. From the directory where the Desktop binary files are installed, issue the DesktopToolkit command to start the application. For example, if you accepted the default location:

```
C:\InfoMan\Desktop\bin\DesktopToolkit
```

When you launch the Toolkit, an **Information Management for z/OS Toolkit Logon** dialog is displayed. Enter your MVS TSO User ID and password.



Figure 44. The Desktop Toolkit Logon

If no configuration file exists on the workstation, the **User ID** field will not be enabled. Check the Start Configuration Editor box and click **OK** to open the Configuration Editor window, where you can supply the required information. For more information about entering data in this window, see “Using the Configuration Editor” on page 21.

After you have logged on successfully, the **Toolkit** window is displayed.

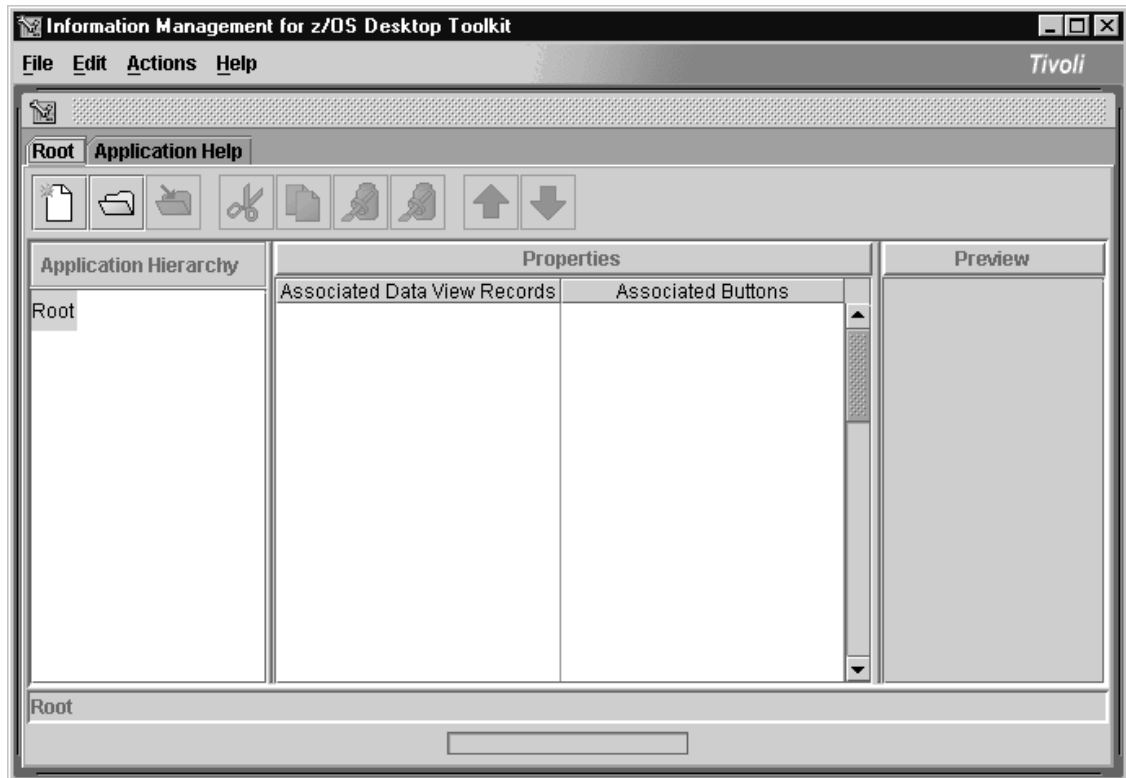


Figure 45. The Desktop Toolkit Window

## Toolkit Graphical Components

This section describes the Toolkit window, menu bar, popup menu, toolbar, and status line.

### Window

The **Toolkit** window is initially displayed with three blank panes. These panes represent the work areas where you can perform particular tasks:

#### Application Hierarchy / Application Help

The left pane lets the Desktop administrator create or modify a hierarchy of processes and tasks (both represented as icons) that will eventually appear on the left side of the user's Desktop application window. Additionally, the Desktop administrator can create or modify a customized application help hierarchy to be stored as part of the Desktop application hierarchy. This is further described in "Using the Toolkit To Build an Application Help Hierarchy" on page 172. When the **Root** tab is selected, the title in the leftmost pane becomes **Application Hierarchy**, and the process for defining the application hierarchy is enabled. When the **Application Help** tab is selected, the title in the leftmost pane becomes **Help Menu Hierarchy**, and the process for defining the customized application help is enabled.

As shown in Figure 46 on page 136, the hierarchy is displayed as an inverted tree-like structure, with the root of the tree appearing at the top. The branches that are attached to the

trunk represent *processes* that are shown as folder icons or *tasks* that are shown as icons with buttons and fields. Task icons represent the leaf nodes and are typically nested under process icons. A task icon is what a user ultimately clicks to display the center pane to type data in the Desktop application.

A hierarchy can contain one root, one or more branches and sub-branches (processes), and one or more leaves (tasks).

**Properties**

The center pane, the **Properties** pane, lets the Desktop administrator define the Tivoli Information Management for z/OS data view records and buttons that should be associated with the tasks created in the application hierarchy. It establishes the characteristics of the Desktop application’s center pane where your users do most of their work. This area is where the Desktop administrator defines the data view records associated with a task, the applications buttons (such as **OK** or **Close**), and the next action that is taken when a button is selected.

For information about the properties associated with the sample Desktop application, see “Toolkit Reference for the Sample Application” on page 199.

Additionally, the Desktop administrator uses the center pane to provide the URL information for the help files defined in the application help menu hierarchy. This process is described in “Using the Toolkit To Build an Application Help Hierarchy” on page 172.

**Preview**

The right pane, the **Preview** pane, lets the Desktop administrator check the appearance of the Desktop application’s center pane and the associated fields before saving the design of the application in an application hierarchy. When using the Toolkit, first build or modify a hierarchy, then associate the properties (data view records and buttons) with each task icon in the tree structure. Additionally, the Desktop administrator can preview the application help menu hierarchy to check the proper display of the help files associated with link icons in the help menu hierarchy. This process is described in “Previewing Your Application Help Hierarchy” on page 174.

You can change the width of each pane in the Toolkit window. Place your cursor on the vertical bar separating the panes, and press and hold the left mouse button. Drag the mouse to the left or right and release the mouse button.

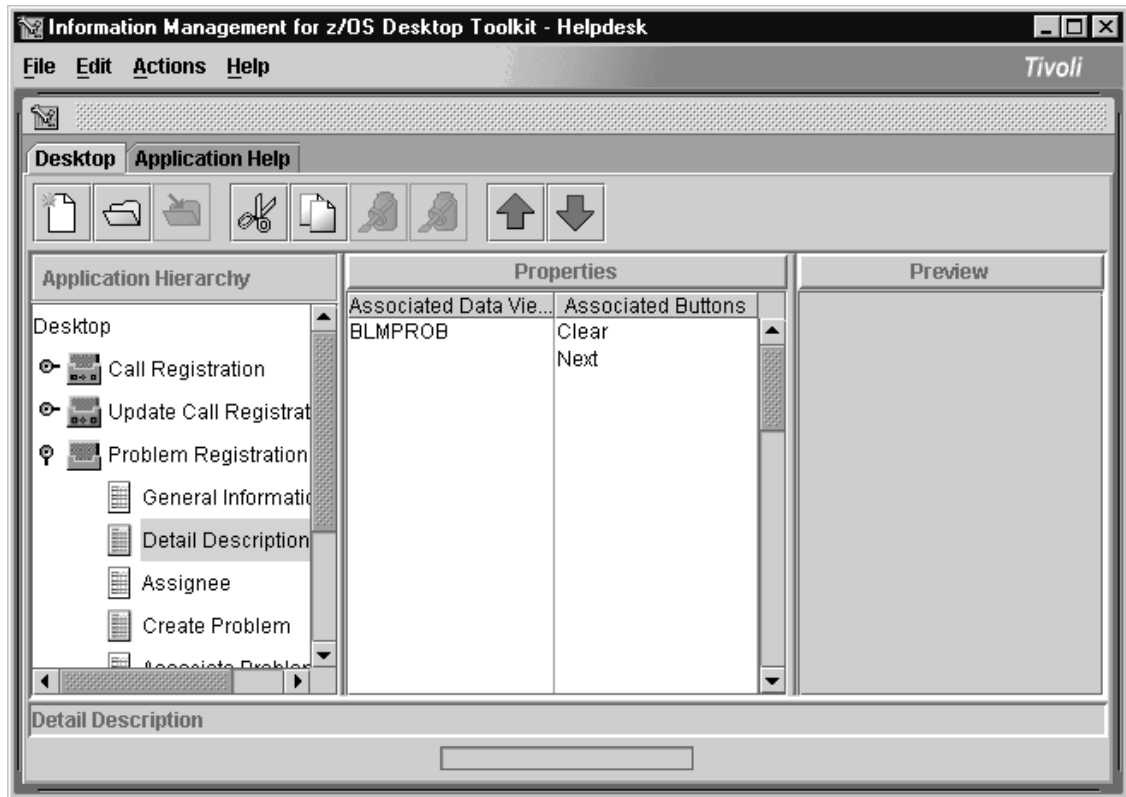


Figure 46. Sample Desktop Toolkit Window

## Menu Bar

The Toolkit contains two tabbed sheets. The first tab is used to define the application hierarchy; the second tab is used to define the help menu hierarchy (application help). Depending on which tab is selected, the choices on the Toolkit menu bar will vary.

The Toolkit contains four pull-down menus: **File**, **Edit**, **Actions**, **Help**.

### ■ File menu

- New** Displays a blank window you can use to create a new application hierarchy.
- Open** Opens an existing application hierarchy.
- Save** Saves the current application hierarchy.
- Save As** Saves an application hierarchy with the given name and location you specify.
- Export** Enables you to identify the application hierarchy to export to the FTP server in OS/390 UNIX System Services, and saves the file under a specified name on the workstation.
- Import** Retrieves a copy of the application hierarchy from the FTP server in OS/390 UNIX System Services.
- Exit** Exits the Toolkit. If you select **Exit**, a message is displayed to ask you if you really want to exit the application.

■ **Edit menu**

- Undo**           Undoes the last action.
- Cut**             Deletes the selected item and copies it onto the clipboard.
- Copy**            Copies the selected item onto the clipboard.
- Paste-Insert**   Retrieves the item from the clipboard and pastes it where indicated (same level paste).
- Paste-Add**      Gets the item from the clipboard and pastes it where indicated (sublevel paste). You can perform a Paste-Add operation only if the target process icon is childless; that is, it has no nested icons.
- Shift Up**        Moves a selected icon (node) to one position higher in the hierarchy. Use this function to change the sequence or order of icons as they appear in the **Root** pane.
- Shift Down**     Moves a selected icon (node) to one position lower in the hierarchy.
- Rename**          Displays a dialog you can use to change the text label associated with a root, process, or task icon.

■ **Actions menu**

**Build Field Help**

Builds field-level HTML files.

**Insert Process**

(Same level) Inserts a new process icon that represents a branch in the application hierarchy. The new icon is placed after the position selected in the hierarchy. This option is only available from the first tab, the application hierarchy.

**Insert Menu**

(Same level) Inserts a new menu icon that represents a branch in the help menu hierarchy. The new icon is placed after the position selected in the hierarchy. This option is only available from the second tab, the application help.

**Add Process**

(Next level) Adds a new process icon under a childless process. This option is only available from the first tab, the application hierarchy.

**Add Menu**

(Next level) Adds a new menu icon under a childless process. This option is only available from the second tab, the application help.

**Insert Task**

(Same level) Inserts a new task icon (depicted with buttons and fields) in the hierarchy. The new icon is placed after the position selected in the hierarchy. This option is only available from the first tab, the application hierarchy.

**Insert Link**

(Same level) Inserts a new link icon in the hierarchy menu hierarchy. The new icon is placed after the position selected in the hierarchy. This option is only available from the second tab, the application help.

**Add Task**

(Next level) Adds a new task icon under a childless process. This option is only available from the first tab, the application hierarchy.

**Add Link**

(Next level) Adds a new link icon under a childless menu. This option is only available from the second tab, the application help.

**Panel Type** Displays a dialog that enables you to specify the type of panel that is associated with the selected task (Create, Update, Display, Inquiry). The default selection is Create.

### **Associated Data View Records**

Displays a dialog from which you select the data view records that you want to associate with a given task icon from the list of data view records that are available on the Tivoli Information Management for z/OS host.

### **Associated Buttons**

Displays a dialog you can use to create the buttons associated with the displayed panel for a given task icon. The dialog displays the button caption, data view record name associated with the button, the function of the button, and the next screen that displays (or action taken) when the button is pressed by a user.

**Smart Map** Displays a dialog you can use to map the s-word of a field to another similar field, so that the Desktop can use a single piece of data for both fields.

**User Export** Displays a dialog you can use to enable Desktop users to export files to the HTTP Server.

**Table Panels** Displays a dialog you can use to define the tables that are available to the user to display search results. This dialog also allows you to edit table descriptions and column titles.

**Expand All** Expands the hierarchy to show all nested processes and tasks.

**Collapse All** Collapses the hierarchy to show only the root of the hierarchy.

**Delete** Deletes the selected process or task icon. You can delete only one process or task at a time. Unlike the cut function, the delete function does not store the item in a clipboard.

**Refresh** Retrieves a copy of the data view records used in the hierarchy and displays the panel layouts in the Preview pane. As part of the refresh, a panel is built for each task in the hierarchy. You can use the refresh function to see changes made in the data view records.

### ■ **Help menu**

Enables you to retrieve Desktop version and copyright information. Provides help for the Desktop, Toolkit, and Desktop messages.

## **Pop-up Menu**

A pop-up menu is available to enable you to perform commonly used actions (such as Insert Process, Insert Task, Rename, Delete). To bring up this menu, highlight a process icon (that has nested tasks) or a task icon and click the right mouse button.

## **Toolbar**

The Toolkit contains two tabbed sheets. The first tab is used to define the application hierarchy; the second tab is used to define the help menu hierarchy (application help). Depending on which tab is selected, the choices on the Toolkit toolbar will vary.



The Toolkit application contains a toolbar menu, depicted as a series of icons as shown in Figure 47. To invoke the hover help or see a description of a particular toolbar icon, place the cursor over the icon to see its label description.

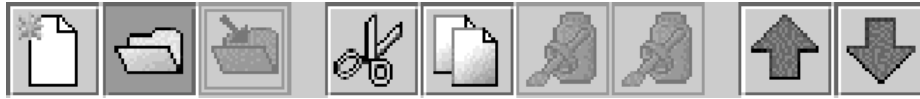


Figure 47. Toolbar Icons

### New Hierarchy

From the **Root** tab, click on **New Hierarchy** to display a blank window you can use to create a new hierarchy file. This has the same function as **File/New**. This option is only available from the first tab, the application hierarchy.

### Open Hierarchy

From the **Root** tab, click on **Open Hierarchy** to open an existing hierarchy file. This has the same function as **File/Open**. This option is only available from the first tab, the application hierarchy.

### Save Hierarchy

Click on **Save Hierarchy** to save the current hierarchy file. This has the same function as **File/Save** for an existing file, or **File/Save As** for a new file.

### Cut

This deletes the selected item and copies it onto the clipboard. This has the same function as **Edit/Cut**.

### Copy

This copies the selected item onto the clipboard. This has the same function as **Edit/Copy**.

### Paste-Insert

This retrieves the item from the clipboard and pastes it where indicated (same level pastes). This has the same function as **Edit/Paste-Insert**.

### Paste-Add

This gets the item from the clipboard and pastes it where indicated (sublevel paste). You can perform a Paste-Add operation only if the target process icon is childless; that is, it has not nested icons. This has the same function as **Edit/Paste-Add**.

### Shift Selected Node Up

This moves a selected icon (node) to one position higher in the hierarchy. Use this function to change the sequence or order of icons as they appear in the Root pane. This has the same function as **Edit/Shift Up**.

### Shift Selected Node Down

This moves a selected icon (node) to one position lower in the hierarchy. This has the same function as **Edit/Shift Down**.

## Status and Transactions

A status line is displayed at the bottom of the Toolkit panel to show you the name of the currently selected icon or node. A progress indicator blinks at the bottom of the panel when data view records are being retrieved for previewing to indicate work is in progress.

### Using the Toolkit To Build or Change an Application Hierarchy

This section describes how you can use the Tivoli Information Management for z/OS Toolkit to build or change an application hierarchy and send or get an application hierarchy from a Web server.

#### Building a Hierarchy

Follow these steps to build a new application hierarchy.

1. Select the **Root** tab on the Toolkit window.
2. Select **File/New** from the Menu Bar to display a blank Root panel (if a blank panel is not already displayed).
3. Add the process icons first. Later, you can add the task icons. To add a process icon, select **Actions/Add Process**. A **New Process** icon is displayed under the root, and a **Rename** dialog is presented.
4. Enter the new name of the process and click **OK**. (You can also rename the root icon if desired. The tree view header will remain "Root" even if the root node is renamed.)
5. To insert another process icon at the same level, select the process you just added. Select **Actions/Insert Process**. Repeat for as many process icons as you need.
6. Now, add the task icons:
  - a. Select a process icon.
  - b. Select **Actions/Add Task**. A task icon appears beneath the process icon.
  - c. Rename the task icon to reflect a meaningful task your users will perform.

**Note:** The name of a task *must match*, letter for letter, case for case, the task name (Panel Name) defined in the data view record on the host. The task name is defined on BLGLTSIN, the Desktop Panel Layout Definition panel in Tivoli Information Management for z/OS. (For an illustration of the BLGLTSIN panel, see 110.)

- d. If you want to add a second task, with the first task already highlighted, select **Actions/Insert Task**. Repeat for as many task icons that should appear at the same level under the process icon.

Figure 48 on page 141 shows an example hierarchy.

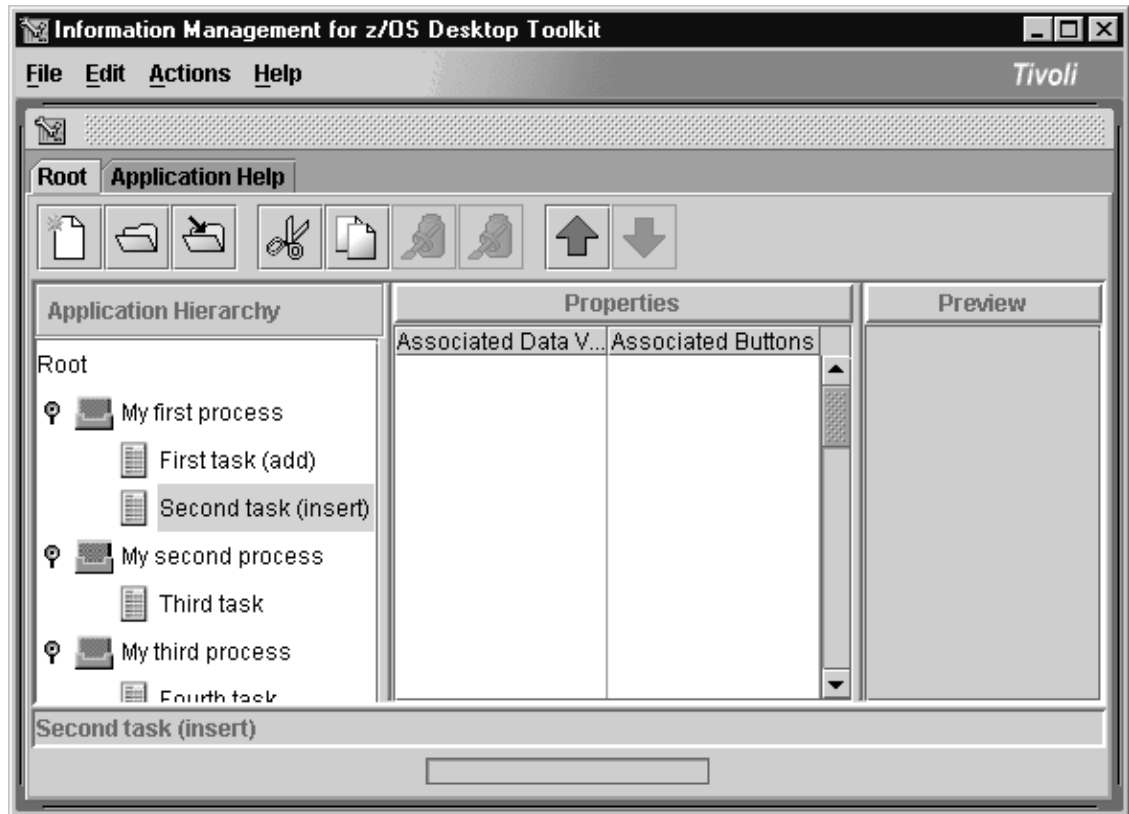


Figure 48. Building a Hierarchy with the Desktop Toolkit

Although task icons are typically cascaded under process icons, you can add or insert them directly as a branch off the hierarchy. A task icon cannot be added underneath a selected task icon.

To delete an icon you may have added incorrectly or that you do not need, highlight the icon with the left mouse button. Select **Actions/Delete** and click **OK** to confirm the deletion. You can also press the delete key or use the Cut toolbar icon.

To collapse the hierarchy, if desired, select **Actions/Collapse All**, and then **Actions/Expand All** to expand it again.

## Changing a Hierarchy

Follow these steps to change an existing application hierarchy. The application hierarchy that ships with the Tivoli Information Management for z/OS Desktop application is called HELPDESK. If you plan to change this file, you may want to make a backup copy of the file before modifying it in the event you need to return to the original file. (Or, open the file and save a copy with a different name.)

To change an application hierarchy, follow these steps:

1. Select **File/Open** from the Desktop menu bar (or click the **Open Hierarchy** toolbar icon).
2. Select the desired application hierarchy from the **Load** dialog and click **Open**. The file name associated with the application hierarchy shipped with the sample Desktop

application is HELPDESK. The HELPDESK file is available under the sample subdirectory of the install directory (default C:\InfoMan\Desktop). The hierarchy is displayed in the left window pane.

3. Change the hierarchy by adding or inserting process or task icons as necessary. To insert a process or task icon at the same level as the icon selected, select **Actions/Insert** (process or task). If you need to add a task icon to a process that has no task icon, select **Actions/Add Task**.
4. On the **Rename** dialog, enter the name of the process or task in the **New Name** field.

**Note:** The name of a task *must match*, letter for letter, case for case, the task name (Panel Name) defined in the data view record on the host. The task name is defined on BLGLTSIN, the Desktop Panel Layout Definition panel in Tivoli Information Management for z/OS. (For an illustration of the BLGLTSIN panel, see page 110.)

### Associating Data Properties

Follow these steps to associate a particular data view record on the Tivoli Information Management for z/OS host with a task icon.

**Note:** The order in which you list data view records determines the order of data fields in the center pane of the Desktop application; therefore, list the data view records in the desired order. Within a data view record, the order in which groups and fields are displayed on the workstation is specified in Tivoli Information Management for z/OS when you define the task panel layout.

1. Select a task icon.
2. Select **Actions/Associated Data View Records**. A dialog is displayed to show you the data view records that are available on the host for you to associate with the task icon. All available data view records are listed, as shown in the example in Figure 49.

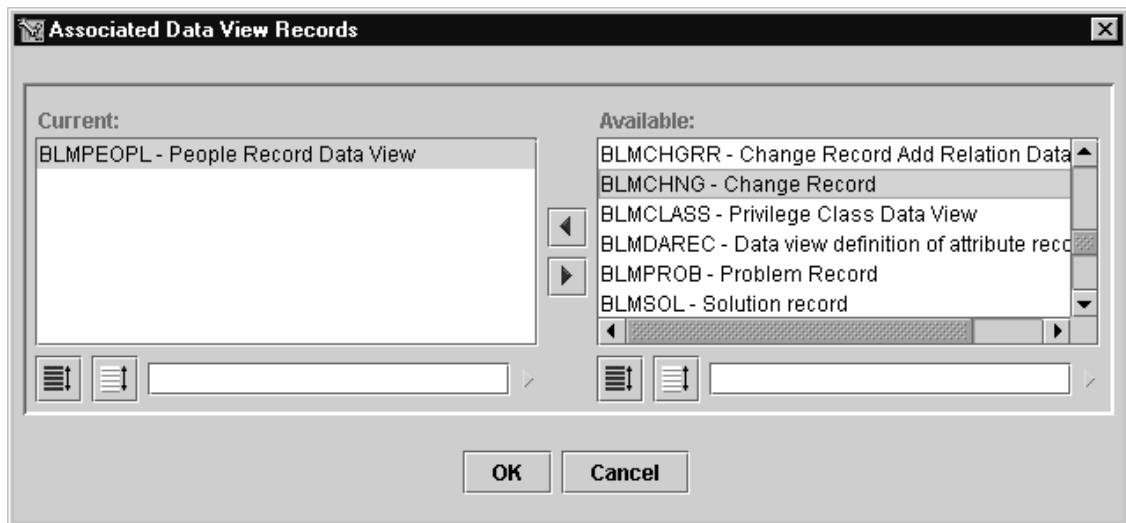


Figure 49. Associating Data View Records with a Task

3. Select a data view record name from the **Available** column. To select more than one record, press the **Ctrl** button while making your selection. To select all items, click the **Select All Items from List** button under the scroll box.

To have the Toolkit find particular data view records, you can enter the name of a data view record in the entry field under the **Available** scroll box and the Toolkit will highlight those record names matching your entry.

4. Click the left arrow to move the selected item(s) to the **Current** selection box.

To remove an item from the **Current** selection box, select the item and click the right arrow. The item is returned to the **Available** column.

**Note:** Data view records that are moved to the **Current** selection box for a particular task icon are still available to other task icons.

## Associating Tasks with Panel Types

Once you have added or inserted a task icon in the tree structure, you should associate the task with a panel type. You should associate panel types with task icons (leaf-level icons) only. The default panel type for a task is Create, but you can change it to a different panel type. Panel types and their corresponding REXX functions are as follows:

- Create
- Update
- Display
- Inquiry

The Desktop uses the panel type specified to identify which field usage column to use on host panels BLGLTSFL (Desktop Panel Field List Entry) or BLGLFGFL (Field Group Field List Entry).

For example, if a task is associated with the Update panel type, the Update field usage column will be checked on these host panels to determine how specific fields should be treated. If the task contains one stand-alone field and one group, the field usage value on panel BLGLTSFL is used for the stand-alone field. For the group, the field usage values on BLGLFGFL are checked, and the field usage designation that is more restrictive (the group value or the data attribute value) is used. For more information about field usage, see pages 105 and 112.

To associate a panel type with a task, follow these steps:

1. Select a task icon.
2. Select **Actions/Panel Type**.
3. Choose a panel type by clicking the appropriate radio button and **OK**. The panel type you selected is associated with the functions that are valid and new fields are displayed on the panel as defined by the data view record.

**Note:** A task can have only one panel type associated with it, and there are restrictions on what button functions can be associated with a panel type. For example, if you specify a task as a create panel type, the task pane cannot have an update or search button on it. If your process requires an update function, you would need to set up another task icon and define it as an update panel type. The Toolkit enables you to

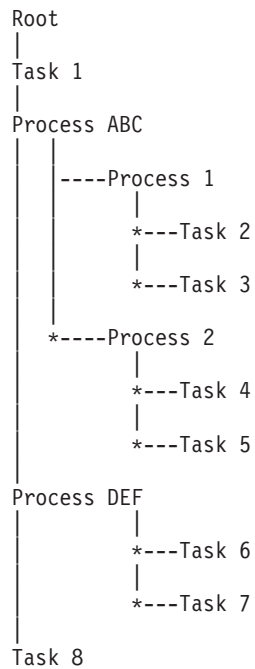
select only those button functions that are valid for the panel type selected. For a list of what button functions are valid for a panel type, see Table 1 on page 150.

The panel type you selected is remembered for the task the next time the **Panel Type** dialog is displayed for that task.

### Understanding Required Field Processing

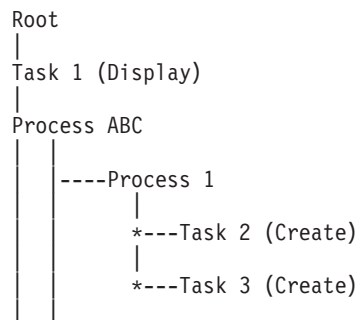
To know how your application will behave once you construct it with the Desktop Toolkit, you should have an understanding of how the association of panel types relates to the processing of transactions that have required fields in a *family*.

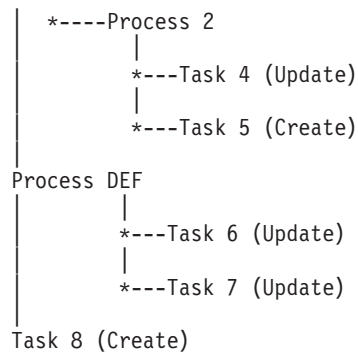
A family is a process icon or task icon stemming from the trunk of a tree hierarchy, with all its sublevels, which are nested processes and tasks. Two nodes are in the same family if their closest ancestor is not root. For example, in the following diagram, Task 1 is a family, even though it has no further nested levels. Process ABC and its sublevels (Processes 1 and 2, and Tasks 2 through 5) are a family. Process DEF, with nested Tasks 6 and 7, is another family, as is Task 8. Four families exist in this hierarchy.



When you click a button in a task pane to create, update, or inquire on a record, a check is performed to ensure that required fields in that family for that panel type are completed.

For example, suppose Process ABC has two subprocesses, each with two task icons and buttons that perform the following transactions:





If you click the Create button on Task pane 2, 3, or 5, Task panes 2, 3, and 5 are all checked for required field data because they are of the same panel type (create). If Task pane 2, 3, or 5 is missing required data, a message is displayed to prompt the user to enter the data, and the task pane with the missing field data is displayed for data entry. Although Task 8 has a create function, it is not checked for required fields in this instance because it belongs to another family.

When required fields are checked, they are checked across the same panel type within a family. If a create transaction is being performed, all create panels in the family are checked for required fields. The same holds true for update and inquiry transactions. The concept of required fields does not apply to display transactions.

If you entered data on Task panes 2, 3, 4, and 5, but forgot to enter data in a required field on Task pane 4 (an update panel), and attempted to perform a record creation by clicking the Create button on Task pane 5, you are not prompted to complete the required field on Task pane 4 because Task pane 4 is a different transaction and a different panel type. You will not be reminded to enter the required data on Task pane 4 until you click an Update button in that family (in this example, on Task pane 4).

**Note:** Task panes with missing required data are displayed for correction in the order in which they appear in the family, from top to bottom.

## Associating Button Properties

Using the Toolkit, you can add buttons to the center pane of your Desktop application that will invoke certain functions to be performed on the record when the user clicks on the buttons. For example, you can define an Add button to invoke the Create function or a Delete button to delete a record from the Tivoli Information Management for z/OS database. You can define more than one button to be displayed on a pane.

**Note:** Before you can associate buttons with a task, you must first associate the data properties (data view records) with the task. Also, the order in which you list buttons determines the order of buttons in the center pane of the Desktop application. List buttons in the desired order.

Follow these steps to associate particular buttons with a task icon:

1. Select a task icon.
2. Select **Actions/Associated Buttons**.
  - If there are no buttons associated with that task, an empty **Button list** dialog is displayed.

- a. Click **New** to display the **New Button** dialog:

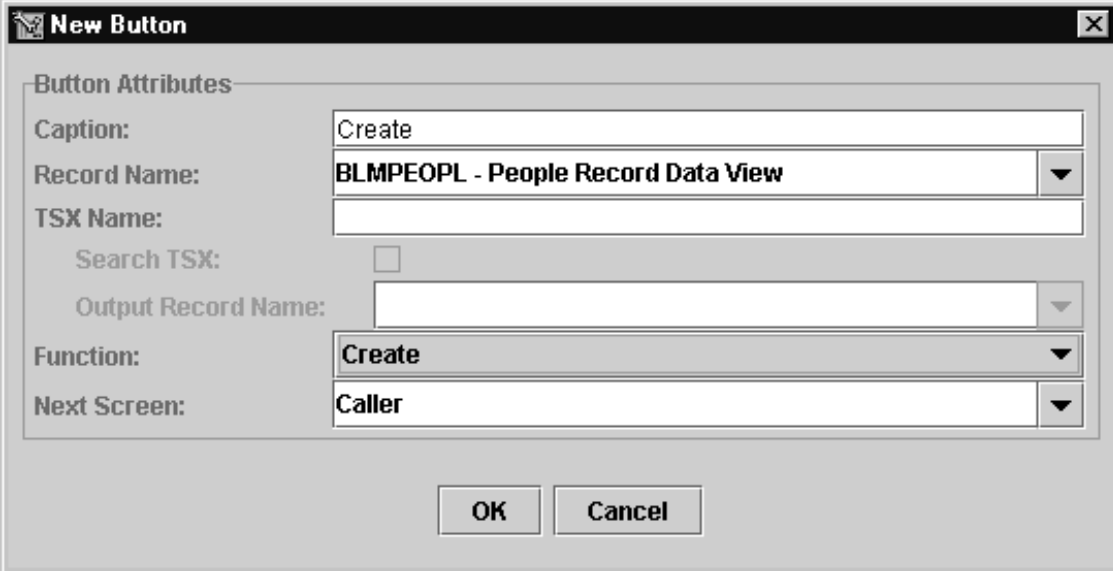


Figure 50. Associating Buttons with Tasks

### **Caption**

Enter a caption label for the button, which will be displayed on the button in the center window pane of your Desktop application.

### **Record Name**

Select the name of the data view record to associate with the button. The list displayed represents the data view records that you previously associated with the task in the Toolkit. If you want to select a record name that is not in the list, the data view record must first be added to the Tivoli Information Management for z/OS database and you need to associate the data view record with the task.

### **TSX Name**

Enter the name of the TSX to run (if you are running a TSX). This is an optional field.

### **Search TSX**

Place a check in this box to designate that the results of the TSX are to be displayed in the third pane of the Desktop as a search results list. This check box can be marked only if you have entered a TSX name.

### **Output Record Name**

Select the name of the output data view record that will display the records in the search results list. By default, the output record name will match the "input" data view record name (the name of the data view record used on the search). Information for this field can only be selected if the Search TSX box has been checked.

### **Function**

Select the function the button will perform (for example, Create, Delete, Update). A list of available functions displays. Functions can be REXX



program names corresponding to local functions or to REXX programs in the OS/390 UNIX System Services environment. They include the following:

**Clear** Clears all fields associated with the center pane of a particular task. The clear function does not clear all fields in the record. Clear is a local function; that is, data is removed from the workstation panels only and is *not* deleted from the actual record in the Tivoli Information Management for z/OS database. Any task that requires clearing of data in entry fields should contain a clear button function.

**Note:** Do *not* assign a **Clear** button to a panel with an RNID field. The Clear function will clear the RNID field as well as the other fields, and will not allow the record to be unlocked from the Desktop. For a panel with an RNID field, it is recommended that you instead use a **Reset** button.

**Create** Creates a record in the database.

**Delete** Removes a record from the database.

**Get** Retrieves a record from the database.

**History** Retrieves history data for a record from the database and displays it in the right pane of the Desktop.

**Search** Searches for a record in the database.

**Update** Updates a record in the database.

**Next** Enables you to specify the name of the next task panel that should follow when the button is clicked (the task panel name is entered in the **Next screen** field). Next is a local function.

**Reset** Clears a particular record. The reset function clears all fields for a record in all task panes. Reset is a local function; data is not deleted from the actual record in the Tivoli Information Management for z/OS database. If the record is locked for update, **Reset** will unlock the record in addition to clearing all fields.

**ShowChildren** Associates a parent record with one or more child records. To enable this function, see “Parent and Child Records” on page 213.

**CreateSolution** Creates a solution record in the database. This button should be used only on a task panel that is associated with a solution record data view record. To create a solution record, the following information is required:

- Description abstract
- Problem Description freeform text

- Resolution Description freeform text

### **CreateSolProb**

Creates a solution record in the database. This button should be used only on a task panel that is associated with a problem record data view record. To create a solution record from a problem record, the problem record status must be **closed** and the problem must contain the following:

- Problem Description freeform text
- Resolution Description freeform text

### **GetSolutionData**

Retrieves solution information from a problem record in the database. This button should be used only on a task panel that is associated with a problem record data view record. To retrieve solution information from a problem record, the problem record status must be **closed** and the problem must contain the following:

- Problem Description freeform text
- Resolution Description freeform text

### **Notes:**

- 1) It is not valid to associate a button with a task icon if it conflicts with the panel type. For example, if you associate a task with a panel type of Create, you cannot associate an Update button with that task. For a list of what buttons (and functions) are allowed for each panel type, see Table 1 on page 150.
- 2) In addition to the functions listed here, you can specify the name of a TSP or TSX that should run when the button is clicked. Because there are some restrictions on how TSPs and TSXs can be used with the Desktop, see “Writing TSPs and TSXs” on page 167 for more information.
- 3) The Desktop user will also be provided with the ability to initiate both a TSX and a “predefined” Desktop function from a single button. The TSX will always be called first. The invocation of the “predefined” Desktop function (get, create, update, and so on) will be contingent upon the successful completion of the TSX. (Successful completion means that the transaction return code and the return code received from the HL14 transaction were both zero. If the TSX encounters a problem, it could use the BLGAPSR user exit to return a bad reason code with a return code of 12. The Desktop would display an error message and the reason code would be logged in the Desktop trace file. Also, if the TSX is not designated as a “search TSX,” the special “Message” PDB could be used to return a specific message to the user.) The input/output definitions of both TSXs and “predefined” functions remain the same as they would if the functions were called independently. See “Writing TSPs and TSXs” on page 167 and “Writing Search TSXs for the Desktop” on page 171 for more information.

**Next screen**

Select the action your Desktop application should take when the button is pressed. That is, identify the next pane (from the list of tasks you included in the hierarchy) the user will see when the button is pressed. When the button is pressed, the user is taken to the task icon identified as the **Next screen** and the center window pane associated with the task icon is displayed.

**Note:** The listed values are the task nodes that are currently on the tree structure. Therefore, you should create the tree structure before specifying the next screen to display when a button is pressed.

- b. Click **OK** to return to the summary **Button List** dialog.
  - If buttons are already associated with the task, select an item from the **Button List** to highlight it. Click **Edit** to edit the **Button Attributes**. Click **OK** to return to the summary **Button List** dialog.

Figure 51 shows the Toolkit **Button List** dialog with buttons specified for a task.

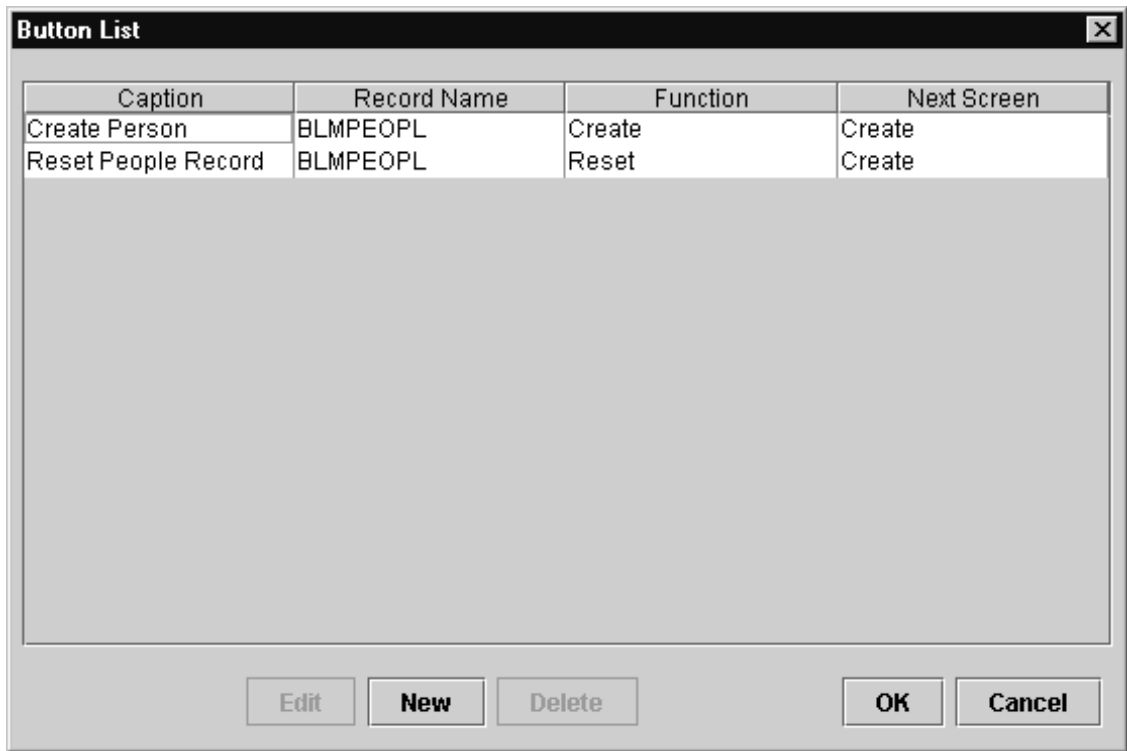


Figure 51. Toolkit Button List Dialog Showing Buttons Selected

To delete an item from the **Button List**, select it from the list, and click **Delete**.

*Table 1. Relationship of Button Functions to Panel Type*

Panel Type	Button Functions Allowed	Button Functions Not Allowed
Create	Create Delete Get Clear Reset Next ShowChildren CreateSolution CreateSolProb GetSolutionData	Update Search History
Update	Get History Update Delete Clear Reset Next ShowChildren CreateSolution CreateSolProb GetSolutionData	Create Search
Inquiry	Get Search Delete Clear Reset Next GetSolutionData	Update Create History ShowChildren CreateSolution CreateSolProb
Display	Get History Delete Clear Reset Next ShowChildren CreateSolution CreateSolProb	Create Update Search GetSolutionData

### Defining Table Panels for the Desktop User

In order to provide more meaningful information for the Desktop user, you can use the Toolkit to define the table panels that can be accessed by the user. You can limit table selections, define table descriptions, and define column titles for those tables which are enabled for the user.

For example, some table panels that are defined on the Tivoli Information Management for z/OS database might not be applicable to a Desktop user. You can use the Toolkit to exclude those table panels from the list of panels available to a Desktop user. In addition, tables defined on the host with p-words for the column names will have meaningful names

displayed for those columns when they are displayed on the Desktop (because the Desktop does not deal with p-words). You can define meaningful column names, such as Record ID and Phone Number, to the columns in these tables.

To begin working with table panels, select **Actions** and then **Table Panels**. A list of table panels will be displayed.

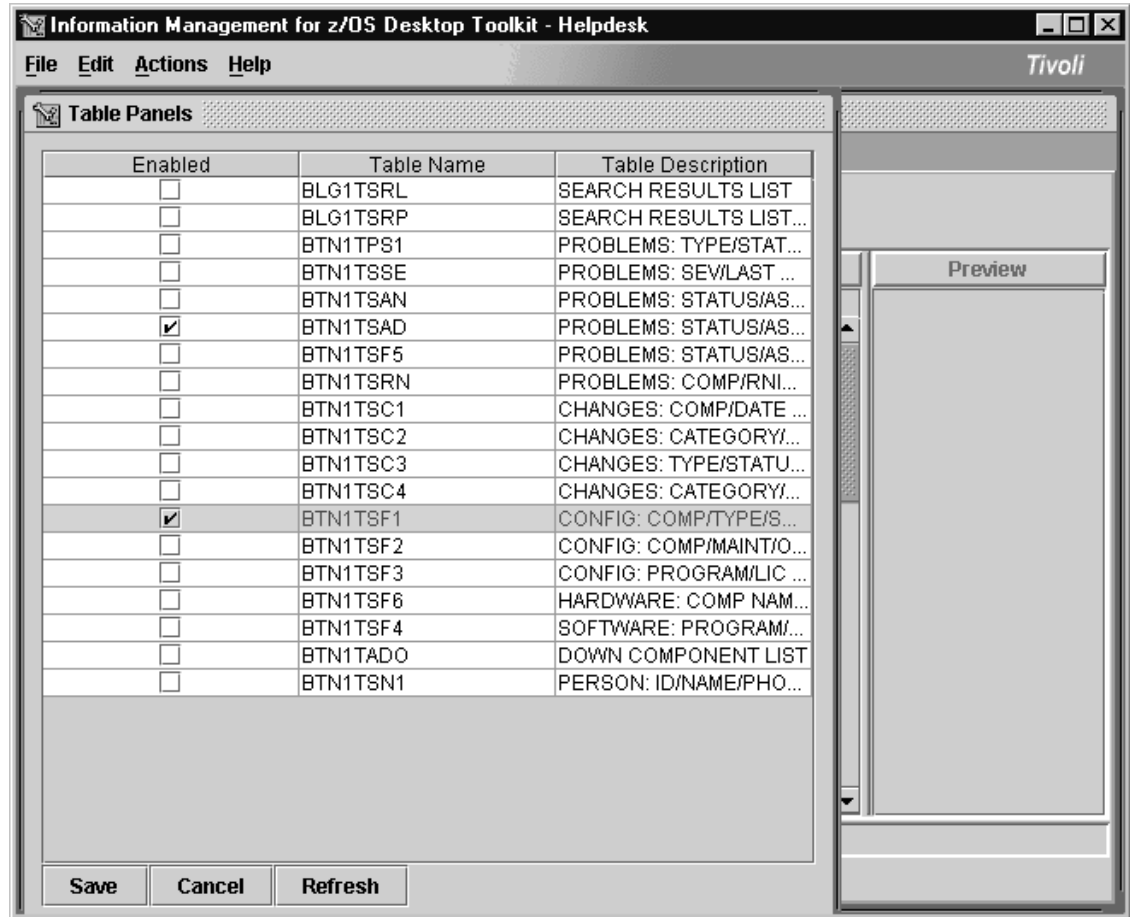


Figure 52. Table Panels

In the **Enabled** column, place checks next to tables that will be enabled for the user.

The **Table Name** column is not editable, but double-click a table name in this column to display a list of the column titles for a table.

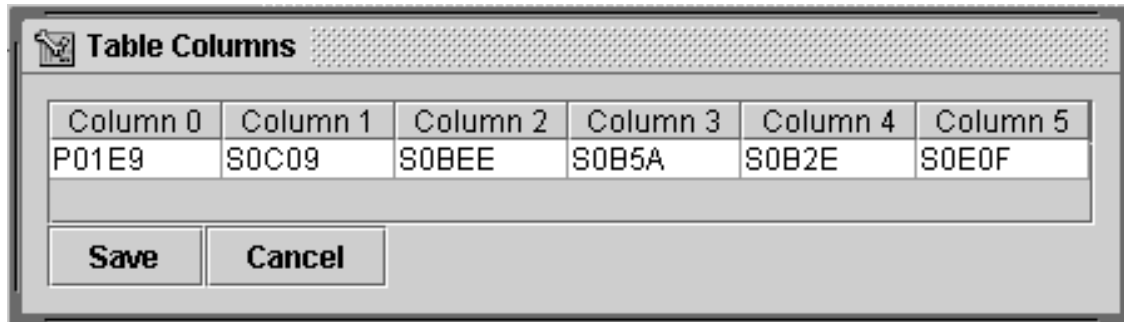


Figure 53. Table Columns

In this panel, double-click any column title you want to change, enter the new data for the column title, and press Enter or click **Save** to save your changes or click **Cancel** to discard your changes.

In the **Table Description** column, double-click the entry you want to change, enter the new data for the table description, and press Enter or click **Save** to save your changes. Click **Cancel** to discard your changes. The table descriptions will appear to the Desktop user as tooltip text on the list of table panels displayed from **Options > Search > Table Panels**.

Click **Refresh** on the Table Panels window to refresh the table panel and table column data, undoing all changes you have made to this data since your last save.

### Enabling the Parent/child Function

You can use the Toolkit to associate parent and child records in the Tivoli Information Management for z/OS database. To enable the Desktop user to view the relationship between a parent record and one or more child records, you need to create a button to define the function associated with the parent record. To enable the parent/child function:

1. Create a task or tasks to be associated with a data view record representing the parent record.
2. Add a button to at least one of the tasks you have created. The new button should have a local function, ShowChildren, associated with it. The ShowChildren function can be associated with any type of task panel except Inquiry.

To read about how the Desktop user uses the button associated with the ShowChildren function, see “Parent and Child Records” on page 213.

### Previewing the Application

Follow these steps to preview an application hierarchy you have built or modified with the Toolkit. In previewing the application hierarchy, you can check the display of the actual data fields associated with the data view records you associated with task icons in a hierarchy. Note that the association of data fields with data view records is done at the Tivoli Information Management for z/OS host.

1. Select **Actions** and then **Refresh**. The rightmost pane displays groups and fields.
2. To see the pane for a specific task icon, select the task by highlighting it in the left pane. The Preview pane then displays the groups and fields associated with that task as shown in Figure 54 on page 153.

The Preview pane is blank if you select a process rather than a task to preview.

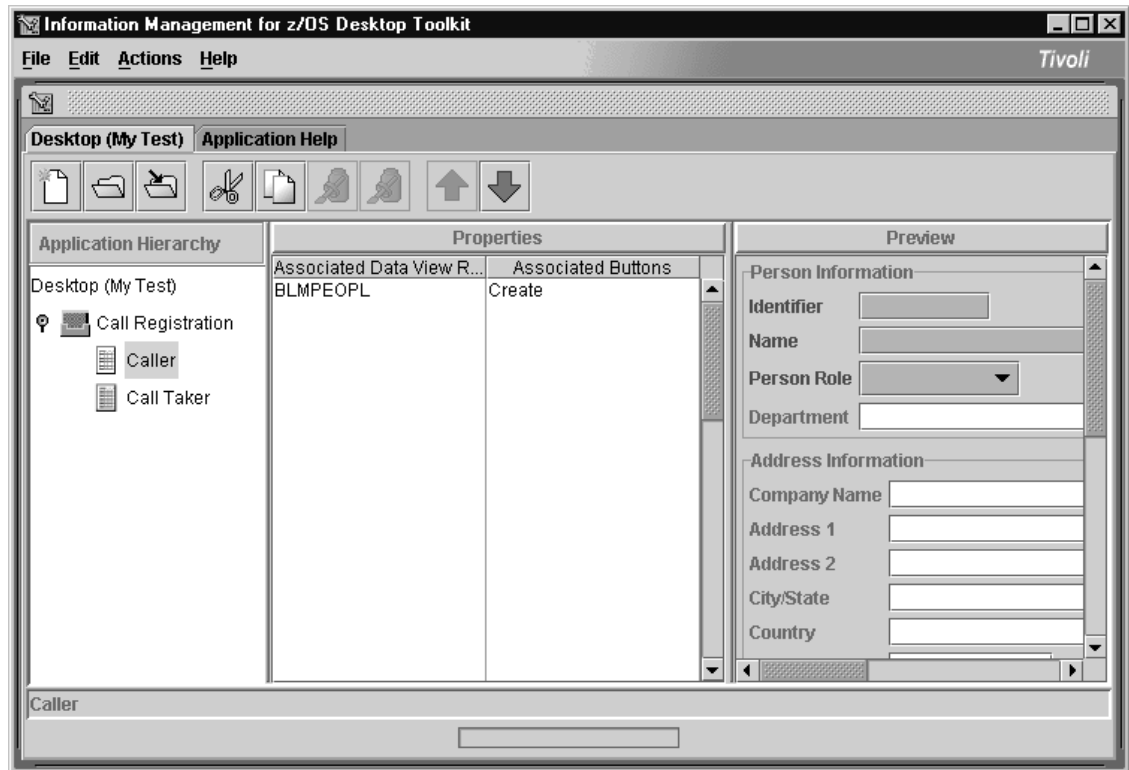


Figure 54. Previewing the Hierarchy

## Mapping Smart Fields

You can use the Toolkit to add data from one record in the Tivoli Information Management for z/OS database to another record by mapping the s-words of similar fields. The mapping of fields enables you to copy data from one field to another.

For example, you may want to map the **Name** field in the people record to a similar **Name** field in your problem records, so that whenever the data is displayed, the value for Name in the people record is used in the **Name** field in the problem record. Although the s-words of these two fields are different in Tivoli Information Management for z/OS, this "smart mapping" enables the two fields to act as one for purposes of your Desktop application. This mapping is performed at the workstation. It does not alter data model records stored in the Tivoli Information Management for z/OS database or affect how the data is stored in the database.

Although the intention of smart mapping is to enable you to map fields across record types, such as problem records and people records, you can also map smart fields within a record type.

**Note:** The smart field map is used at the task level and only within a given task. A smart field map is not automatically used within all tasks within a family. To use the same smart fields across tasks in a family, you must construct a smart field map for each task in that family. A smart map is associated with a leaf-level task and is invoked only when you display the task associated with the map.

For a smart map to be invoked in a Desktop application, the task panel associated with the smart map must be displayed and the field having the smart map must contain a value in its text box or selection box in the Desktop application.

There are three ways smart field mapping can be invoked in a Desktop application. Each method requires the smart field to contain a data value. If the smart field is blank in the user application, no smart mapping occurs. Data propagation is not automatic because if it were, you could unintentionally propagate data to the wrong fields (for instance, customer data could be propagated into an assignee field in a call or problem record). One of these three methods must be in use for smart field mapping to occur:

- Users can invoke a Tivoli Information Management for z/OS database function (such as Create, Delete, Get, Search, or Update) from a task panel that has a smart map. If a user enters a value in the smart field or retrieves data into the smart field by invoking a database function, the smart map is invoked and data is mapped for the displayed panel.
- Users can display a task panel associated with a smart map and type data on the panel. If the smart field contains a value, the smart map is invoked to map all data in the smart map for the displayed panel.
- Users can display a task panel associated with a smart map, and data already exists in the smart map field. (This could occur, for example, if data from the search results list was dragged and dropped onto a task pane.) The user can click **Action** and then **Map** on the menu bar to invoke the smart map and map all data in the smart map for the displayed panel.

### Creating a Smart Map

To map smart fields for a selected task, follow these procedures. It is assumed that you have already constructed a task in the Toolkit by associating data view records, buttons, and a panel type.

1. In the left pane of the Toolkit, select a task from the hierarchy by clicking on it. The **Properties** pane is displayed with the properties associated with the task.
2. On the menu bar, click **Actions** and then click **Smart Map...**
3. The **Select Map From Record** dialog is displayed with the names of the data view records associated with the task. Select a data view record and click **OK** to proceed. A transaction with the host database takes place to retrieve a list of data attribute records associated with the data view record.
4. The **Select Smart Field** dialog is displayed with a list of data attribute records for selection. Click the field you want as the smart map field and click **OK**. The field you select becomes the name of the smart map. This field *must* have a data value in the Desktop application for the smart map to be invoked.



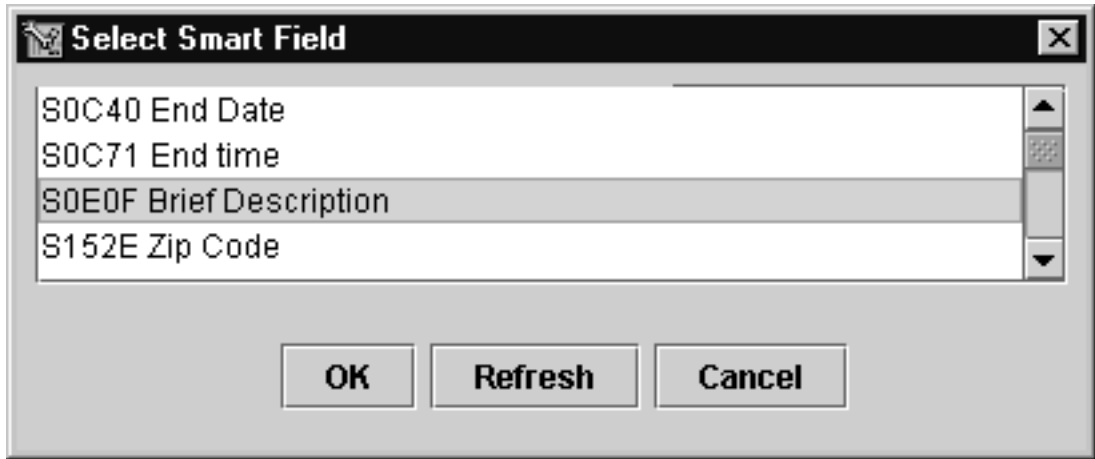


Figure 55. Select Smart Field dialog

If you need to see a refreshed list of data attribute records, you can click **Refresh** on the **Select Smart Field** dialog. You can click **Cancel** at any time to end the building of a smart map.

5. The smart map dialog is displayed. The dialog title reflects the data view record for the task and the smart map name. A list of s-words and field prompts for the data attribute records associated with the data view is displayed in the **Map From Names** column.

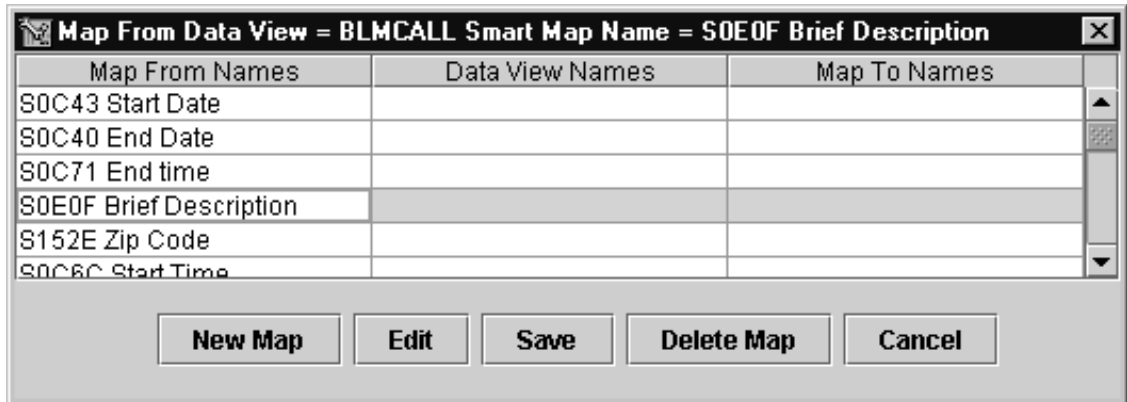


Figure 56. Smart Map dialog

Click the field in the **Map From Names** list that you want to specify as a smart field. This field will be the field that will map to a data attribute in another record. Click **Edit** to display the **Select Map To Record** dialog.

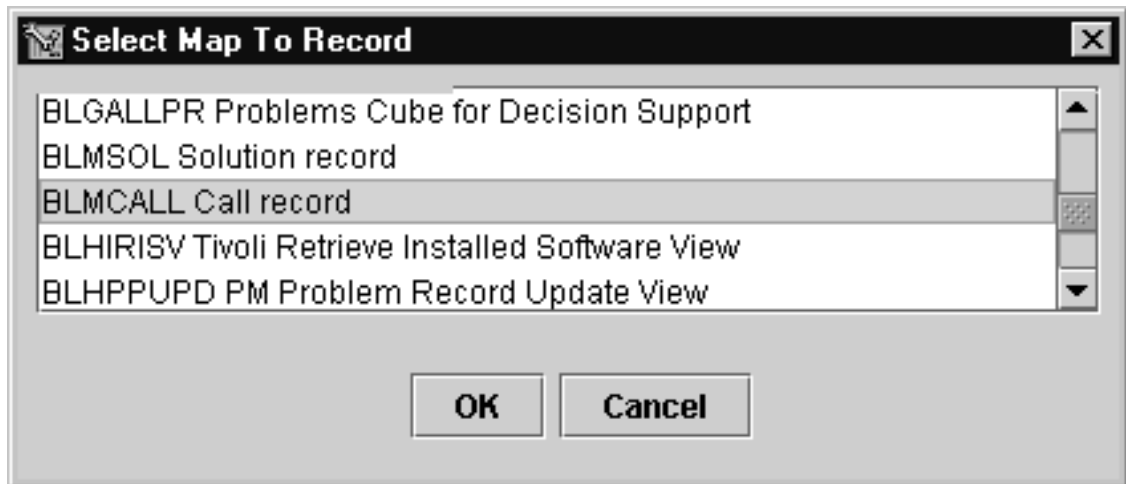


Figure 57. Select Map To Record Dialog

6. A list of all possible data view records is displayed for your selection. Click the data view record name to which the smart field should map. Click **OK**.

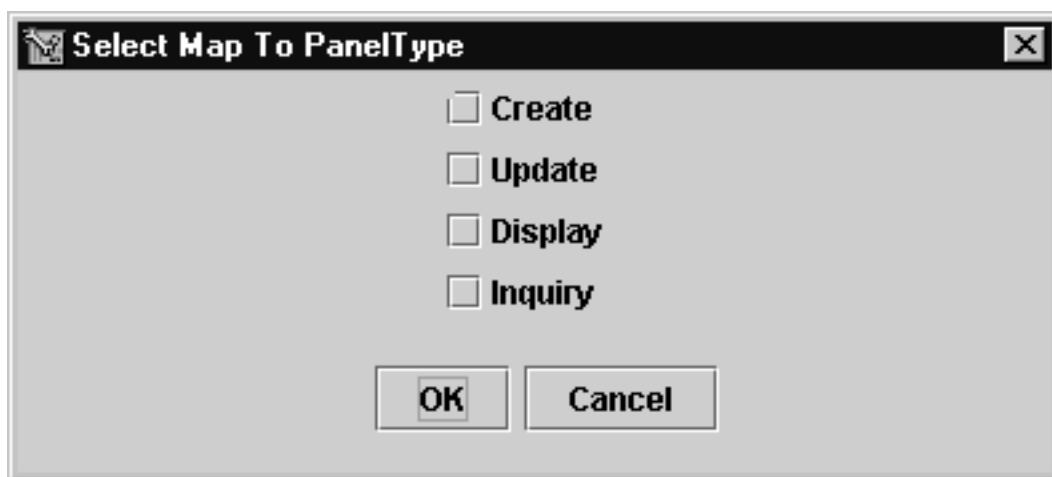


Figure 58. Select Radio Button

7. A panel **Select Map To Panel Type** displays four radio buttons: Create, Update, Display, and Inquiry. You can select any or all of these buttons for mapping a value to a type of panel associated with the selected data view record. Then select **OK** to accept the selection (or selections) that you have made or **Cancel** to cancel the attempt to use the Smart Mapping function and redisplay the Smart Map table being built.
8. When you have identified the type of panel to be associated with the selected data view record, a transaction takes place to retrieve the data attribute records associated with the data view record you selected.

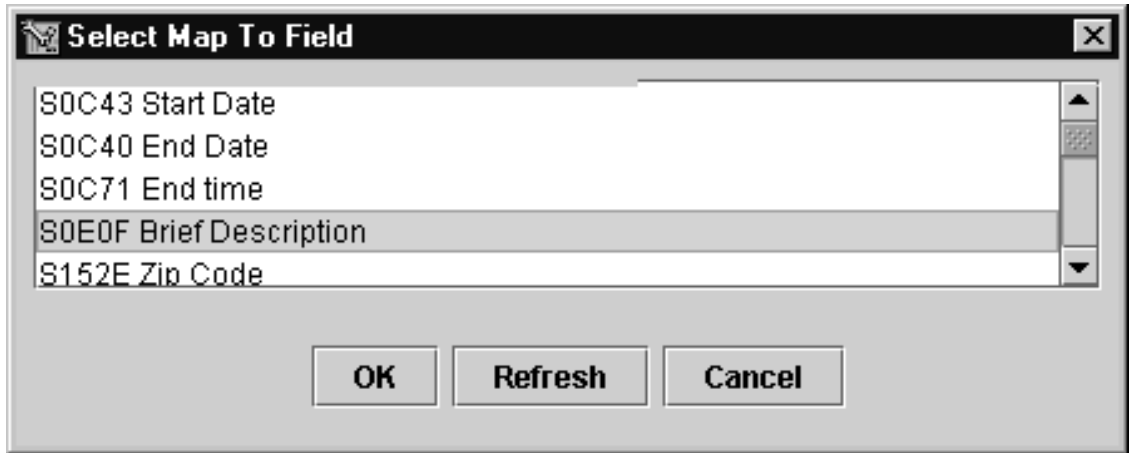


Figure 59. Select Map To Field Dialog

- In the **Select Map To Field** dialog, click the field to which your smart field should map, and click **OK**.

The smart map is displayed with your selection.

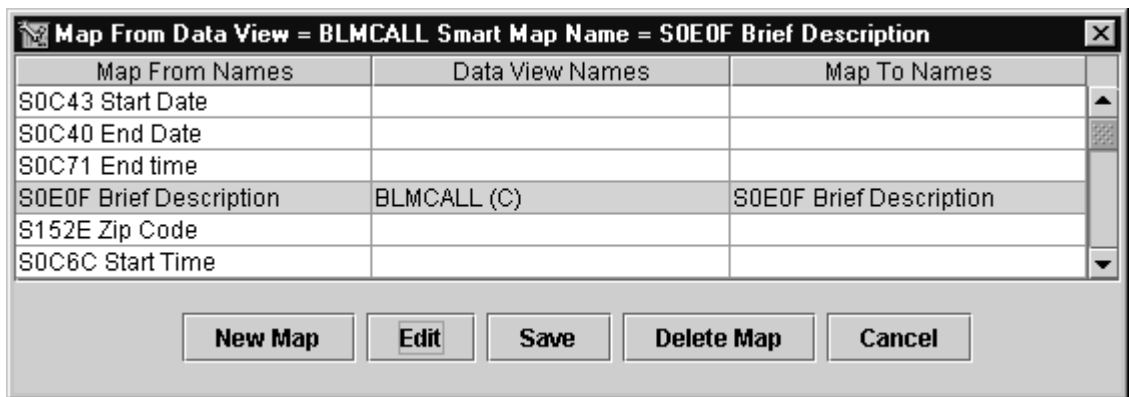


Figure 60. Smart Mapping for a Field

- Click **Save** to save the smart map. The information contained in the smart map is saved in the application hierarchy.

For the smart mapping to take effect, you must save the application hierarchy and send it to the FTP server.

You can use the **New Map** button on the smart map dialog to create a new smart map (with a new smart map name) that will overlay and replace the existing smart map. Only one smart map per task pane is allowed.

To delete the current smart map click **Delete Map**.

To browse the smart map you just created for the task, click **Actions** and then click **Smart Map...** All mapped fields are displayed at the top of the list in the dialog.

### Updating a Smart Map

To update an existing smart map, follow these procedures:

- Select a task in the hierarchy. Click **Actions** and then click **Smart Map...**

2. Select the item in the list you want to change.
3. Click the **Edit** button to display the **Select Map To Record** dialog. Select the data view record to which to map and click **OK**.
4. Select a field on the **Select Map To Field** dialog and click **OK**.
5. Click **Save** on the smart map dialog to save your changes in the application hierarchy.

### Deleting an Entry in a Smart Map

To delete an entry in an existing smart map, follow these procedures:

1. Select a task in the hierarchy. Click **Actions** and then click **Smart Map....**
2. Select the item you want to delete from the list.
3. Click the **Edit** button to display the **Select Map To Record** dialog. Select **<DELETE MAP TO DATA>** from the list and click **OK**.
4. Click **Save** on the smart map dialog to save your changes in the application hierarchy.

To delete all the mapping information in a smart map, rather than just one line, click **Delete Map** on the smart map dialog.

### Building Field Level Help

Using the Toolkit, you can create the HTML help files which are displayed when Desktop user selects **Help** and then **Field Help** and clicks on a specific field in the Desktop. There are two methods for creating the HTML help files that are displayed in the Field Help.

- If you choose to use the Toolkit, you create these HTML help files by extracting help text from data attribute records.
- If you choose not to use the Toolkit, you create the HTML files directly in OS/390 UNIX System Services.

In either case you must enable the HTTP server to find the HTML help files on OS/390 UNIX System Services. See “Enabling the HTTP server to find HTML help files” on page 160.

To create HTML help files using the Toolkit and the data attribute records, you must first create help text within a data attribute record by selecting option 10 on the Data Attribute Summary panel (BLG0VU70). Then you must store the data attribute record in the Tivoli Information Management for z/OS database. (For more information on this panel, see the *Tivoli Information Management for z/OS Panel Modification Facility Guide*.)

After you have created the help text, perform the following steps to build the HTML help files.

1. In the Toolkit, select **Actions** and then **Build Field Help**. The Select Data View for Field Help window appears. Only the data view records associated with the current hierarchy are displayed in the window.

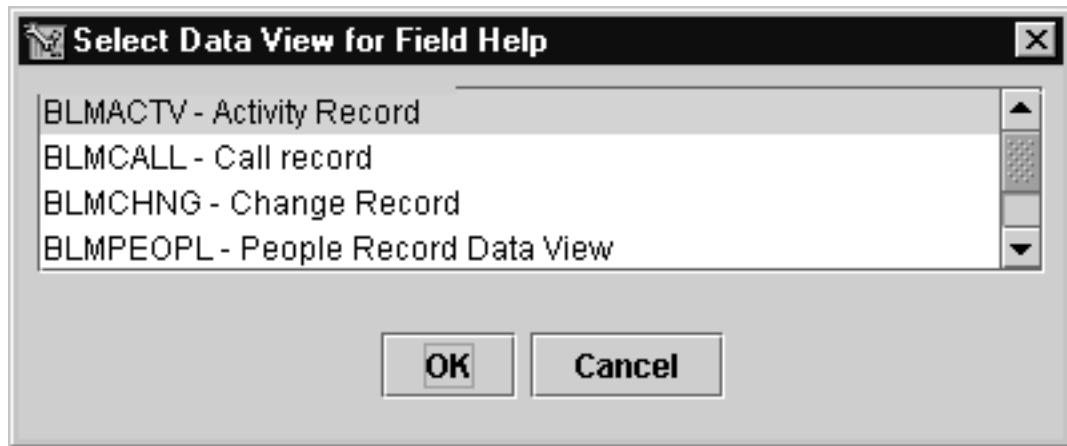


Figure 61. Select Data View for Field Help

2. Select the desired data view record and click **OK**. The Select Attributes for Field Help window is displayed. It contains a list of the data attribute records associated with the selected data view record. If you selected more than one data view record, only the attribute records for the first data view record selected will be retrieved.

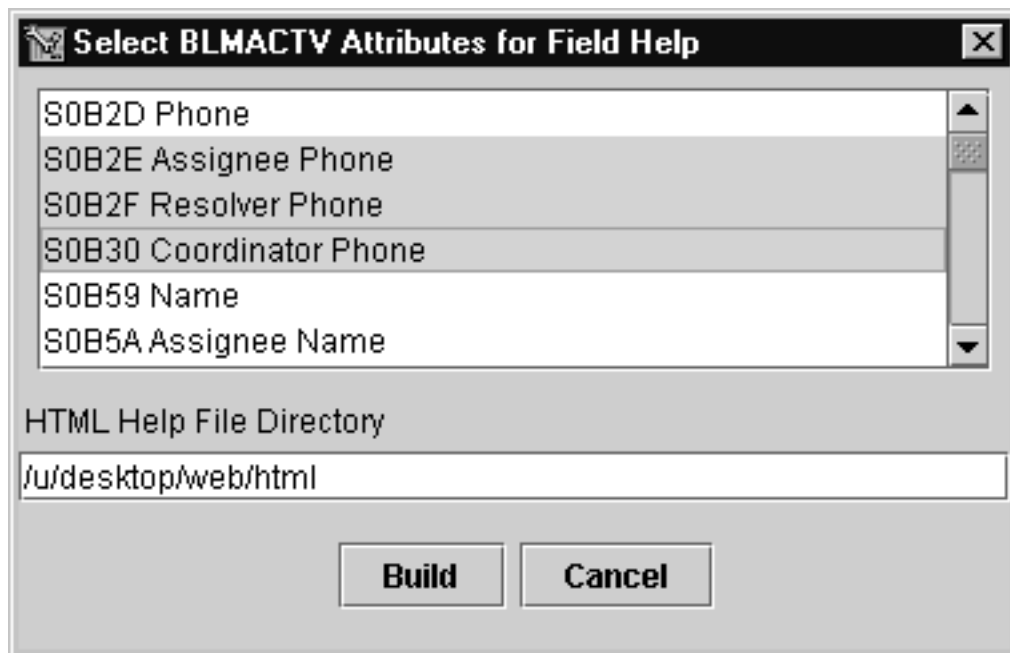


Figure 62. Select Attributes for Field Help

3. Select one or more attribute records from which to build the HTML help files. You can select multiple attributes by holding down the **Ctrl** button while highlighting the attributes.
4. In the **HTML Help File Directory** field, enter the name of the directory where the HTML files will be stored on OS/390 UNIX System Services. The directory name is the same directory associated with the InfoManHELP directive in the HTTP server configuration file. See “Enabling the HTTP server to find HTML help files” on page 160.

## Building or Changing an Application Hierarchy

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5. Click **Build** to create the HTML help files and store them in the provided directory on OS/390 UNIX System Services. The name of the HTML file will be BLMSXXXX.HTML where XXXX is the s-word index associated with the data attribute record. The file name should be in uppercase letters.
6. Go to “Enabling the HTTP server to find HTML help files” on page 160.

If you choose not to use the Toolkit to build HTML help files, perform the following steps to enable the Desktop to find the HTML help files you created in OS/390 UNIX System Services. For more information on the panels discussed in the following steps, see the *Panel Modification Facility Guide*.

1. Determine the data attribute record to which you want to associate an HTML help file.
2. In the data attribute record, select option 4 on the Data Attribute Summary Panel (BLG0VU70). The Panel Flow Update panel appears.
3. Enter the file name for the HTML help file in field 8 (HTML Help File) of the Panel Flow Update panel.

**Note:** The file name entered on the Panel Flow Update panel is case-sensitive and must *not* include an extension. The extension .HTML will be added to the file when the Desktop displays the help information. However, when you create the HTML file in OS/390 UNIX System Services, the file must have the extension .HTML (all uppercase letters).

4. Go to “Enabling the HTTP server to find HTML help files” on page 160.

### Enabling the HTTP server to find HTML help files

Whether or not you have used the Toolkit to build your HTML help files, in order to enable the HTTP server to find the HTML help files you have built on OS/390 UNIX System Services, you must add a “pass directive” to the HTTP server configuration file (httpd.conf). The following is an example of a “pass directive.”

```
Pass /InfoManHELP/* /u/desktop/web/html/*
```

InfoManHELP must be typed exactly as shown, but the directory associated with it will be determined by the administrator. Under this directory will be subdirectories for each data view used by the Desktop. These subdirectories are needed because the same s-word may be used in different data views. For example, the RNID s-word occurs in both the problem data view BLMPROB and the call data view BLMCALL. In this case, help for the Problem **RNID** field would be stored in u/desktop/web/html/BLMPROB/BLMS0CCF.HTML, while help for the Call **RNID** field would be stored in u/desktop/web/html/BLMCALL/BLMS0CCF.HTML.

If you use the Toolkit to build HTML help files, the Build Field Help function will automatically create the data view subdirectories. If you create HTML help files from scratch, you must manually create the data view subdirectories and then store the HTML files in the correct subdirectories. The data view subdirectory names must be entered in uppercase letters.

For example, if you create an HTML help file called sysname.HTML which contains help information about the **System Name** field, then in the data attribute record, BLM&SYSN, you would enter sysname in the **HTML Help File** field on the Panel Flow Update panel. You would then store the file in OS/390 UNIX System Services as u/desktop/web/html/BLMPROB/sysname.HTML.

## Working with Solution Records

A solution record preserves knowledge about the resolution of a problem. By saving this knowledge, you can use it to resolve future problems. For more information about solution records, see the *Tivoli Information Management for z/OS Program Administration Guide and Reference*.

To create a process dedicated to solution records, perform the following steps. The following process describes how tasks related to solution records were added to the Desktop sample application. If you are modifying your own hierarchy to include solution records, the following steps should provide a useful model of the process, but may require some modification to apply to the specifics of your hierarchy.

1. Add a process icon named **Solutions** to the hierarchy.
2. Under the **Solutions** process, add two task icons called **Problem Solution Data** and **Create Solution**.
3. For the **Problem Solution Data** task, perform the following steps:
  - a. Associate the task with data view BLMPROB.
  - b. Associate the task with a panel type of Inquiry.
  - c. Add a **Get** button to the task. This button will perform the GetSolutionData task. When a Desktop user types a problem number and clicks this button, solution information will be retrieved from the problem record (as long as the problem record called has a status of **closed** and contains data in the freeform text fields for Description and Resolution).
  - d. Create a smart map to map fields from the **Problem Solution Data** task to the **Create Solution** task. For more information on smart mapping, see “Mapping Smart Fields” on page 153. The following fields should be mapped from data view BLMPROB to data view BLMSOL:

BLMPROB field maps to...	BLMSOL field
Problem ID (S0CCF)	Problem Number (S0CE6)
System (S0CA5)	System (S0CAA)
Device (S0CA9)	Component (S0CAB)
Item affected (S0CBF)	Item (S0CAC)
Program (S0CA8)	Module (S0CAD)
Brief description (S0E0F)	Description (S0E0F)
Description freeform text (S0E01)	Problem Description freeform text (S0E01)
Resolution freeform text (S0E03)	Resolution Description freeform text (S0E03)

**Note:** For the last three items in the list, the s-words are the same in the two mapped data views.

4. For the **Create Solution** task, perform the following steps:
  - a. Associate the task with data view BLMSOL.
  - b. Associate the task with a panel type of Create.
  - c. Add a **Create** button to the task. This button will perform the **CreateSolution** task. When a Desktop user clicks this button, a solution record will be created (as long as

## Building or Changing an Application Hierarchy

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the record contains data in the following fields: Description abstract, Problem Description freeform text, Resolution Description freeform text).

The process above was used to create a **Solutions** process in the sample Desktop hierarchy. You can also enable a Desktop user to create a solution record from within a problem record task.

1. Select any problem update task in the hierarchy. For example, select the **Update Detail Desc** task.
2. Add a **Create Solution** button to the task. This button will perform the CreateSolProb task. When a Desktop user clicks this button, a solution record will be created (as long as the problem record status is **closed** and the problem record contains text in the Description and Resolution freeform text fields).

**Note:** If you have customized your Information Management for z/OS environment to use different s-words to represent problem records or to use a different status to represent "closed" problems, you may need to update the following TSXs:

- BLMWCSOL
- BLHTXSOL

## Saving the Application Hierarchy

Follow these steps to save an application hierarchy you have built or modified:

1. Select **File/Save** from the menu bar to save a new or existing application hierarchy. If the help menu has been updated but not saved, the Desktop administrator will be prompted to save the help menu when exiting from the application hierarchy.
2. If the file is new, a **Save As** dialog displays. Enter the name of the file in the **File name** field and press the **Save** button.

If the file already exists, no dialog displays. The file is saved under the same name.

After the file is saved, you can send it to the FTP server in OS/390 UNIX System Services where it will be automatically accessed by other networked workstations running the Desktop application.

## Sending the Hierarchy File to the HTTP Server

To send the hierarchy file to the HTTP Server, select **File** and then select **Export** on the **Export File** dialog. Refer to "Exporting Files to the HTTP Server" on page 164 for more information.

If you have just installed the Desktop and need to send a sample hierarchy file to OS/390 UNIX System Services to enable users to begin using the Desktop, send the HELPDESK hierarchy file provided with the sample Desktop application. The HELPDESK hierarchy file can be found in the sample subdirectory of the install directory.

## Getting the Hierarchy File from the HTTP Server

As an administrator, you may need to get a copy of a previously built hierarchy file in order to modify it. To get a copy of a hierarchy file from the HTTP Server, select **File** and then select **Import** on the **Import File** dialog. Refer to "Importing Files from the HTTP Server" on page 165 for more information.

## Enabling the User Export Option

The Desktop administrator can authorize users to export files to the HTTP Server. Files that can be exported to the HTTP Server include formats such as HTML, image, graph, audio,

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and video. The exported files can then be used as attachments to Tivoli Information Management for z/OS records or to customize help for your Desktop application. When the User Export option is enabled, users can export files to the HTTP Server via the Export feature available from the Desktop **File** menu.

**Note:** The **User Export** menu item will only be enabled when the hierarchy root is selected.

Before implementing the **Export** option for the Desktop application, the Desktop administrator should ensure that these prerequisites are met:

- All authorized help desk personnel have UNIX user IDs on the HTTP Server.
- All authorized help desk personnel must have write access to subdirectories under their UNIX home directory. Information on HTTP Server administration can be found in the documentation provided by your HTTP Server.

For example, in IBM HTTP Server for OS/390 Version 5.2, the comment symbol # has been removed from the `UserDir` directive in the HTTP Server configuration file `httpd.conf` and a user export directory has been specified by the `UserDir` directive. Each user should have write access to a subdirectory of this name under their UNIX home directory.

In addition to these prerequisites, before users can export any files to the HTTP Server, the HTTP Server configuration file must be configured to enable or disable user ownership of private web documents. The user name must reference a defined OS/390 UNIX User ID that includes a home directory definition. The value in the HTTP Server configuration file specifies the name of a subdirectory within each user's home directory. When the HTTP Server receives a URL request that begins with `/~UserName/`, the server looks for the requested object in the subdirectory name specified on the `UserDir` directive of the user's home directory. You should consider issues of security in configuring the HTTP Server configuration file.

To enable users to export files to the HTTP Server:

1. Click **Actions** and then click **User Export**. The User Export dialog is displayed.

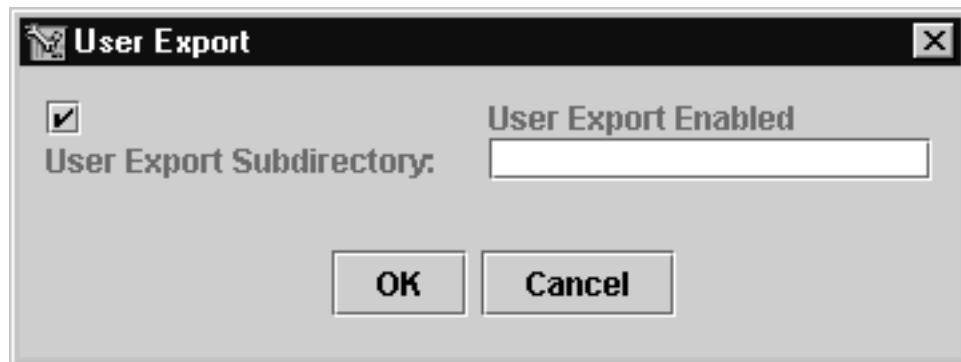


Figure 63. User Export Dialog

2. Put a check in the **User Export Enabled** checkbox.
3. Specify the export subdirectory in the **User Export Subdirectory** text field. This subdirectory must match the subdirectory you specified in the `UserDir` directive of the HTTP Server configuration file.

4. Click **OK**.

### Exporting Files to the HTTP Server

Follow these steps to export a file to the HTTP Server. This export capability allows the Desktop and Tivoli Information Management for z/OS to contain URL links to the exported files. The URL links can be customized help menu items created by the administrator or links to Tivoli Information Management for z/OS records created by help desk personnel. Refer to “Using the Toolkit To Build an Application Help Hierarchy” on page 172 for additional information on customizing the application help menu. Follow these steps to export a file to the HTTP Server:

1. Select **File** and then select **Export**. On the **Export File** dialog (shown in Figure 64), the FTP Server Name, Port Number, and User ID are retrieved from your configuration file and displayed.

The screenshot shows the 'Export File' dialog box with the following fields and values:

- FTP Information:**
  - Server Name: WEBSVR
  - User ID: CORTEZ
  - Port Number: 8888
  - Password: \*\*\*\*\*
  - Mode:  Active  Passive
- Local File Information:**
  - Local File Path: C:\InfoMan\Desktop
  - Local File Name: HELPDESK
  - File Type:  ASCII  binary
- Remote File Information:**
  - Remote File Path: /u/cortez
  - Remote File Name: HELPDESK

Buttons: Export, Close

Figure 64. Exporting the Application Hierarchy

#### Password

Enter the password of your MVS TSO User ID.

#### Local File Path

Enter the local file path for the file you want to export. The default is your current directory. If you are doing multiple exports, the local file path is saved.

|           **Local File Name**

|           Enter the local file name or use the find file icon to locate the file.

|           **File Type**

|           Select the file type, ASCII or binary.

|           **Remote File Path**

|           Enter the remote file path where the exported file will reside. The default is the Remote File Path information from the Desktop administrator's configuration editor.

|           **Remote File Name**

|           Enter the remote file name or click the find file icon to get a list of files for the remote directory. This list will be used to populate the Remote File Name combo box. Click the down arrow on the Remote File Name combo box. The list of files for the remote directory is displayed in a pop-up window. Select the file name you want for your exported file.

|           **Note:** The exported file will overlay the existing file on the HTTP Server.

|           **File Type**

|           Select the file type, ASCII or binary.

- |           2. Click **Export**. A message informs you of the file transfer.

### Importing Files from the HTTP Server

|           To import a file from the HTTP Server:

**Import File**

**FTP Information**

Server Name: WEBSVR      User ID: CORTEZ

Port Number: 8888      Password: \*\*\*\*\*

Mode:  Active     Passive

**Local File Information**

Local File Path: C:\InfoMan\Desktop

Local File Name: HELPDESK

**Remote File Information**

Remote File Path: /u/kdean

Remote File Name: HELPDESK

File Type:  ASCII     binary

**Import**    **Close**

Figure 65. Importing an Application Hierarchy

1. Select **File** and then select **Import**. On the **Import** dialog, the FTP Server Name, Port Number, and your User ID are provided from your Desktop configuration file. Enter the following information in the fields shown:

**Password**

Enter the password of your MVS TSO User ID.

**Local File Path**

Enter the local file path for the file you want to import. The default is your current directory. If you are doing multiple imports, the local file path is saved.

**Local File Name**

Enter the local file name or use the find file icon to locate the file.

**Remote File Path**

Enter the remote file path of the file to be imported. The default is the Remote File Path information from the Desktop administrator's configuration editor.

**Remote File Name**

Type the remote file name or click the find file icon to get a list of files for the remote directory. This list will be used to populate the Remote File Name combo box. Click the down arrow on the Remote File Name combo box. The list of files for the remote directory is displayed in a pop-up window. Select the file name you want to import from the list of files.

**File Type**

Select the file type, ASCII or binary.

2. Click **Import**.

## Writing TSPs and TSXs

The information in this section is intended for programmers or administrators who have a need to tailor Desktop functionality to meet the unique needs of their environments. **If you do not intend to use or write special TSPs or TSXs for use with the Desktop, you can skip this section.** For a description of how TSPs or TSXs are used in Tivoli Information Management for z/OS, refer to the *Tivoli Information Management for z/OS Terminal Simulator Guide and Reference*. If you intend to write TSPs, you should be familiar with the Panel Modification Facility. If you intend to write TSXs, you should be familiar with REXX.

You can write a TSP or TSX that can execute under the following conditions:

- When a field loses focus in a task pane other than an Inquiry panel  
The TSP or TSX is specified as part of the panel flow for a data attribute record on BLG0V730, the Panel Flow Update panel (see page 90 for an example).
- When a button is clicked on a task pane  
The TSP or TSX is specified as the name of a button function, as described in “Associating Button Properties” on page 145.

Before writing or using existing TSPs or TSXs with your Desktop application, consider the following:

- You can start a TSP but not use a TSP to send data back and forth between the Tivoli Information Management for z/OS database and the Desktop. To retrieve or send data, use a TSX. TSXs can provide an alternative way of sending data back to the Desktop.
- You can send data to a TSX and retrieve data from a TSX through an s-word index.
- You can decide how your TSX uses data that is sent to it. For example, the TSX can use all or some of the data associated with fields on a task pane, or ignore the data completely.
- Your TSX must use the TSX control line GETAPIDATA rather than FINDSDATA to retrieve data entered on Desktop task panels for use by a TSP or TSX.
- To modify the data in a current record, use the TSX control line SETAPIDATA. Do not use the TSX PROCESS control line.
- The REXX EXEC that composes an initiated TSX must reside on the Tivoli Information Management for z/OS host in a data set which is included in the BLGTSX DD statement definitions in the HTTP Server start-up PROC. This start-up PROC is usually a member in a procedure library.

A TSX or TSP can be associated with a button or field on a task pane. When the button is clicked or the field loses focus, a stream of data is sent to Tivoli Information Management for z/OS. The basic stream of data consists of a set of an s-word index and its field value. The use of s-word indexes enables the value of a field to be associated with an s-word on the host.

For example, suppose a Caller task pane contained the following fields and values in the Desktop:

## Building or Changing an Application Hierarchy

---

```
Person Information-----
Identifier          CUSTOM1
Name               CUSTOMER ONE
Person Role        CUSTOMER
Department         CUST01

Address Information-----
Company Name       CUSTOMER INC
Address 1          BCUST
Address 2          CUSTOMER BLVD
City/State         WASHINGTON
Country            USA
Zip Code           27717

Contact Information-----
Preferred Notification PHONE
Phone Number       9191111111
Mobile Phone Number 9192222222
Fax Number         9193333333
Pager Number       9194444444
Email Address      CUSTOMER.ONE@CUST.COM
```

A TSX could be used to send the following stream of people record data to the host. The stream includes the data view record name, name of the TSP or TSX being invoked, and s-word indexes and values.

```
DV = BLMPEOPL
TSP = ATSPNAME
S0CCF = CUSTOM1
S151F = CUSTOMER+ONE
S15F8 = CUSTOMER
S151E = CUST01
S15F7 = CUSTOMER+INC
S152A = BCUST
S152B = CUSTOMER+BLVD
S152C = WASHINGTON
S152F = USA
S152E = 27717
S01D2 = PHONE
S15F0 = 9191111111
S15F3 = 9192222222
S15F1 = 9193333333
S15F2 = 9194444444
S01D1 = CUSTOMER.ONE@CUST.COM
```

The data is available to the host TSX in parameter data blocks (PDBs). Each PDB is a REXX stem variable that holds the value of a field. The REXX stem variable is named the s-word index for the field (for example, 'S0CCF.').

In this example, the first REXX stem value in the data stream shown is 'S0CCF.1'. It contains the value of 'CUSTOM1'.

The following example of a TSX shows how you can apply the data associated with a task pane into variables in a basic TSX. It also shows how to substitute another value into each field that is sent back to the Desktop. REXX SAY statements are included in the example for tracing purposes only. The example is intended to show you how to get data into a TSX and out of a TSX. Other than serving as an example, it is not intended to be used for any practical purposes.

Each of the s-word PDB names is stored in another PDB named 'desktop'. This PDB enables the user's TSX to obtain the s-word PDB names from the REXX stem variable PDB

named 'desktop'. The Desktop application uses the PDB name of desktop to store a list of s-word PDB names. The TSX control line GETAPIDATA is used to access and pass the data specified to the TSX.

The example TSX loops through each of the s-word index PDBs (for instance, 'S0CCF.', 'S151F.', 'S15F8.' and so on) to find the associated data values. Your TSX can use the values or discard them, depending on how you want to use the data.

You can send values back to the Desktop through the TSX. Send a value as part of the first REXX stem value in an s-word index PDB. For example, 'S0CCF.1' has the value 'CUSTOM1'. The PDB named S0CCF. is created using the TSX control line SETAPIDATA.

If you want to return a message to the Desktop user or change the flow of processing on the Desktop, you can use the SETAPIDATA control line to return both message and task information by using output PDB names of MESSAGE and PROCESS respectively, as in the following example:

```
call blgtsx 'SETAPIDATA', 'MESSAGE', message
call blgtsx 'SETAPIDATA', 'PROCESS', 'Problems'
```

The task name that is specified on the PROCESS PDB must match exactly the task name specified on the Desktop.

**Note:** The MESSAGE and PROCESS PDBs are ignored on a search TSX.

If the TSX completes successfully, the message returned is displayed in the Desktop status area and the user is returned to the panel or task that was specified. If an invalid task name is specified, the user remains on the panel that initiated the TSX. If the TSX failed, a standard error message will be displayed.

```

/*****
/* The following TSX reads a pdb named 'desktop' (using the control line GETAPIDATA) to obtain */
/* a list of sword pdb's and their values. The Desktop application always uses the pdb name */
/* of desktop to store a list of sword pdb's. This list of sword pdb's contain the sword index */
/* and its associated data sent up from the Desktop Application as SwordIndex = 'value'. */
*****/

/* Use 'getapidata' control line to obtain sword pdb list and store it in stem variable 'mysword.' */
call blgtsx 'getapidata','desktop','mysword.'

say 'TSCAFRET/TSCAFRES1 from MYTSX getapidata' tscafret tscafres

/* If no error found from getapidata then obtain each sword pdb and its value */
/* by looping through list of sword pdb's in stem variable 'mysword' */
if tscafret=0 then

/* Make sure there are sword pdb's to obtain */
if mysword.0/='MYSWORD.0' then

/* Loop through list of sword pdb's */
do i = 1 to mysword.0
  say 'got 1st >'mysword.i<'

  /* At this point the value of mysword.i would equal 'S0CCF' (for example) */

  /* Strip off any blanks */
  mysword.i=STRIP(mysword.i);

  /* Concatenate a period onto the end of the swordindex name for getapidata*/
  sword.i = mysword.i||'.'
/* Now value of sword.i is 'S0CCF.' (for example) */

/* Obtain sword pdb named in mysword.i ('S0CCF.') and put value in stem variable sword.i */
call blgtsx 'getapidata',mysword.i,sword.i

```

## Building or Changing an Application Hierarchy

---

```
say 'TSCAFRET/TSCAFRES from MYTSX getapidata' tscafret tscafres
if tscafret /= 0 then leave;
end

/* At this point you are free to do anything a TSX normally does using the Sword Index values */
/* obtained from the Desktop application or ignoring them

/* In the example, the data CUSTOM1 is in variable S0CCF.1, the data USA is in variable      */
/* S152F.1, etc.                                                                           */

/* Check for errors from 'getapidata' call                                               */
if tscafret = 0 then

/* Sending data back to desktop application in the form of swordindex = 'value'         */
/* In this instance we are returning all data sent with value = 'TEST'                 */
/* However, any sword index could be back with any value associated. The data will     */
/* be displayed in the desktop application for the particular record being processed.   */

do i = 1 to mysword.0
/* Use interpret command to put into sword index stem variable pdb the number of values */
/* Example...S0CCF.0 is assigned the value 1                                           */
  INTERPRET sword.i||'0' '= 1;

/* Put the value 'TEST' into each sword index                                           */

  INTERPRET sword.i||'1' '= 'TEST';

/* Results in for example S0CCF.1 = 'TEST';                                           */
/* Use the 'setapidata' control line command to send                                   */
/*   the name of the pdb (mysword.i or 'S0CCF.')                                       */
/*   the value in the pdb (sword.i or 'TEST')                                         */
/*   the length of the value ('4')                                                    */
  call blgtsx 'SETAPIDATA',mysword.i,sword.i,1,LENGTH(VALUE(sword.i||'1'))

say 'TSCAFRET/TSCAFRES0 from MYTSX getapidata' tscafret tscafres
/* Check for errors                                                                     */
if tscafret /= 0 then leave;
end

exit;

/* END TSX */
```

As a result of running the example TSX, the value of 'TEST' would be displayed in the fields shown in the Desktop application:

```
Person Information-----
Identifier          TEST
Name               TEST
Person Role        TEST
Department         TEST

Address Information-----
Company Name       TEST
Address 1          TEST
Address 2          TEST
City/State         TEST
Country            TEST
Zip Code           TEST

Contact Information-----
Preferred Notification TEST
Phone Number       TEST
Mobile Phone Number TEST
Fax Number         TEST
Pager Number       TEST
Email Address      TEST
```

You do not have to use the value of the s-word index which is sent to the TSX; nor do you have to process it in the TSX. You also do not have to send data back to the Desktop application. It is also possible for the TSX to perform other functions while running on the host, and then return information.



**Note:** You should use only TSXs or TSPs that do *not* process panel data interactively in Tivoli Information Management for z/OS. If a TSX or TSP is written to use specific Tivoli Information Management for z/OS panels, it cannot be used with the Desktop. Panel-driven TSXs or TSPs will not work properly with the Desktop.

## Writing Search TSXs for the Desktop

You can also define a button that will invoke a TSX which can build a search and put the results in the third pane of the Desktop. When the user clicks the button you have defined, a stream of data consisting of sets of s-word indices and their field values is sent to the TSX. The s-word indices that are sent are those associated with the input dataview record specified when the button was defined. The table name that will be used to display the search results list will also be sent to the TSX as an input PDB with a name of SEARCH\_PANEL.

You can invoke the predefined search function in two ways, depending on your level of TSX writing knowledge. (See Figure 50 on page 146 for the panel used to specify the Search TSX that you have written.)

- The following method requires more TSX programming but creates a more flexible TSX:
  1. Define the predefined search button and specify a TSX name.
  2. Specify the TSX as a search TSX by selecting the **Search TSX** checkbox on the New Button dialog.
  3. (Optional) Specify a name for the output data view record for the search results list. If you do not specify a name, this record will default to the name of the "input" data view record used on the search.
- The following method requires less TSX programming but creates a less flexible TSX. This method is easier to implement because the TSX you write will simply return fields with their associated values for the Desktop to use for the search.
  1. Define the predefined search button and specify a TSX name.
  2. Do *not* select the **Search TSX** checkbox on the New Button dialog.
  3. Ensure that all fields that you are searching on are defined on the task panel that will contain the button.
  4. Select **Search** in the **Function name** field.

The results of a TSX designated as a search TSX are displayed in the third pane of the Desktop. The output PDBs required on exit from the TSX are as follows:

- **HITS:** Number of hits to be retrieved by the search up to max\_hits. The current maximum number of hits is 32 767.
- **COLUMNS:** Number of data columns to be returned by the search. COLUMNS is used to determine the number of COLUMNINDEX and COLUMN values returned.
- **COLUMNINDEXn:** S-word index (Snnnn) or p-word index (Pnnnn) that corresponds to the SRL table column. The value of n is in the range of 1 to the value returned in COLUMNS. COLUMNINDEX is returned even when the value of HITS is zero.
- **COLUMNn:** If HITS > 0, then n is in the range of 1 to COLUMNS. If HITS = 0, then COLUMNn PDB is not returned.

## Using the Toolkit To Build an Application Help Hierarchy

As a Desktop administrator, you can use the Toolkit to build a custom help menu hierarchy to support the custom application hierarchy structure that reflects your business process. This application help menu hierarchy is used to dynamically build the custom application help menu when the user starts the Desktop.

You can use the Toolkit to create, update, and delete links from the application help menu to Web files. The links are stored as URL data on link nodes in that application help menu hierarchy. The help menu hierarchy is stored as user data on the root node of the application hierarchy.

To build an application help menu hierarchy:

1. Add the menu icons:
  - a. Select the **Application Help** tab on the Toolkit toolbar. The three-paned window used for updating the Application Help hierarchy is displayed.

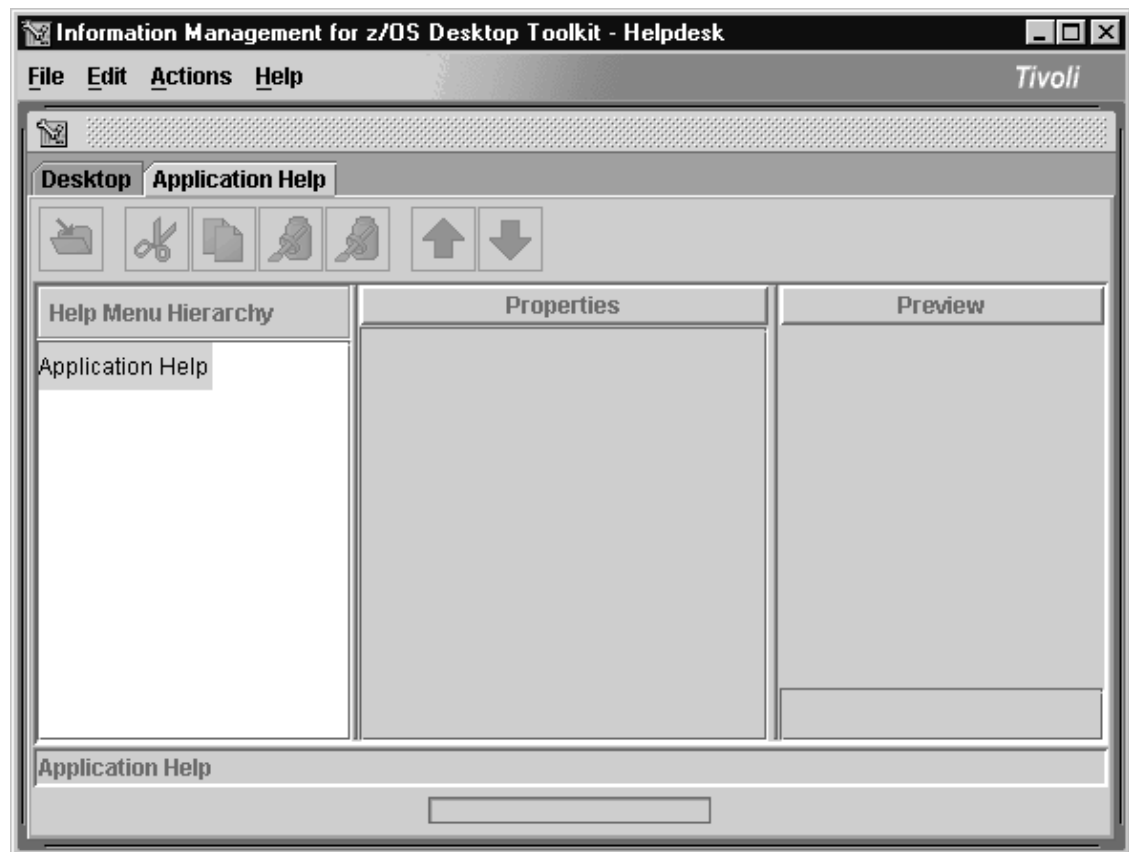


Figure 66. Application Help

- b. To add a menu icon, select **Actions** and then select **Add Menu**. A Rename dialog is presented and a **New Menu** icon is displayed under the Application Help hierarchy.
    - c. Enter the new name of the menu and click **OK**. The renamed label will overlay the **Application Help** tab on the help menu bar.

- d. To insert another menu icon at the same level, select the menu you just added. Select **Actions** and then select **Insert Menu**. Repeat for as many same level menu icons as you need.
- e. To add a sub-menu (a menu icon at the next level as the icon selected), select **Actions** and then select **Add Menu**.

**Note:** The selected icon must be childless (that is, it must contain no associated links).

Repeat for as many next level menu icons as you need.

2. Add the link icons:
  - a. Select a menu icon.
  - b. Select **Actions** and then select **Add Link**. A link icon appears beneath the menu icon.
  - c. Rename the link icon to reflect a meaningful task that your users will perform.
  - d. In the center pane of the toolkit, the Properties pane, provide either Structured or Freeform URL information for the help file.

**Note:** Do not use spaces in URL file names for the application help.

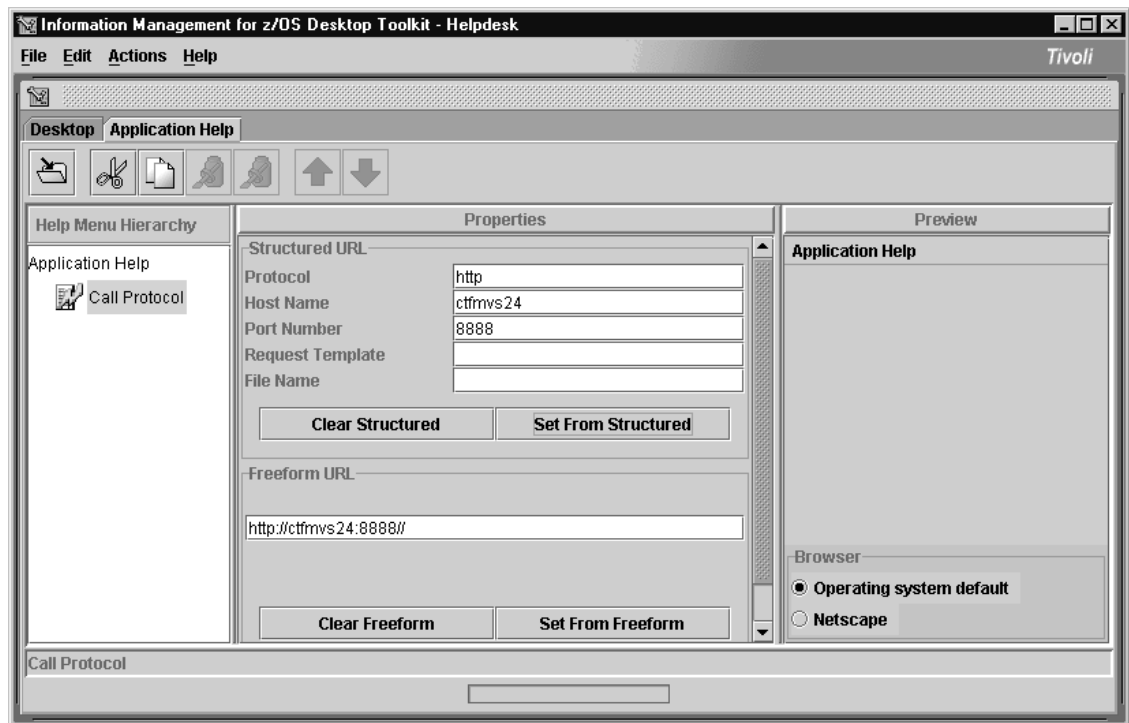


Figure 67. Adding Link Icons

■ **Structured URL**

- 1) The Protocol, Host Name, and Port Number fields are defaulted from your configuration file. You can click **Clear Structured** to erase the default information if you want to provide other values for these fields.

- 2) Enter the request template information from a valid directive in the httpd.conf file. In the following example from an httpd.conf file, the request template is INFOWEB.

```
Pass /INFOWEB/* /usr/lpp/InfoMan/Desktop/html/*
```

For more information about request templates, refer to the HTTP Server documentation.

- 3) Enter the name of the help file that you exported to /usr/lpp/InfoMan/Desktop/html.
- 4) Click **Set from Structured** to set the URL information. The **Freeform URL** field will be generated from the information you entered in the **Structured URL** fields.

**Note:** The URL information is not saved until both the application hierarchy and the application hierarchy help menu are saved.

### ■ Freeform URL

- 1) Enter the URL of the desired link in the freeform search field. You can click **Clear Freeform** to clear the field.
- 2) Click **Set from Freeform** to set the URL information. Setting the URL from the **Freeform URL** field will override any information you might have entered in the **Structured URL** fields.

**Note:** The URL information is not saved until both the application hierarchy and the application hierarchy help menu are saved.

- e. If you want to add a second link, highlight the first link and then select **Actions** and then **Insert Link**. Repeat for as many link icons as should appear at the same level under the menu icon.
- f. To save the application help menu:
  - 1) Click **File** and then click **Save**.
  - 2) Click the tab for your customized application hierarchy (left tab) on the Toolkit toolbar. Click **File** and then click **Exit**. You will be prompted to save the application hierarchy menu. Click **Yes**.

## Previewing Your Application Help Hierarchy

You can preview an application help menu hierarchy that you built or modified using the Toolkit. This allows you to check the proper display of the help files you associated with link icons in your help menu hierarchy.

To preview the application help menu hierarchy:

1. Select the tab for your customized application hierarchy (left tab) on the Toolkit toolbar.
2. Open the application hierarchy by selecting **File** and then selecting **Open**.
3. Select the tab for the customized application help (right tab) from the Toolkit toolbar. The application help menu hierarchy is displayed in the left pane.
4. Select the link node of the help you want to preview by highlighting it in the help menu hierarchy in the left pane.

5. The center pane, the Properties pane, is refreshed to show the URL information for the selected help file.
6. The right pane, the Preview pane, is refreshed to display the help menu. Click on the help menu to display the sub-menu items.
7. Select the browser you want to use to view the help by clicking its radio button in the Preview pane.
8. Click on the link menu item for the help you want to preview.
9. The help file associated with the selected link is displayed in your preferred browser.

**Note:** No help file is available if you select a menu rather than a link.

## Designing the Application

Although there are various ways you can design a Desktop application, it is helpful to have general guidelines or a structure that you can follow. The following steps provide an overview of the activities involved in creating a new Desktop application. Use the approach that is best for you, but be sure to involve your users so that you can ensure the design you establish is valid and enables users to perform tasks in support of your company's needs.

- Identify the overall *business process* your application will support. For example, are you developing an application to support a problem management process, or a change management process, or some aspects of both?  
The business process will help to define the types of Tivoli Information Management for z/OS records you will be using in your application. Are you building a help desk application to collect and display information on problem records, data center changes, or an application that combines various types of records? The types of records you use will dictate, at a minimum, how many data view records you need to build.
- Identify the *tasks* to be performed by the users within each process.  
As part of this identification, you can define the type of user you are targeting for the application and what type of authority those users should generally have in the application.
- Identify the workstation *panels* that will be used by the users of your application. (It may help to sketch out the task design on paper before beginning the panel construction.)
- Identify the commonly used *fields* in those record types that you may want to use in your application. For each field, establish a data attribute record and ensure that it has a field prompt specified as necessary.
- Determine the *types of transactions* the users should be able to perform for each task. What fields are they using? Should they be able to create new records when performing the task, updating data, browsing the information, or searching? This information is used to define the field usage and authority for data view records in Tivoli Information Management for z/OS, and button function in the interface.
- Build the *data view records* as necessary and associate the data attribute records used with each view.

**Note:** If you are modifying the data model records provided to support the Tivoli Information Management for z/OS Desktop application, be sure to retain a backup copy of the data view records provided in the SBLMRCDS data set and the

Toolkit application hierarchy, so that you can return to the state of the original environment for the Desktop application if needed.

- Set up (create or update) the Desktop tables for each data view record in Tivoli Information Management for z/OS. The tables define the groups of related list data fields.
- Set up (create or update) the Desktop field groups for each data view record in Tivoli Information Management for z/OS.
- Set up (create or update) the Desktop tasks (panel layout) for each data view record in Tivoli Information Management for z/OS.
- Use the Desktop Toolkit to build the *process/task hierarchy* of icons. Associate one or more data view records with each task or process icon.
- Identify the *buttons* that should appear in the task window pane and decide what data view records should be associated with each button. Define the button properties and behavior. Should the button be associated with an update transaction, delete transaction, or some other transaction? What is the next task pane that should be displayed to the user when the button is pressed?

**Note:** Even though you can define what task pane should be displayed when a button is pressed, keep in mind that users can jump from one task to another before finally pressing a button to file a record. Users are not required to complete all fields in one task before moving to another. It is conceivable that work can be started in task A, a button is pressed in task B, and the record associated with task B is filed while task A remains incomplete. Use buttons with names for the task you are designing.

- Build your application help Web files.
- Use the Toolkit to build the application help hierarchy.
- Test the application and get necessary feedback.
- Export the Toolkit application hierarchy to OS/390 UNIX System Services so that it is available to networked workstations running your application.



## Data Model Record List

---

This appendix provides a list of data model records (see Table 2 on page 178) to help you understand how data attribute records relate to the Desktop data view records. All of the data model records used by the Desktop sample application are provided with Tivoli Information Management for z/OS.

### BLGDVLAY

You can generate a list of the groups, fields, and tables associated with a data view record by running a TSX named BLGDVLAY interactively in Tivoli Information Management for z/OS. To run this TSX, enter the following at a Tivoli Information Management for z/OS command line. Note that in this command line that the brackets are not part of the syntax, but are used to indicate optional parameters.

```
RUN BLGDVLAY rnid [FILE [dsname]]
```

where

*rnid* The name of the data view record.

**File** Indicates that the report should be written to a pre-allocated data set. If *dsname* is specified, the output is written to the named data set. If *dsname* is not specified, the output is written to a data set named *hlq*.BLGDVLAY, where *hlq* is your high level qualifier.

FILE is an optional parameter. If FILE is not specified, the output is written to the screen.

*dsname*

The name of a pre-allocated data set to which the output should be written. If you specify *dsname*, specify the fully qualified data set name without quotation marks.

*Dsname* is an optional parameter. If you specify FILE and do not specify *dsname*, the output is written to a data set named *hlq*.BLGDVLAY, where *hlq* is your high level qualifier. If FILE is not specified, *dsname* is ignored.

If you choose to write the output to a data set, whether to a data set that you specify or to the default data set *hlq*.BLGDVLAY, you must pre-allocate the data set before running TSX BLGDVLAY. The DCB parameters for the output data set are:

<b>Data set organization=</b>	Sequential
<b>Device type=</b>	DASD
<b>Record format=</b>	Fixed block or variable block
<b>Record length=</b>	80 or greater

This example illustrates how to run `BLGDVLAY` to print the desktop panel layouts, groups, tables and fields for the data view record `BLMPROB` to the screen:

```
RUN BLGDVLAY BLMPROB
```

This example writes the output to the default data set `hlq.BLGDVLAY`. First pre-allocate `hlq.BLGDVLAY` with fixed block record format and record length 80, and then specify:

```
RUN BLGDVLAY BLMPROB FILE
```

This example illustrates how to run `BLGDVLAY` to print the desktop panel layouts, groups, tables, and fields for the data view record `BLMPROB` to a data set named `CHIRON.BLMPROB`. The data set `CHIRON.BLMPROB` is a pre-allocated sequential data set with fixed block record format and record length 80.

```
RUN BLGDVLAY BLMPROB FILE CHIRON.BLMPROB
```

## Map of GUI Fields to Host Records

The following tables identify, by each task in the Desktop sample application, the host data view records and associated field groups and attribute records. You can use this information to understand how the fields seen by the user in the Desktop graphical interface relate to the data model records in Tivoli Information Management for z/OS.

*Table 2. Data Model Records – Call Registration Icon*

Call Registration		
Task	Data View Record	Group or Field Name
Caller	BLMPEOPL	Group: PERSON Person Information BLM&URN1 Identifier BLM&PERN Name BLM&ROLE Person Role BLM&DEPT Department Group: ADDRESS Address Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&CTRY Country BLM&ZIPC Zip Code Group: CONTACT Contact Information BLM&PNOT Preferred Notification BLM&PHNM Phone Number BLM&PHMO Mobile Phone Number BLM&PHFX Fax Number BLM&PHPG Pager Number BLM&EADD Email Address Field: BLM&PDSC Additional Information



Table 2. Data Model Records – Call Registration Icon (continued)

Call Registration		
Call Taker	BLMPEOPL	Group: PERSON Person Information BLM&URN1 Identifier BLM&PERN Name BLM&ROLE Person Role BLM&DEPT Department Group: ADDRESS Address Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&CTRY Country BLM&ZIPC Zip Code Group: CONTACT Contact Information BLM&PNOT Preferred Notification BLM&PHNM Phone Number BLM&PHMO Mobile Phone Number BLM&PHFX Fax Number BLM&PHPG Pager Number BLM&EADD Email Address Field: BLM&PDSC Additional Information
Create Call	BLMCALL	Field: BLM&URN0 Call ID Field: BLM&PBNO Associated Problem ID Field: BLM&TYPJ Call Type Field: BLM&DSTA Start Date Field: BLM&TSTA Start Time Field: BLM&STAT Status Field: BLM&DSAB Brief Description Field: BLM&DTXT Detail Description Group: CALLER Caller Information BLM&CAID Identifier BLM&REQN Name BLM&PHON Phone BLM&RQDP Dept. Group: LOCATION Location Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&ZIPC Zip Code Group: ASSIGNEE Call Taker Information BLM&ASID Identifier BLM&00AA Name BLM&ASPH Phone BLM&00AG Department

Table 3. Data Model Records – Update Call Registration Icon

Update Call Registration		
Task	Data View Record	Group or Field Name

Table 3. Data Model Records – Update Call Registration Icon (continued)

Update Call Registration		
Update Caller	BLMCALL	Field: BLM&URN0 Call ID Group: CALLER Caller Information BLM&CAID Identifier BLM&REQN Name BLM&PHON Phone BLM&RQDP Dept. Group: LOCATION Location Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&ZIPC Zip Code
Update Call Taker	BLMCALL	Field: BLM&URN0 Call ID Group: ASSIGNEE Call Taker Information BLM&ASID Identifier BLM&00AA Name BLM&ASPH Phone BLM&00AG Department
Update Call	BLMCALL	Field: BLM&URN0 Call ID Field: BLM&PBNO Associated Problem ID Field: BLM&TYPJ Call Type Field: BLM&STAT Status Field: BLM&DSTA Start Date Field: BLM&TSTA Start Time Field: BLM&CMPD End Date Field: BLM&CMPT End time Field: BLM&DSAB Brief Description Field: BLM&DTXT Detail Description

Table 4. Data Model Records – Problem Registration Icon

Problem Registration		
Task	Data View Record	Group or Field Name
General Information	BLMPROB	Field: BLM&URN0 Problem ID Group: REPORTER Customer Information BLM&REQN Name BLM&RQDP Department BLM&PHON Phone Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&STAT Status Field: BLM&DSAB Brief Description Field: BLM&CPRI Priority Field: BLM&OCOD Date Occurred Field: BLM&OCCT Time Occurred Field: BLM&BPAV Bypass Available
Detail Description	BLMPROB	Field: BLM&URN0 Problem ID Field: BLM&DSAB Brief Description Group: COMPONENT Component Information BLM&PTYP Problem Type BLM&SYSN System Name BLM&DEVN Device Name BLM&KIAF Item Affected BLM&0APN Program Name BLM&NETN Network Name Field: BLM&DTXT Problem Description Field: BLM&STXT Status Comments Field: BLM&RTXT Resolution Description

Table 4. Data Model Records – Problem Registration Icon (continued)

Problem Registration		
Assignee	BLMPEOPL	Group: PERSON Person Information BLM&URN1 Identifier BLM&PERN Name BLM&ROLE Person Role BLM&DEPT Department Group: ADDRESS Address Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&CTRY Country BLM&ZIPC Zip Code Group: CONTACT Contact Information BLM&PNOT Preferred Notification BLM&PHNM Phone Number BLM&PHMO Mobile Phone Number BLM&PHFX Fax Number BLM&PHPG Pager Number BLM&EADD Email Address Field: BLM&PDSC Additional Information
Create Problem	BLMPROB	Field: BLM&URN0 Problem ID Group: ASSIGNEE Assignee Information BLM&00AA Assignee Name BLM&PHNA Assignee Phone BLM&00AG Assignee Department BLM&ASSD Assigned Date BLM&ASST Assigned Time Field: BLM&STAT Status Field: BLM&CPRI Priority Field: BLM&DTXT Problem Description Field: BLM&STXT Status Comments
Associate Problem to Call	BLMCALL	Field: BLM&URN0 Call ID Field: BLM&PBNO Associated Problem ID
	BLMPROB	Group: REPORTER Customer Information BLM&REQN Name BLM&RQDP Department BLM&PHON Phone Field: BLM&STAT Status Field: BLM&CPRI Priority Field: BLM&DSAB Brief Description

Table 5. Data Model Records – Update Problem Registration Icon

Update Problem Registration		
Task	Data View Record	Group or Field Name
Update General Info	BLMPROB	Field: BLM&URN0 Problem ID Group: REPORTER Customer Information BLM&REQN Name BLM&RQDP Department BLM&PHON Phone Field: BLM&STAT Status Field: BLM&CPRI Priority Field: BLM&DSAB Brief Description Field: BLM&DTXT Problem Description Field: BLM&00CD Date Closed Field: BLM&00CT Time Closed

Table 5. Data Model Records – Update Problem Registration Icon (continued)

Update Problem Registration		
Update Detail Desc	BLMPROB	Field: BLM&URN0 Problem ID Field: BLM&DSAB Brief Description Group: COMPONEN Component Information BLM&PTYP Problem Type BLM&SYSN System Name BLM&DEVN Device Name BLM&KIAF Item Affected BLM&0APN Program Name BLM&NETN Network Name Field: BLM&DTXT Problem Description Field: BLM&STXT Status Comments Field: BLM&RTXT Resolution Description
Update Assignee	BLMPROB	Field: BLM&URN0 Problem ID Group: ASSIGNEE Assignee Information BLM&00AA Assignee Name BLM&PHNA Assignee Phone BLM&00AG Assignee Department BLM&ASSD Assigned Date BLM&ASST Assigned Time

Table 6. Data Model Records – Change Registration Icon

Change Registration		
Task	Data View Record	Group or Field Name
Requester Data	BLMCHNG	Field: BLM&URN0 Change ID Group: REPORTER Requester Information Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&STAT Status Field: BLM&CPRI Priority Field: BLM&PTYP Change Type Group: DETAIL Detail Information Field: BLM&DSAB Brief Description
Assignee Data	BLMCHNG	Field: BLM&URN0 Change ID Group: ASSIGNEE Assignee Information Group: COORDNTR Coordinator Information Field: BLM&SCHD Planned Start Date Field: BLM&SCHT Planned Start Time Field: BLM&TARD Planned End Date Field: BLM&TART Planned End Time
Close Data	BLMCHNG	Field: BLM&URN0 Change ID Group: COMPLETE Completion Information Group: ACTUAL Actual Information
Approver Data	BLMCHNG	Group: CHANGEID Change Information Table: APPROVAL Approval Data
Text Data	BLMCHNG	Group: CHANGEID Change Information Group: TEXT Text Data

Table 7. Data Model Records – Update Change Registration Icon

Update Change Registration		
Task	Data View Record	Group or Field Name

Table 7. Data Model Records – Update Change Registration Icon (continued)

Update Change Registration		
Update Requester Data	BLMCHNG	Field: BLM&URN0 Change ID Group: REPORTER Requester Information Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&STAT Status Field: BLM&CPRI Priority Field: BLM&PTYP Change Type Group: DETAIL Detail Information Field: BLM&DSAB Brief Description
Update Assignee Data	BLMCHNG	Field: BLM&URN0 Change ID Group: ASSIGNEE Assignee Information Group: COORDNTR Coordinator Information  Field: BLM&SCHD Planned Start Date Field: BLM&SCHT Planned Start Time Field: BLM&TARD Planned End Date Field: BLM&TART Planned End Time
Update Close Data	BLMCHNG	Field: BLM&URN0 Change ID Group: COMPLETE Completion Information Group: ACTUAL Actual Information
Update Approver Data	BLMCHNG	Group: CHNGID2 Change Information Table: APPROVAL Approval Data
Update Text Data	BLMCHNG	Group: CHANGEID Change Information Group: TEXT Text Data

Table 8. Data Model Records – People Registration Icon

People Registration Icon		
Task	Data View Record	Group or Field Name
Create	BLMPEOPL	Group: PERSON Person Information BLM&URN1 Identifier BLM&PERN Name BLM&ROLE Person Role BLM&DEPT Department Group: ADDRESS Address Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&CTRY Country BLM&ZIPC Zip Code Group: CONTACT Contact Information BLM&PNOT Preferred Notification BLM&PHNM Phone Number BLM&PHMO Mobile Phone Number BLM&PHFX Fax Number BLM&PHPG Pager Number BLM&EADD Email Address Field: BLM&PDSC Additional Information

Table 8. Data Model Records – People Registration Icon (continued)

People Registration Icon		
Update	BLMPEOPL	Group: PERSON Person Information BLM&URN1 Identifier BLM&PERN Name BLM&ROLE Person Role BLM&DEPT Department Group: ADDRESS Address Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&CTRY Country BLM&ZIPC Zip Code Group: CONTACT Contact Information BLM&PNOT Preferred Notification BLM&PHNM Phone Number BLM&PHMO Mobile Phone Number BLM&PHFX Fax Number BLM&PHPG Pager Number BLM&EADD Email Address Field: BLM&PDSC Additional Information

Table 9. Data Model Records – Solutions Icon

Solutions Icon		
Task	Data View Record	Group or Field Name
Problem Solution Data	BLMPROB	Field: BLM&URN0 Solution ID Field: BLM&SYSN System Name Field: BLM&0APN Program Name Field: BLM&DEVN Device Name Field: BLM&KIAF Item Affected Field: BLM&DSAB Brief Description Field: BLM&DTEXT Problem Description Field: BLM&RTXT Resolution Description
Create Solution	BLMSOL	Field: BLM&URN0 Solution ID Field: BLM&RNPD Problem Number Group: SCIM SCIM Group: TEXT Text Data

Table 10. Data Model Records – Search Icon

Search		
Task	Data View Record	Group or Field Name

Table 10. Data Model Records – Search Icon (continued)

Search		
Calls	BLMCALL	Field: BLM&URN0 Call ID Field: BLM&PBNO Associated Problem ID Field: BLM&TYPJ Call Type Field: BLM&DSTA Start Date Field: BLM&TSTA Start Time Field: BLM&CMPD End Date Field: BLM&CMPT End Time Field: BLM&STAT Status Field: BLM&DSAB Brief Description Group: CALLER Caller Information BLM&CAID Identifier BLM&REQN Name BLM&PHON Phone BLM&RQDP Dept. Group: LOCATION Location Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&ZIPC Zip Code Group: ASSIGNEE Call Taker Information BLM&ASID Identifier BLM&00AA Name BLM&ASPH Phone BLM&00AG Department
Problems	BLMPROB	Field: BLM&URN0 Problem ID Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&OCCD Date Occurred Field: BLM&OCCT Time Occurred Field: BLM&00CD Date Closed Field: BLM&00CT Time Closed Field: BLM&STAT Status Field: BLM&CPRI Priority Field: BLM&DSAB Brief Description Group: REPORTER Customer Information BLM&REQN Name BLM&RQDP Department BLM&PHON Phone Group: ASSIGNEE Assignee Information BLM&00AA Assignee Name BLM&PHNA Assignee Phone BLM&00AG Assignee Department BLM&ASSD Assigned Date BLM&ASST Assigned Time Group: COMPONENT Component Information BLM&PTYP Problem Type BLM&SYSN System Name BLM&DEVN Device Name BLM&KIAF Item Affected BLM&0APN Program Name BLM&NETN Network Name

Table 10. Data Model Records – Search Icon (continued)

Search		
People	BLMPEOPL	Group: PERSON Person Information BLM&URN1 Identifier BLM&PERN Name BLM&ROLE Person Role BLM&DEPT Department Group: ADDRESS Address Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&CTRY Country BLM&ZIPC Zip Code Group: CONTACT Contact Information BLM&PNOT Preferred Notification BLM&PHNM Phone Number BLM&PHMO Mobile Phone Number BLM&PHFX Fax Number BLM&PHPG Pager Number BLM&EADD Email Address
Changes	BLMCHNG	Field: BLM&URN0 Problem ID Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&OCCD Date Occurred Field: BLM&OCCT Time Occurred Field: BLM&00CD Date Closed Field: BLM&00CT Time Closed Field: BLM&STAT Status Field: BLM&CPRI Priority Field: BLM&DSAB Brief Description Group: REPORTER Customer Information Group: ASSIGNEE Assignee Information Group: COMPONEN Component Information

Table 11. Data Model Records – Search Icon > Changes

Search > Changes		
Task	Data View Record	Group or Field Name
Search Requester Data	BLMCHNG	Field: BLM&URN0 Change ID Group: REPORTER Requester Information Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&STAT Status Field: BLM&CPRI Priority Field: BLM&8TYP Change Type Group: DETAIL Detail Information Field: BLM&DSAB Brief Description
Search Assignee Data	BLMCHNG	Group: ASSIGNEE Assignee Information Group: COORDNTR Coordinator Information Field: BLM&SCHD Planned Start Date Field: BLM&SCHT Planned Start Time Field: BLM&TARD Planned End Date Field: BLM&TART Planned End Time
Search Close Data	BLMCHNG	Group: COMPLETE Completion Information Group: ACTUAL Actual Information



Table 12. Data Model Records – Search Icon > Activities

Search > Activities		
Task	Data View Record	Group or Field Name
Search Activity Requester	BLMACTV	Field: BLM&URN0 Activity ID Field: BLM&CTYP Activity Type Field: BLM&ACNM Activity Name Field: BLM&RNOR Parent Change Identifier Group: REPORTER Requester Information Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&STAT Status Field: BLM&CPRI Priority Group: DETAIL Detail Information Field: BLM&DSAB Brief Description
Search Assignee Data	BLMACTV	Group: ASSIGNEE Assignee Information Group: COORDNTR Coordinator Information  Field: BLM&SCHD Planned Start Date Field: BLM&SCHT Planned Start Time Field: BLM&TARD Planned End Date Field: BLM&TART Planned End Time
Search Close Data	BLMACTV	Group: COMPLETE Completion Information Group: ACTUAL Actual Information

Table 13. Data Model Records – Display R Task

Display R		
Task	Data View Record	Group or Field Name
Display R	BLMCALL	Field: BLM&URN0 Call ID Field: BLM&PBN0 Associated Problem ID Field: BLM&TYPJ Call Type Field: BLM&DSTA Start Date Field: BLM&TSTA Start Time Field: BLM&CMPD End Date Field: BLM&CMPT End Time Field: BLM&STAT Status Field: BLM&DSAB Brief Description Field: BLM&DTXT Detail Description Group: CALLER Caller Information BLM&CAID Identifier BLM&REQN Name BLM&PHON Phone BLM&RQDP Dept. Group: LOCATION Location Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&ZIPC Zip Code Group: ASSIGNEE Call Taker Information BLM&ASID Identifier BLM&00AA Name BLM&ASPH Phone BLM&00AG Department

Table 13. Data Model Records – Display R Task (continued)

Display R		
Display R	BLMPROB	Field: BLM&URN0 Problem ID Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&OCCD Date Occurred Field: BLM&OCCT Time Occurred Field: BLM&00CD Date Closed Field: BLM&00CT Time Closed Field: BLM&STAT Status Field: BLM&CPRI Priority Field: BLM&BPAV Bypass Available Field: BLM&DSAB Brief Description Group: REPORTER Customer Information BLM&REQN Name BLM&RQDP Department BLM&PHON Phone Group: COMPONENT Component Information BLM&PTYP Problem Type BLM&SYSN System Name BLM&DEVN Device Name BLM&KIAF Item Affected BLM&0APN Program Name BLM&NETN Network Name Group: ASSIGNEE Assignee Information BLM&00AA Assignee Name BLM&PHNA Assignee Phone BLM&00AG Assignee Department BLM&ASSD Assigned Date BLM&ASST Assigned Time Field: BLM&DTXT Problem Description Field: BLM&STXT Status Comments Field: BLM&RTXT Resolution Description
Display R	BLMPEOPL	Group: PERSON Person Information BLM&URN1 Identifier BLM&PERN Name BLM&ROLE Person Role BLM&DEPT Department Group: ADDRESS Address Information BLM&CPYN Company Name BLM&ADR1 Address 1 BLM&ADR2 Address 2 BLM&CITY City/State BLM&CTRY Country BLM&ZIPC Zip Code Group: CONTACT Contact Information BLM&PNOT Preferred Notification BLM&PHNM Phone Number BLM&PHMO Mobile Phone Number BLM&PHFX Fax Number BLM&PHPG Pager Number BLM&EADD Email Address Field: BLM&PDSC Additional Information

Table 13. Data Model Records – Display R Task (continued)

Display R		
Display R	BLMCHNG	Field: BLM&URN0 Change ID Group: REPORTER Requester Information Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&STAT Status Field: BLM&CPRI Priority Field: BLM&PTYP Change Type Group: DETAIL Detail Information Field: BLM&DSAB Brief Description Group: TEXT Text Data Group: ASSIGNEE Assignee Information Group: COORDNTR Coordinator Information Field: BLM&SCHD Planned Start Date Field: BLM&SCHT Planned Start Time Field: BLM&TARD Planned End Date Field: BLM&TART Planned End Time Group: COMPLET2 Completion Information Group: ACTUAL Actual Information
Display R	BLMACTV	Field: BLM&URN0 Activity ID Field: BLM&CTYP Activity Type Field: BLM&ACNM Activity Name Field: BLM&RNOR Parent Change Identifier Group: REPORTER Requester Information Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&STAT Status Field: BLM&CPRI Priority Group: DETAIL Detail Information Field: BLM&DSAB Brief Description Group: TEXT Text Data Group: ASSIGNEE Assignee Information Group: COORDNTR Coordinator Information Field: BLM&SCHD Planned Start Date Field: BLM&SCHT Planned Start Time Field: BLM&TARD Planned End Date Field: BLM&TART Planned End Time Group: COMPLETE Completion Information Group: ACTUAL Actual Information
Display R	BLMSOL	Field: BLM&URN0 Solution ID Field: BLM&RNPD Problem Number Group: SCIM SCIM Group: TEXT Text Data

Table 14. Data Model Records – Create R Task

Create R		
Create R	BLMACTV	Field: BLM&URN0 Activity ID Field: BLM&CTYP Activity Type Field: BLM&ACNM Activity Name Field: BLM&RNOR Parent Change Identifier Group: REPORTER Requester Information Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&STAT Status Field: BLM&CPRI Priority Group: DETAIL Detail Information: Field: BLM&DSAB Brief Description Group: TEXT Text Data Group: ASSIGNEE Assignee Information Group: COORDNTR Coordinator Information Field: BLM&SCHD Planned Start Date Field: BLM&SCHT Planned Start Time Field: BLM&TARD Planned End Date Field: BLM&TART Planned End Time Group: COMPLETE Completion Information Group: ACTUAL Actual Information

Table 15. Data Model Records – Update R Task

Update R		
Update R	BLMACTV	Field: BLM&URN0 Activity ID Field: BLM&CTYP Activity Type Field: BLM&ACNM Activity Name Field: BLM&RNOR Parent Change Identifier Group: REPORTER Requester Information Field: BLM&DATX Date Opened Field: BLM&TIMX Time Opened Field: BLM&STAT Status Field: BLM&CPRI Priority Group: DETAIL Detail Information Field: BLM&DSAB Brief Description Group: TEXT Text Data Group: ASSIGNEE Assignee Information Group: COORDNTR Coordinator Information Field: BLM&SCHD Planned Start Date Field: BLM&SCHT Planned Start Time Field: BLM&TARD Planned End Date Field: BLM&TART Planned End Time Group: COMPLETE Completion Information Group: ACTUAL Actual Information

**Note:** The Create and Update processes for activity records are accessed from beneath the Create and Update processes for Change Registration records.

## Data View Records

The data attribute records that are included in data view records provided with Tivoli Information Management for z/OS to support the Desktop are shown in the following tables. Since the data view records may be used for purposes other than the Desktop, more data attribute records may be listed than are actually used by the Desktop. For a current list of records, display the data attribute record list for the data view record in Tivoli Information Management for z/OS.

The following data attribute record composes the BLMCLASS data view record.

*Table 16. Data Attribute Records for Data View Record BLMCLASS*

BLMCLASS	
Data Attribute Record Name	Description
BLM&DSAB	Brief Description

**Note:** The BLMCLASS data view record is required to use the sample Desktop application, or any Desktop application you create. This data view record is used by the Desktop to obtain a list of the available privilege classes in your Tivoli Information Management for z/OS database. BLMCLASS is included in the BLMLRDSK list of data model records provided for use with the Desktop and is installed when you load the BLMLRDSK list of data model records. **A BLMCLASS data view record must exist to use the sample Desktop application, or any Desktop application you create.**

If you elect not to use the other data view records provided, such as BLMCALL, BLMPEOPL, or BLMPROB, be sure to copy the BLMCLASS data view record into your database so that your Desktop application can run properly. To copy the BLMCLASS data view record, you can create a list like BLMLRDSK (as referred to on page 10). The list should have only one data view record, BLMCLASS, and the BLM&DSAB data attribute record. After creating the list, run the BLHRCDSL TSX to load the data view and data attribute records to your database.

The BLMCLASS data view record must be named BLMCLASS.

If you use partitioned databases, be aware that the list of privilege classes retrieved using BLMCLASS are those privilege classes associated with your primary partition.

The following data attribute records compose the BLMPEOPL data view record.

*Table 17. Data Attribute Records for Data View Record BLMPEOPL*

BLMPEOPL	
Data Attribute Record Name	Description
BLM&URN1	People Record ID
BLM&PERN	Person Name
BLM&ROLE	Person Role
BLM&DEPT	Department
BLM&CPYN	Company Name
BLM&ADR1	Address 1
BLM&ADR2	Address 2
BLM&CITY	City/State
BLM&CTRY	Country
BLM&ZIPC	Zip Code
BLM&PNOT	Preferred Notification Method
BLM&PHNM	Phone Number
BLM&PHMO	Mobile Phone Number

Table 17. Data Attribute Records for Data View Record BLMPEOPL (continued)

BLMPEOPL	
BLM&PHFX	Fax Number
BLM&PHPG	Pager Number
BLM&EADD	Email Address
BLM&PDSC	People Information
BLH&DATE	Date Created Attribute
BLH&TIME	Time Created Attribute
BLH&CLAE	Class Created Attribute
BLH&DATM	Date Modified Attribute
BLH&TIMM	Time Modified Attribute
BLH&USER	User Modified Attribute
BLM&002C	Management Application Entry S-word

The following data attribute records compose the BLMCALL data view record.

Table 18. Data Attribute Records for Data View Record BLMCALL

BLMCALL	
Data Attribute Record Name	Description
BLM&URN0	Problem ID
BLM&PBNO	Problem IDs
BLM&REQN	Name
BLM&PHON	Phone
BLM&CAID	Caller's ID
BLM&RQDP	Department
BLM&CPYN	Company Name
BLM&ADR1	Address 1
BLM&ADR2	Address 2
BLM&CITY	City/State
BLM&ZIPC	Zip Code
BLM&DSAB	Brief Description
BLM&DTXT	Problem Description
BLM&DSTA	Start Date
BLM&TSTA	Start Time
BLM&CMPD	End Date
BLM&CMPT	End Time
BLM&STAT	Status
BLM&TYPJ	Call Type
BLM&EADD	Email Address
BLM&PNOT	Preferred Notification Method
BLM&FAXN	Call Fax Number
BLM&ASID	Call Assignee ID

Table 18. Data Attribute Records for Data View Record *BLMCALL* (continued)

<b>BLMCALL</b>	
BLM&00AA	Assignee Name
BLM&ASPH	Call Assignee Phone
BLM&00AG	Assignee Department
BLH&DATE	Date Created Attribute
BLH&TIME	Time Created Attribute
BLH&CLAE	Class Created Attribute
BLH&DATM	Date Modified Attribute
BLH&TIMM	Time Modified Attribute
BLH&USER	User Modified Attribute
BLM&002C	Management Application Entry S-word

The following data attribute records compose the *BLMPROB* data view record.

Table 19. Data Attribute Records for Data View Record *BLMPROB*

<b>BLMPROB</b>	
Data Attribute Record Name	Description
BLM&SYSN	System Name
BLM&0APN	Program Name
BLM&REQN	Name
BLM&STAT	Status
BLM&RQDP	Department
BLM&OCCD	Date Occurred
BLM&OCCT	Time Occurred
BLM&BPAV	Bypass Available
BLM&CPRI	Current Priority
BLM&PHON	Phone
BLM&DSAB	Brief Description
BLM&DTXT	Problem Description
BLM&PTYP	Problem Type
BLM&DEVN	Device Name
BLM&KIAF	Key Item Affected
BLM&ASSD	Assigned Date
BLM&ASST	Assigned Time
BLM&00CD	Date Closed
BLM&00CT	Time Closed
BLM&00AA	Assignee Name
BLM&PHNA	Assignee Phone
BLM&00AG	Assignee Department
BLM&ASNT	Assignment Status
BLM&STXT	Status Text

Table 19. Data Attribute Records for Data View Record BLMPROB (continued)

BLMPROB	
BLM&RTXT	Resolution Description
BLM&ATXT	Address Text
BLM&PLOC	Location Code
BLM&DPCT	Duplicate Count
BLM&URN0	Problem ID
BLM&NETN	Network Name
BLM&DATX	Date Opened
BLM&TIMX	Time Opened
BLH&DATE	Date Created Attribute
BLH&TIME	Time Created Attribute
BLH&CLAE	Class Created Attribute
BLH&DATM	Date Modified Attribute
BLH&TIMM	Time Modified Attribute
BLH&USER	User Modified Attribute
BLM&002C	Management Application Entry S-word

The following data attribute records compose the BLMCHNG data view record.

Table 20. Data Attribute Records for Data View Record BLMCHNG

BLMCHNG	
Data Attribute Record Name	Description
BLM&SYSN	System Name
BLM&CMPD	End Date
BLM&CMPT	End Time
BLM&0APN	Program Name
BLM&REQN	Name
BLM&STAT	Status
BLM&RQDP	Department
BLM&OCCD	Date Occurred
BLM&OCCT	Time Occurred
BLM&BPAV	Bypass Available
BLM&CPRI	Current Priority
BLM&PHON	Phone
BLM&DSAB	Brief Description
BLM&PTYP	Problem Type
BLM&DEVN	Device Name
BLM&KIAF	Key Item Affected
BLM&ASSD	Assigned Date
BLM&ASST	Assigned Time
BLM&00CD	Date Closed



Table 20. Data Attribute Records for Data View Record BLMCHNG (continued)

BLMCHNG	
BLM&00CT	Time Closed
BLM&00AA	Assignee Name
BLM&PHNA	Assignee Phone
BLM&00AG	Assignee Department
BLM&ASNT	Assignment Status
BLM&STXT	Status Text
BLM&RTXT	Resolution Description
BLM&ATXT	Address Text
BLM&PLOC	Location Code
BLM&DPCT	Duplicate Count
BLM&URN0	Problem ID
BLM&NETN	Network Name
BLM&DATX	Date Opened
BLM&TIMX	Time Opened
BLM&CTXT	Change Description
BLM&00CR	Resolver Name
BLM&00CG	Resolver Department
BLM&PHNR	Resolver Phone
BLM&00CC	Completion Code
BLM&DSTA	Start Date
BLM&TSTR	Actual Start Time
BLM&ACEF	Actual Effort
BLM&ACIM	Actual Impact
BLM&ADUR	Actual Duration
BLM&REQD	Date Required
BLM&REQT	Time Required
BLM&EDUR	Estimated Duration
BLM&FXPN	Problem Record Fixed
BLM&SCHD	Planned Start Date
BLM&SCHT	Planned Start Time
BLM&TARD	Planned End Date
BLM&TART	Planned End Time
BLM&00CN	Coordinator Name
BLM&CNDP	Coordinator Department
BLM&COPN	Coordinator Phone
BLG&APST	Approval Status
BLG&APVR	Approver
BLM&STAA	Overall Approval Status
BLH&DATE	Date Created Attribute
BLH&TIME	Time Created Attribute

Table 20. Data Attribute Records for Data View Record BLMCHNG (continued)

BLMCHNG	
BLH&CLAE	Class Created Attribute
BLH&DATM	Date Modified Attribute
BLH&TIMM	Time Modified Attribute
BLH&USER	User Modified Attribute
BLM&002C	Management Application Entry S-word

The following data attribute records compose the BLMACTV data view record.

Table 21. Data Attribute Records for Data View Record BLMACTV

BLMACTV	
Data Attribute Record Name	Description
BLM&ACNM	Request Work Activity Name – help
BLM&SYSN	System Name
BLM&CMPD	End Date
BLM&CMPT	End Time
BLM&0APN	Program Name
BLM&REQN	Name
BLM&STAT	Status
BLM&RQDP	Department
BLM&OCCD	Date Occurred
BLM&OCCT	Time Occurred
BLM&BPAV	Bypass Available
BLM&CPRI	Current Priority
BLM&PHON	Phone
BLM&DSAB	Brief Description
BLM&DEVN	Device Name
BLM&KIAF	Key Item Affected
BLM&ASSD	Assigned Date
BLM&ASST	Assigned Time
BLM&00CD	Date Closed
BLM&00CT	Time Closed
BLM&00AA	Assignee Name
BLM&PHNA	Assignee Phone
BLM&00AG	Assignee Department
BLM&ASNT	Assignment Status
BLM&STXT	Status Text
BLM&RTXT	Resolution Description
BLM&ATXT	Address Text
BLM&PLOC	Location Code
BLM&DPCT	Duplicate Count

Table 21. Data Attribute Records for Data View Record BLMACTV (continued)

BLMACTV	
BLM&URN0	Problem ID
BLM&NETN	Network Name
BLM&DATX	Date Opened
BLM&TIMX	Time Opened
BLM&CTXT	Change Description
BLM&00CR	Resolver Name
BLM&00CG	Resolver Department
BLM&PHNR	Resolver Phone
BLM&00CC	Completion Code
BLM&DSTA	Start Date
BLM&TSTR	Actual Start Time
BLM&ACEF	Actual Effort
BLM&ACIM	Actual Impact
BLM&ADUR	Actual Duration
BLM&REQD	Date Required
BLM&REQT	Time Required
BLM&EDUR	Estimated Duration
BLM&FXPN	Problem Record Fixed
BLM&SCHD	Planned Start Date
BLM&SCHT	Planned Start Time
BLM&TARD	Planned End Date
BLM&TART	Planned End Time
BLM&00CN	Coordinator Name
BLM&CNDP	Coordinator Department
BLM&COPN	Coordinator Phone
BLM&CTYP	Activity Type
BLM&RNOR	Parent Change Identifier
BLH&DATE	Date Created Attribute
BLH&TIME	Time Created Attribute
BLH&CLAE	Class Created Attribute
BLH&DATM	Date Modified Attribute
BLH&TIMM	Time Modified Attribute
BLH&USER	User Modified Attribute
BLM&002C	Management Application Entry S-word
BLM&0B06	Change Record S-word

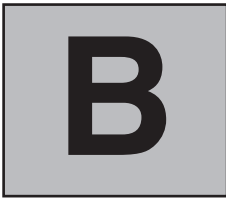
## Data View Records

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The following data attribute records compose the BLMSOL data view record.

*Table 22. Data Attribute Records for Data View Record BLMSOL*

BLMSOL	
Data Attribute Record Name	Description
BLM&URN0	Problem ID
BLM&RNPD	Original Problem Record Number
BLM&DESC	Description Abstract
BLM&SYST	System
BLM&COMP	Component
BLM&ITEM	Item
BLM&MODL	Module
BLM&COUX	Solution Usage Count
BLM&DTXT	Problem Description
BLM&RTXT	Resolution Description
BLH&DATE	Date Created Attribute
BLH&TIME	Time Created Attribute
BLH&CLAE	Class Created Attribute
BLH&DATM	Date Modified Attribute
BLH&TIMM	Time Modified Attribute
BLH&USER	User Modified Attribute
BLH&002C	Management Application Entry S-word



# Toolkit Reference for the Sample Application

The following table provides information you can use to understand how the sample Tivoli Information Management for z/OS Desktop application is designed in the Toolkit. This information can help you to prepare your own application or modify the sample Desktop application.

## Default Hierarchy Properties

You can view information about the default hierarchy properties for the sample Desktop application in the Desktop Toolkit.

Table 23. Desktop Task Design from a Toolkit Perspective

Hierarchy Task	Panel Type	Data View Record	Button	Record Name	Function	Next Screen
<b>Call Registration</b>						
Caller	Create	BLMPEOPL	Create Reset Next	BLMPEOPL BLMPEOPL BLMPEOPL	Create Reset Next	Caller Caller Call Taker
Call Taker	Create	BLMPEOPL	Create Reset Next	BLMPEOPL BLMPEOPL BLMPEOPL	Create Reset Next	Call Taker Call Taker Create Call
Create Call	Create	BLMCALL	Create Create as Problem Reset	BLMCALL BLMCALL BLMCALL	Create Create Reset	Create Call General Information Create Call
<b>Update Call Registration</b>						
Update Caller	Update	BLMCALL	Update Reset	BLMCALL BLMCALL	Update Reset	Update Caller Update Caller
Update Call Taker	Update	BLMCALL	Update Reset	BLMCALL BLMCALL	Update Reset	Update Call Taker Update Call Taker
Update Call	Update	BLMCALL	Update Reset	BLMCALL BLMCALL	Update Reset	Update Call Update Call
<b>Problem Registration</b>						
General Information	Create	BLMPROB	Reset Next	BLMPROB BLMPROB	Reset Next	General Information Information Detail Description

## Default Hierarchy Properties

Table 23. Desktop Task Design from a Toolkit Perspective (continued)

Hierarchy Task	Panel Type	Data View Record	Button	Record Name	Function	Next Screen
Detail Description	Create	BLMPROB	Reset Next	BLMPROB BLMPROB	Reset Next	Detail Description Assignee
Assignee	Create	BLMPEOPL	Create Reset Next	BLMPEOPL BLMPEOPL BLMPEOPL	Create Reset Next	Assignee Assignee Create Problem
Create Problem	Create	BLMPROB	Create Reset Next	BLMPROB BLMPROB BLMPROB	Create Reset Next	Create Problem Create Problem Associate Problem to Call
Associate Problem to Call	Update	BLMCALL BLMPROB	Associate Problem to Call	BLMCALL	Update	Associate Problem to Call
<b>Update Problem Registration</b>						
Update General Info	Update	BLMPROB	Update Problem Record Reset Problem Record View History	BLMPROB  BLMPROB BLMPROB	Update  Reset History	Update General Info  Update General Info  View History
Update Detail Desc	Update	BLMPROB	Update Problem Record Reset Problem Record Create Solution	BLMPROB  BLMPROB BLMPROB	Update  Reset CreateSol Prob	Update Detail Desc  Update Detail Desc  Create Solution
Update Assignee	Update	BLMPROB	Update Problem Record Reset Problem Record	BLMPROB  BLMPROB	Update  Reset	Update Assignee  Update Assignee
<b>Change Registration</b>						
Requester Data	Create	BLMCHNG	File Activities  Next Reset	BLMCHNG BLMCHNG  BLMCHNG BLMCHNG	Create Show Children Next Reset	Requester Data Requester Data  Assignee Data Requester Data
Assignee Data	Create	BLMCHNG	File Activities  Reset	BLMCHNG BLMCHNG  BLMCHNG	Create Show Children Reset	Assignee Data Assignee Data  Assignee Data

Table 23. Desktop Task Design from a Toolkit Perspective (continued)

Hierarchy Task	Panel Type	Data View Record	Button	Record Name	Function	Next Screen
Close Data	Create	BLMCHNG	File Activities	BLMCHNG BLMCHNG	Create Show Children	Close Data Close Data
			Reset	BLMCHNG	Reset	Close Data
Approver Data	Create	BLMCHNG	File Activities	BLMCHNG BLMCHNG	Create Show Children	Approver Data Approver Data
			Reset	BLMCHNG	Reset	Approver Data
Text Data	Create	BLMCHNG	File Activities	BLMCHNG BLMCHNG	Create Show Children	Text Data Text Data
			Reset	BLMCHNG	Reset	Text Data
<b>Update Change Registration</b>						
Update Requester Data	Update	BLMCHNG	File Activities	BLMCHNG BLMCHNG	Update Show Children	Update Requester Data Update Requester Data
			Reset	BLMCHNG	Reset	Update Requester Data
			History Delete	BLMCHNG BLMCHNG	History Delete	Update Requester Data Update Requester Data
Update Assignee Data	Update	BLMCHNG	File Activities	BLMCHNG BLMCHNG	Update Show Children	Update Assignee Data Update Assignee Data
			Reset History	BLMCHNG BLMCHNG	Reset History	Update Assignee Data Update Assignee Data
Update Close Data	Update	BLMCHNG	File Activities	BLMCHNG BLMCHNG	Update Show Children	Update Close Data Update Close Data
			Reset History	BLMCHNG BLMCHNG	Reset History	Update Close Data Update Close Data
Update Approver Data	Update	BLMCHNG	File Activities	BLMCHNG BLMCHNG	Update Get	Update Approver Data Update Approver Data
			Reset History	BLMCHNG BLMCHNG	Reset History	Update Approver Data Update Approver Data
Update Text Data	Update	BLMCHNG	File Activities	BLMCHNG BLMCHNG	Update Show Children	Update Text Data Update Text Data
			Reset History	BLMCHNG BLMCHNG	Reset History	Update Text Data Update Text Data
<b>People Registration</b>						
Create	Create	BLMPEOPL	Create Person	BLMPEOPL	Create	Create
			Reset People Record	BLMPEOPL	Reset	Create

B. Toolkit Reference for the Sample Application

## Default Hierarchy Properties

Table 23. Desktop Task Design from a Toolkit Perspective (continued)

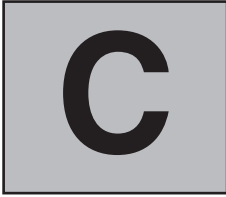
Hierarchy Task	Panel Type	Data View Record	Button	Record Name	Function	Next Screen
Update	Update	BLMPEOPL	Update Person	BLMPEOPL	Update	Update
			Reset People Record	BLMPEOPL	Reset	Update
<b>Solutions</b>						
Problem Solution Data	Inquiry	BLMPROB	Get	BLMPROB	GetSolution Data	Problem Solution Data
			Reset	BLMPROB	Reset	Problem Solution Data
Create Solution	Create	BLMSOL	Create	BLMSOL	Create Solution	CreateSolution
			Reset	BLMSOL	Reset	CreateSolution
<b>Search &gt; Calls</b>						
Calls	Inquiry	BLMCALL	Reset Call Record	BLMCALL	Reset	Calls
			Search Calls	BLMCALL	Search	Calls
Problems	Inquiry	BLMPROB	Reset Problem Record	BLMPROB	Reset	Problems
			Search Problems	BLMPROB	Search	Problems
<b>Search &gt; Changes</b>						
Search Requester Data	Inquiry	BLMCHNG	Search	BLMCHNG	Search	Search Requester Data
			Reset	BLMCHNG	Reset	Search Requester Data
Search Assignee Data	Inquiry	BLMCHNG	Search	BLMCHNG	Search	Search Assignee Data
			Reset	BLMCHNG	Reset	Search Assignee Data
Search Close Data	Inquiry	BLMCHNG	Search	BLMCHNG	Search	Search Close Data
			Reset	BLMCHNG	Reset	Search Close Data
<b>Search &gt; Activities</b>						
Search Activity Requester	Inquiry	BLMACTV	Search	BLMACTV	Search	Search Activity Requester
			Reset	BLMACTV	Reset	Search Activity Requester
Search Activity Assignee	Inquiry	BLMACTV	Search	BLMACTV	Search	Search Activity Assignee
			Reset	BLMACTV	Reset	Search Activity Assignee
Search Activity Close	Inquiry	BLMACTV	Search	BLMACTV	Search	Search Activity Close
			Reset	BLMACTV	Reset	Search Activity Close
<b>Search &gt; People</b>						
People	Inquiry	BLMPEOPL	Reset People Record	BLMPEOPL	Reset	People
			Search People	BLMPEOPL	Search	People



Table 23. Desktop Task Design from a Toolkit Perspective (continued)

Hierarchy Task	Panel Type	Data View Record	Button	Record Name	Function	Next Screen
<b>Search &gt; Solution</b>						
Search Solution Requester	Inquiry	BLMSOL	Search Solutions	BLMSOL	Search	Solution
			Reset Solution Records	BLMSOL	Reset	Solution





## Identifying Help Desk Callers

You can use people records in Tivoli Information Management for z/OS to collect information about a caller that can be useful in your help desk operations. You can search, display, add, or update people records from the Desktop. Although you cannot delete people records from the sample Desktop application, you can customize the sample Desktop to perform deletions, if desired. You can also delete them interactively as you would any other Tivoli Information Management for z/OS record through the use of Tivoli Information Management for z/OS host panels.

The following panels show you how to create a people record interactively using Tivoli Information Management for z/OS panels.

### Creating a Record

On BLG0EN20, the Primary Options Menu for the Management application, type **5** and press **Enter** to enter a people record.

```
BLG0EN20          --- PRIMARY OPTIONS MENU ---      APPLICATION: MANAGEMENT
OPTIONS:
1. OVERVIEW.....Display general information and product enhancements.
2. PROFILE.....Display or alter invocation or session defaults.
3. APPLICATION....Change application, list available applications.
4. CLASS.....Change current class, list available classes.
5. ENTRY.....Create a record.
6. INQUIRY.....Search for records.
7. UTILITY.....Copy, display, print, delete, and update records.
8. GLOSSARY.....Display a list of searchable words in the database.
9. PMF.....Modify or create panels.

      Select an option, enter a command, or type QUIT to exit.

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====> 5
```

On BLG00000, the Entry panel, type **6** and press **Enter**.

```
+ BLM00000 ----- ENTRY ----- 1 OF 1--+
|
| USE....Identify the type of description (record) to be entered.
|
| 1.PROBLEM.....Enter data processing problem description.
| 2.CHANGE.....Enter change request for system/procedure.
| 3.CONFIG.....Enter description of system configuration,
|                financial data, or service organization.
| 4.RULES.....Enter description of escalation rules.
| 5.DATA MODEL.....Enter description of a data model.
| 6.PEOPLE.....Enter description of a person.
| 7.SOLUTION.....Enter solution record.
|
+----- SELECT ITEM -----+

====> 6
```

On BLM0B001, the People Record panel, type the person's name and any other pertinent data that helps to identify the person.

You can specify an identifier for the person in the People Identifier field which will become the record ID when you file the record. The identifier can be up to 8 characters long, and the first character must be alphabetic.

**Note:** The Desktop application as shipped uses the People Identifier field information for retrieval purposes.

Try to use an identifier that uniquely identifies the person and that will probably not change. For example, do not use a person's initials; they are not unique. Also, do not use a person's last name; names can change.

When you have decided on an identification method, be sure to inform your help desk agents so that they can ask the caller for an identifier. The identifier is used in Desktop panels.

In the Person Role field, you must identify the person as either Customer, TSD390, or TSD390&TSD. The designations TSD390 and TSD390&TSD are significant if you are creating people records as part of integrating Tivoli Information Management for z/OS with the Tivoli Problem Management application. If you are not integrating with Tivoli Problem Management, the only entries you should make are Customer or TSD390. Use Customer if the person you are describing is one of your customers. Use TSD390 if the person is an internal support person or problem assignee.

BLM0B001 PEOPLE RECORD RECORD: \_\_\_\_\_

Enter people information; cursor placement or input line entry allowed.

1. People identifier...<R> C12345\_\_
2. Person name.....<R> Richard Wagner \_\_\_\_\_
3. Person role.....<R> customer\_\_
4. Person department..... X74B\_\_\_\_\_
5. Company name..... Supermarkets Plus\_\_\_\_\_
6. Address 1..... 3050 Independence Ave. \_\_\_\_\_
7. Address 2..... \_\_\_\_\_
8. City/State/Province.... East Brunswick, NJ \_\_\_\_\_
9. Country..... USA \_\_\_\_\_
10. Postal code/ZIP..... 08861\_\_\_\_\_

When you finish, type END to save or CANCEL to discard any changes.

====> end

Type **end** and press **Enter** to save your entries.

**Note:** If you try to enter people records and receive a message indicating that data model record BLM&xxxx could not be found, determine whether the data model records used by your application have been loaded in the Tivoli Information Management for z/OS database. Also, check that your session-parameters member has a BLGPARMs MODELDB parameter specified.

On BLM0B000, the People Summary panel, type **2** and press **Enter** to enter contact information for this individual.

BLM0B000 PEOPLE SUMMARY RECORD: CN12345

Identifier.....	CN12345	Date entered.....	_____
Name.....	Richard Wagner	Time entered.....	_____
Department.....	D40	Date last altered	_____
Role.....	CUSTOMER	Time last altered	_____
Phone.....	_____	User last altered	_____
E-mail address.....	_____		
Company name.....	Supermarkets Plus		
City/State/Prov....	East Brunswick, NJ		
Country.....	usa		
TSD user ID.....	_____		
TSD site ID.....	_____		

- |                         |                   |
|-------------------------|-------------------|
| 1. Person information.  | 8. Freeform text. |
| 2. Contact information. | 9. File           |

====> 2

## Creating a Record

On BLM0B002, the Contact Information panel, you can enter contact information such as the person's telephone number or fax number, or e-mail address. Type **end** and press **Enter** to save your entries.

```
BLM0B002                CONTACT INFORMATION                RECORD: CN12345

Enter contact information; cursor placement or input line entry allowed.

  Person Name..... Richard Wagner
  1. Preferred contact method.. phone_
  2. Phone number..... 732-555-3333_____
  3. Mobile phone number..... _____
  4. Fax number..... 732-555-3334_____
  5. Pager number..... _____
  6. E-mail address..... wager@supermarketsplus.com_____

      When you finish, type END to save or CANCEL to discard any changes.

====> end
```

You can also enter additional text in the **freeform text** option on panel BLM0B000. For now, type **9** to file the record and press **Enter**.

```
BLM0B000                PEOPLE SUMMARY                RECORD: CN12345

Identifier..... CN12345                Date entered..... _____
Name..... Richard Wagner                Time entered..... _____
Department..... D40                    Date last altered _____
Role..... CUSTOMER                    Time last altered _____
Phone..... 919-555-4444                User last altered _____
E-mail address..... wager@supermarketsplus.com

Company name..... Supermarkets Plus
City/State/Prov.... East Brunswick, NJ
Country..... usa
TSD user ID..... _____
TSD site ID..... _____

      1. Person information.                8. Freeform text.
      2. Contact information.              9. File

====> 9
```

```

BLG0EN20          --- PRIMARY OPTIONS MENU ---          APPLICATION: MANAGEMENT

OPTIONS:

  1. OVERVIEW.....Display general information and product enhancements.
  2. PROFILE.....Display or alter invocation or session defaults.
  3. APPLICATION...Change application, list available applications.
  4. CLASS.....Change current class, list available classes.
  5. ENTRY.....Create a record.
  6. INQUIRY.....Search for records.
  7. UTILITY.....Copy, display, print, delete, and update records.
  8. GLOSSARY.....Display a list of searchable words in the database.
  9. PMF.....Modify or create panels.

          Select an option, enter a command, or type QUIT to exit.

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BLG03058I Record CN12345  was stored successfully.
====>

```

You can also search, display, update, and delete people records interactively in Tivoli Information Management for z/OS as you would any other Tivoli Information Management for z/OS record.

**Note:** Although you cannot delete people records from the sample Desktop application as shipped, you can customize the sample Desktop to perform deletions, if desired.

For more information about people records, refer to the *Tivoli Information Management for z/OS Program Administration Guide and Reference*.

## Displaying Records

You can use the Tivoli Information Management for z/OS DISPLAY command to display people records, problem records, and call records interactively in Tivoli Information Management for z/OS. For example, you can type `display r rmid` where *rmid* is the record number ID of the people record (People identifier), call record (Caller ID), or problem record (Problem ID). Data collected from the Desktop task panels is displayed in the record.

Depending on your authority, you can update people records and problem records, but you cannot create or update call records from the Tivoli Information Management for z/OS host. There are no entry or update panels for this type of record. (The Tivoli Information Management for z/OS administrator can, however, create customized panels to perform this function if desired.) By default, you can only search, display, delete, or print call records on the host.

**Note:** When searching records interactively in Tivoli Information Management for z/OS (for example, by doing a freeform search), you can distinguish a call record from a problem record by the type of summary display panel that is associated with the record. A call record uses a call summary display panel; a problem record uses a

## Displaying Records

problem summary display panel. When a call record is displayed on the host, panel BLMOS010, the Call Summary Display panel, is displayed as shown in the following example:

```
BLMOS010                CALL SUMMARY DISPLAY                CALL: 00001314
|
|
| Caller's name..... WAGNER                Call type.....
| Caller's phone..... 732-555-3333         Call status..... INITIAL
| Caller's ID..... CN12345                Start date..... 03/11/1999
| Caller's dept..... D40                  Start time..... 15:00
| Call taker ID.....                      End date.....
| Call taker name..... HUBERT             End time.....
| Call taker phone..... 919-555-4444      Date entered..... 03/11/1999
| Call taker dept..... X74B               Time entered..... 15:45
|                                         Date last altered... 03/11/1999
|
|
| Description..... Question about URL to use for sw upgrades
| Company name..... Supermarkets Plus
| Address 1 ..... 3050 Independence Ave.
| Address 2.....
| City/State/Province.. East Brunswick, NJ
| Postal code/ZIP..... 08861              Associated problem... 00001315
|
|
| Select one of the following, or type END or CANCEL to leave this panel.
|   4. History display.      8. Detail description
|
|
|====>
```

The call record displays much of the same information that would appear in a problem record. If you created a call record from the Desktop and decided that the call was also a problem, and you created a problem record from the Desktop, you can view the record number of the problem associated with the call in the **Associated problem** field. The most recent problem associated with the call is displayed.

You can also view the brief description of the call by selecting option 8 on panel BLMOS010. Type END and press Enter to leave the panel.

For a description of the Tivoli Information Management for z/OS panels associated with problem records, or information about using Tivoli Information Management for z/OS commands, refer to the *Tivoli Information Management for z/OS User's Guide*.





## Working with Customized Desktop Applications

---

This appendix discusses the use of some of the functions which may be enabled if the Desktop hierarchy you are using has been customized by your Desktop administrator.

### Working with List Data Fields in the Desktop

If the administrator has enabled this function, you are able to click a button in the Desktop to access list processor tables and single list processor fields (i.e. list processor fields not included in any tables). The button label is the **Group, Table, or Field Description** specified on the Desktop Panel Field List Entry panel for the data view record panel layout that corresponds to the task you have selected.

**Note:** The Desktop administrator must first define data attribute records for the list processor fields and include those data attributes in the data views. If appropriate, the Desktop administrator can also group related list processor fields into a table in the data view.

When you click this button in the Desktop, the list processor data is presented as a table in an internal frame; this frame is resizeable and scrollable. The actions you can perform on this table are based on the panel type of the task that you have selected (**Display, Create, or Update**). You can select actions from the menu bar. You can also sort the data by clicking on a particular column heading or resize the columns.

**Note:** The actions you can perform are also determined by your access to the data as defined by the **Field Usage** information entered by the administrator in the data view record. The column headings in the table are obtained from the table's **Field Description** information for the panel layout/data view. The columns are presented left to right in the order (top to bottom) they are included in the table. Fields that are not displayable (that is, hidden fields) are not shown.

### Performing Actions on the Table

In the Desktop, the actions you can perform on the table depend on the panel type of the task that you selected (**Display, Create, or Update**), as well as the Field Usage values of the fields in the table. For example, if you are displaying a record, you can display the table, but you cannot change any data in the table. If you are creating or updating a record, you can only add or update data for fields in the table that you are allowed to edit. In addition, some actions are not available if you have restricted access to the fields in the table. For example, if some fields in a table are display-only or are hidden, you will not be able to delete rows from the table.

---

In the **Display** panel type, the fields you are authorized to view are displayed, and the table is display-only. You can sort data by clicking on a column heading, but the sorted data is not saved in its new order when you close the table. You can select **File** and then **Print Table** to print the table. You can select **File** and then **Close** to close the table.

In the **Create** and **Update** panel types, the fields you are authorized to view are displayed, and the fields you are authorized to edit are editable. You can sort data by clicking on a column heading, and the sorted data is saved in its new order when you close the table (as long as all the fields are not display-only). You can select **File** and then **Print Table** to print the table. You can select **File** and then **Close** to save changes and close the table. You can select **File** and then **Cancel** to cancel changes and close the table.

In the **Create** and **Update** panel types, the following conditions determine what actions you can perform:

- If all the fields are display-only, the table is presented as if it were in a **Display** panel type.
- If there are any hidden fields, you cannot add, move, copy, or delete, but you can update any editable fields.
- If there are any display-only fields, you cannot copy or delete, but you can add, update and move.

Depending on the above conditions, some or all of the following actions are available in the **Create** and **Update** panel types.

- To add a row to the bottom of a table, select **Actions** and then **Add Row**.  
An information pane displays with the fields for the new row. Fields are managed in the same manner that they are on the middle pane of the Desktop. Enter the information for the new row.
  - Select **File** and **Close** to save the new row. The new row is added to the bottom of the table.
  - Select **File** and **Cancel** to cancel the new row.
  - Select **File** and **Cancel All** to cancel the new row.
- To insert a row anywhere other than the bottom of a table, select the row where you want the new row to be inserted. Then select **Actions** and **Add Row**.  
An information pane displays with the fields for the new row. Fields are managed in the same manner that they are on the middle pane of the Desktop. Enter the information for the new row.  
You can add multiple rows. An information pane is displayed for each new row until there are no more rows for update or until you select **File** and **Cancel All** to cancel the current add and all pending adds.
  - Select **File** and **Close** to save the new row. The new row is inserted at the position you selected, and the row originally selected is moved down.
  - Select **File** and **Cancel** to cancel the new row.
  - Select **File** and **Cancel All** to cancel the new row and all pending rows to be added.
- To update a row, select a row and then select **Actions** and **Update Row**. An information pane displays with editable fields containing the data for the selected row. Fields are managed in the same manner that they are on the middle pane of the Desktop.

You can select multiple rows to be updated. An information pane is displayed for each selected row until there are no more rows for update or until you select **File** and **Cancel All** to cancel updates for the current row and all pending rows.

- Select **File** and **Close** to save the updates for the row.
  - Select **File** and **Cancel** to cancel the updates for the row.
  - Select **File** and **Cancel All** to cancel the updates for the row and all pending row updates.
- To move a row or a block of rows, select the row or block of rows to be moved, and then select **Actions** and **Move Row**.  
The table is displayed again.
    - Select the row you want the row or rows moved before, and select **Actions** and then **Before** to move the row or rows before the selected row.
    - Select the row you want the row or rows moved after, and select **Actions** and then **After** to move the row or rows after the selected row.
  - To copy a row or a block of rows, select the row or block of rows to be copied, and then select **Actions** and **Copy Row**.  
The table is displayed again.
    - Select the row you want the row or rows copied before, and select **Actions** and then **Before** to copy the row or rows before the selected row.
    - Select the row you want the row or rows copied after, and select **Actions** and then **After** to copy the row or rows after the selected row.
  - To delete a row, select one or more rows to be deleted and select **File** and **Delete Row**.

**Note:** If the table is empty, then all actions except **Add Row** (if it is available) are disabled.

When you are finished working with the table, select **File** and then **Close** to save your changes and close the frame. If you do not want to save your changes, select **File** and then **Cancel** to cancel the changes and close the frame.

## Parent and Child Records

On a Create, Update, or Display panel which has been enabled for the parent/child function by your Desktop administrator, you can click the button associated with the Show Children function (as defined by your Desktop administrator) to view the relationship between a parent record and one or more child records. Administrative information about how to enable this function can be found in “Enabling the Parent/child Function” on page 152. If enabled, this button displays a panel that shows all the child records associated with a parent record and allows you to create, update, display, or delete child records.

To access a table list of child records associated with a parent record:

1. Select a parent record task from the left pane of the Desktop. The button associated with the Show Children function appears on the panel, but is not yet enabled.
2. Enter a valid record number in the **Record Number Identifier (RNID)** field of the parent record.
3. Click in the next available field so that the **RNID** field loses focus. The button associated with the Show Children function should now be enabled.

- Click the button associated with the Show Children function. If the RNID entered is not valid, an error message is issued.

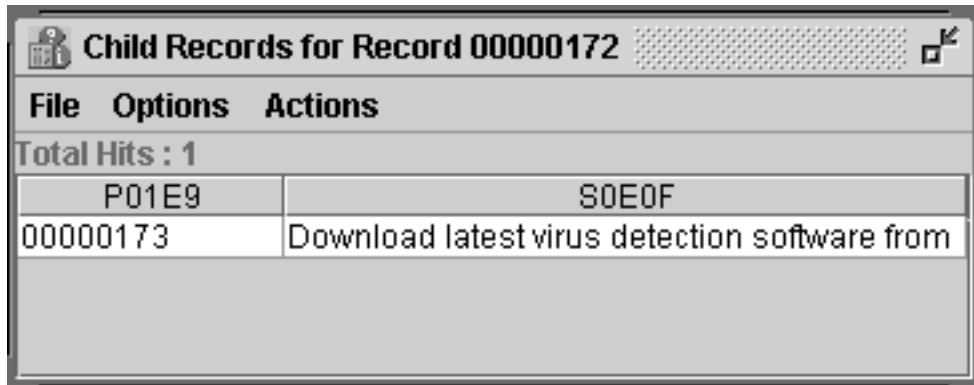


Figure 68. Child Records Window

- If the RNID is valid, the New Child Record window appears. This window contains a table list of child records associated with the parent record. This window can be repositioned within the Desktop application as desired and reduced to an icon by clicking the minimize button in the upper right corner of the window. You can print individual records from the table list by selecting one or more of the table records and right-clicking on the selected record or records.

**Note:** Only one New Child Record window per parent record can be displayed at a time. However, you can display multiple New Child Record windows if each one represents the child of a different parent record.

The New Child Record window menu bar contains the following pull-down menu options:

- Select **File** and then **Print** to print the entire table list of child records.
- Select **File** and then **Close** to close the child record window.
- Select **Options** and then **Select Columns** to select the columns you want to appear in the table list of child records. Click the check box for the desired column heading to select it. If a check box is not selected, the column associated with that column heading will be hidden in the table list.

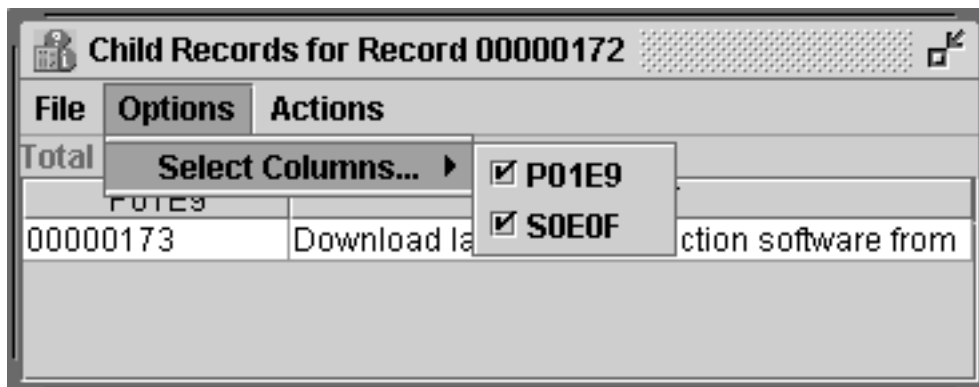


Figure 69. Child Records Window Options Menu

- Select **Actions** and then **Create** to create child records.

- Select **Actions** and then **Update** to update child records.
- Select **Actions** and then **Display** to display child records.
- Select **Actions** and then **Delete** to delete child records.

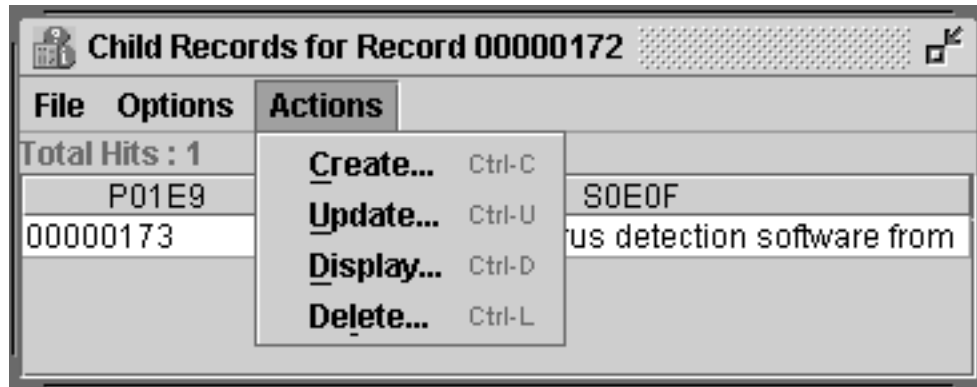


Figure 70. Child Records Window Actions Menu

The **Actions** options are discussed in the remainder of this section.

## Creating a Child Record

To create a child record from the New Child Record window:

1. Select **Actions** and then **Create**. An empty child record is displayed. The parent RNID number is not enabled on the child record and cannot be changed.
2. Enter the appropriate data in the fields of the child record.  
You can select **Actions** and then **Clear** to clear all fields in the record except the RNID.
3. Select **Actions** and then **Create**. The new child record is created. If the record number field exists on the panel, a record number is generated and displayed.
4. Repeat the create process to create other child records as desired.
5. Select **File** and then **Close** when finished. The table list in the New Child Record window is refreshed to reflect the new records.

## Updating a Child Record

To update a child record from the New Child Record window:

1. Select one or more records for update from the child record table list.
2. Select **Actions** and then **Update**. The first selected child record is displayed and locked for update. The parent RNID number and the unique name associated with the parent record are not enabled on the child record and cannot be changed.
3. Update the selected child record by making the desired changes to the record.
4. Select **Actions** and then **Update** to commit the update.
5. Repeat the update process for other child records in the list as desired.
6. Select **File** and **Close** when finished to return to the table list of child record panels.

If you have selected multiple records for update, the following options are also enabled:

- Select **Actions** and then **Next** to unlock the current record (if it is not already unlocked) and retrieve, display, and lock the next selected record in the child record table list.
- Select **Actions** and then **Previous** to unlock the current record (if it is not already unlocked) and retrieve, display, and lock the previously selected record in the child record table list.

### Displaying a Child Record

To display a child record from the New Child Record window:

1. Select one or more records for display from the child record table list.
2. Select **Actions** and then **Display**. The first selected child record is displayed. No fields are enabled for change.
3. Select **Actions** and then **Next** or **Previous** to display the next or previous child record selected for display.
4. Select **File** and then **Close** when finished.

### Deleting a Child Record

To delete a child record from the New Child Record window:

1. Select one or more child records for deletion from the child record table list.
2. Select **Actions** and then **Delete**. The first selected child record is displayed.
3. Select **Actions** and then **Verify Delete** to delete the currently displayed child record. After the record is deleted, the next selected child record is displayed, if one exists. You can also select **Actions** and then **Verify Multiple Delete** to delete all of the selected child records.
4. Select **File** and then **Close** when finished to return to the table list of child records. The list is refreshed to reflect the deletions.



## REXX EXECs

The following is a list of the commonly used REXX EXECs which support the basic functions of the Desktop.

*Table 24. Commonly used Desktop REXX EXECs*

REXX EXEC	Function
BLMWAUTH	Retrieves all authorization codes for a specified privilege class record
BLMWBHLP	Builds HTML help file from help text in a specified data attribute record
BLMWCKID	Retrieves privilege class records for a specified application ID
BLMWCLDT	Returns the current date, time, and time zone
BLMWCMAC	Creates a record
BLMWCSOL	Creates a solution record
BLMWDFDT	Returns the default date format and time zone
BLMWDMAC	Deletes a record
BLMWFMAC	Builds create record string from multiple transaction sends
BLMWGMAC	Retrieves an external record ID (RNID)
BLMWGPRI	Retrieves a privilege class record and stores selected field data in stem variable
BLMWHIST	Retrieves record history data
BLMWKWS	Performs a record search
BLMWNGET	Retrieves data view record information
BLMWRAPP	Approves or rejects a change for the specified privilege class
BLMWRLCK	Retrieves and locks a specified record
BLMWRMAC	Retrieves a specified record
BLMWR SOL	Checks a problem record and retrieves data for a solution record
BLMWSEDEV	Retrieves a data view record and stores selected field data in stem variable
BLMWSINI	Establishes a host session and sets REXX global variables
BLMWSWRT	Routes a form request to correct REXX routine to process a form sent by the browser
BLMWTKWS	Invokes a user-specified TSX that returns a search results list
BLMWTMAC	Invokes a user-specified TSX
BLMWULCK	Unlocks a specified record
BLMWUMAC	Updates a specified record
BLMWVTZL	Returns the valid time zone list







## Where to Find More Information

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The Tivoli Information Management for z/OS library is an integral part of Tivoli Information Management for z/OS. The books are written with particular audiences in mind. Each book covers specific tasks.

### The Tivoli Information Management for z/OS Library

The publications shipped automatically with each Tivoli Information Management for z/OS Version 7.1 licensed program are:

- *Tivoli Information Management for z/OS Application Program Interface Guide*
- *Tivoli Information Management for z/OS Client Installation and User's Guide \**
- *Tivoli Information Management for z/OS Data Reporting User's Guide \**
- *Tivoli Information Management for z/OS Desktop User's Guide*
- *Tivoli Information Management for z/OS Diagnosis Guide \**
- *Tivoli Information Management for z/OS Guide to Integrating with Tivoli Applications \**
- *Tivoli Information Management for z/OS Integration Facility Guide \**
- *Tivoli Information Management for z/OS Licensed Program Specification*
- *Tivoli Information Management for z/OS Master Index, Glossary, and Bibliography*
- *Tivoli Information Management for z/OS Messages and Codes*
- *Tivoli Information Management for z/OS Operation and Maintenance Reference*
- *Tivoli Information Management for z/OS Panel Modification Facility Guide*
- *Tivoli Information Management for z/OS Planning and Installation Guide and Reference*
- *Tivoli Information Management for z/OS Program Administration Guide and Reference*
- *Tivoli Information Management for z/OS Problem, Change, and Configuration Management\**
- *Tivoli Information Management for z/OS Reference Summary*
- *Tivoli Information Management for z/OS Terminal Simulator Guide and Reference*
- *Tivoli Information Management for z/OS User's Guide*
- *Tivoli Information Management for z/OS World Wide Web Interface Guide*

**Note:** Publications marked with an asterisk (\*) are shipped in softcopy format only.

Also included is the Product Kit, which includes the complete online library on CD-ROM.

To order a set of publications, specify order number SBOF-7028-00.

Additional copies of these items are available for a fee.

Publications can be requested from your Tivoli or IBM representative or the branch office serving your location. Or, in the U.S., you can call the IBM Publications order line directly by dialing 1-800-879-2755.

The following descriptions summarize all the books in the Tivoli Information Management for z/OS library.

***Tivoli Information Management for z/OS Application Program Interface Guide***, SC31-8737-00, explains how to use the low-level API, the high-level API, and the REXX interface to the high-level API. This book is written for application and system programmers who write applications that use these program interfaces.

***Tivoli Information Management for z/OS Client Installation and User's Guide***, SC31-8738-00, describes and illustrates the setup and use of Tivoli Information Management for z/OS's remote clients. This book shows you how to use Tivoli Information Management for z/OS functions in the AIX<sup>®</sup>, CICS<sup>®</sup>, HP-UX, OS/2<sup>®</sup>, Sun Solaris, Windows NT, and OS/390 UNIX System Services environments. Also included in this book is complete information about using the Tivoli Information Management for z/OS servers.

***Tivoli Information Management for z/OS Data Reporting User's Guide***, SC31-8739-00, describes various methods available to produce reports using Tivoli Information Management for z/OS data. It describes Tivoli Decision Support for Information Management (a Discovery Guide for Tivoli Decision Support), the Open Database Connectivity (ODBC) Driver for Tivoli Information Management for z/OS, and the Report Format Facility. A description of how to use the Report Format Facility to modify the standard reports provided with Tivoli Information Management for z/OS is provided. The book also illustrates the syntax of report format tables (RFTs) used to define the output from the Tivoli Information Management for z/OS REPORT and PRINT commands. It also includes several examples of modified RFTs.

***Tivoli Information Management for z/OS Desktop User's Guide***, SC31-8740-00, describes how to install and use the sample application provided with the Tivoli Information Management for z/OS Desktop. The Tivoli Information Management for z/OS Desktop is a Java-based graphical user interface for Tivoli Information Management for z/OS. Information on how to set up data model records to support the interface and instructions on using the Desktop Toolkit to develop your own Desktop application are also provided.

***Tivoli Information Management for z/OS Diagnosis Guide***, GC31-8741-00, explains how to identify a problem, analyze its symptoms, and resolve it. This book includes tools and information that are helpful in solving problems you might encounter when you use Tivoli Information Management for z/OS.

***Tivoli Information Management for z/OS Guide to Integrating with Tivoli Applications***, SC31-8744-00, describes the steps to follow to make an automatic connection between NetView<sup>®</sup> and Tivoli Information Management for z/OS applications. It also explains how to customize the application interface which serves as an application enabler for the NetView Bridge and discusses the Tivoli Information Management for z/OS NetView AutoBridge. Information on interfacing Tivoli Information Management for z/OS with other Tivoli management software products or components is provided for Tivoli Enterprise Console<sup>®</sup>, Tivoli Global Enterprise Manager, Tivoli Inventory, Tivoli Problem Management, Tivoli Software Distribution, and Problem Service.

***Tivoli Information Management for z/OS Integration Facility Guide***, SC31-8745-00, explains the concepts and structure of the Integration Facility. The Integration Facility provides a task-oriented interface to Tivoli Information Management for z/OS that makes the

Tivoli Information Management for z/OS applications easier to use. This book also explains how to use the panels and panel flows in your change and problem management system.

***Tivoli Information Management for z/OS Master Index, Glossary, and Bibliography***, SC31-8747-00, combines the indexes from each hardcopy book in the Tivoli Information Management for z/OS library for Version 7.1. Also included is a complete glossary and bibliography for the product.

***Tivoli Information Management for z/OS Messages and Codes***, GC31-8748-00, contains the messages and completion codes issued by the various Tivoli Information Management for z/OS applications. Each entry includes an explanation of the message or code and recommends actions for users and system programmers.

***Tivoli Information Management for z/OS Operation and Maintenance Reference***, SC31-8749-00, describes and illustrates the BLX-SP commands for use by the operator. It describes the utilities for defining and maintaining data sets required for using the Tivoli Information Management for z/OS licensed program, Version 7.1.

***Tivoli Information Management for z/OS Panel Modification Facility Guide***, SC31-8750-00, gives detailed instructions for creating and modifying Tivoli Information Management for z/OS panels. It provides detailed checklists for the common panel modification tasks, and it provides reference information useful to those who design and modify panels.

***Tivoli Information Management for z/OS Planning and Installation Guide and Reference***, GC31-8751-00, describes the tasks required for installing Tivoli Information Management for z/OS. This book provides an overview of the functions and optional features of Tivoli Information Management for z/OS to help you plan for installation. It also describes the tasks necessary to install, migrate, tailor, and start Tivoli Information Management for z/OS.

***Tivoli Information Management for z/OS Problem, Change, and Configuration Management***, SC31-8752-00, helps you learn how to use Problem, Change, and Configuration Management through a series of training exercises. After you finish the exercises in this book, you should be ready to use other books in the library that apply more directly to the programs you use and the tasks you perform every day.

***Tivoli Information Management for z/OS Program Administration Guide and Reference***, SC31-8753-00, provides detailed information about Tivoli Information Management for z/OS program administration tasks, such as defining user profiles and privilege classes and enabling the GUI user interface.

***Tivoli Information Management for z/OS Reference Summary***, SC31-8754-00, is a reference booklet containing Tivoli Information Management for z/OS commands, a list of p-words and s-words, summary information for PMF, and other information you need when you use Tivoli Information Management for z/OS.

***Tivoli Information Management for z/OS Terminal Simulator Guide and Reference***, SC31-8755-00, explains how to use terminal simulator panels (TSPs) and EXECs (TSXs) that let you simulate an entire interactive session with a Tivoli Information Management for z/OS program. This book gives instructions for designing, building, and testing TSPs and TSXs, followed by information on the different ways you can use TSPs and TSXs.

*Tivoli Information Management for z/OS User's Guide*, SC31-8756-00, provides a general introduction to Tivoli Information Management for z/OS and databases. This book has a series of step-by-step exercises to show beginning users how to copy, update, print, create, and delete records, and how to search a database. It also contains Tivoli Information Management for z/OS command syntax and descriptions and other reference information.

*Tivoli Information Management for z/OS World Wide Web Interface Guide*, SC31-8757-00, explains how to install and operate the features available with Tivoli Information Management for z/OS that enable you to access a Tivoli Information Management for z/OS database using a Web browser as a client.

Other related publications include the following:

*Tivoli Decision Support: Using the Information Management Guide* is an online book (in portable document format) that can be viewed with the Adobe Acrobat Reader. This book is provided with Tivoli Decision Support for Information Management (5697-IMG), which is a product that enables you to use Tivoli Information Management for z/OS data with Tivoli Decision Support. This book describes the views and reports provided with the Information Management Guide.

IBM Redbooks™ published by IBM's International Technical Support Organization are also available. For a list of redbooks related to Tivoli Information Management for z/OS and access to online redbooks, visit Web site <http://www.redbooks.ibm.com> or <http://www.support.tivoli.com>

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# Index

## A

- actions menu search 69, 74
- activity records 63
- adding icons, Toolkit 137
- application help hierarchy 172
- application hierarchies
  - changing 141
  - creating 140
  - default 12
  - naming 162
  - saving 162
- Approver Data icon 57
- Assignee Data icon 56
- Assignee icon 49
- Associate Problem to Call icon
  - lock and unlock 52
- associating
  - button properties 145
  - data attribute records 92
  - data properties 142
  - panel types 143
- attaching files to records 37
- authorization code 95
- automatic retrieval 90

## B

- BLG0V700, Data Attribute Record Entry 89
- BLG0V730, Panel Flow Update 90
- BLG0VU60, Data View Summary 93, 95
- BLG0VU70, Data Attribute Summary 89
- BLGDVLAY, TSX 178
- BLGLDATT, Data Attribute Records Entry 89, 93
- BLGLFGFL, Field Group Field List Entry 104
- BLGLFGIN, Desktop Field Group Entry 103, 107
- BLGLTSFL, Task Field List Entry 111
- BLGLTSIN, Desktop Panel Layout Definition 110
- BLGTDMBL, TSX 130
- BLHRCDSL, TSX 10
- BLM0B000, People Summary 207
- BLM0B001, People Record 206
- BLM0B002, Contact Information 208
- BLM0S010, Call Summary Display 210
- building
  - application hierarchies 140
  - data model records, TSX 130
- button definition, Toolkit 145

## C

- calendar icon 37
- call registration 41
- Call Taker icon 42
- Caller icon 41
- Calls icon, Search 71
- center pane 23
- center pane search 69, 71
- change approval
  - administrator overview 124
  - Desktop user overview 77
- Change Registration icon 55
- changing the Desktop application 132
- child records
  - creating 215
  - deleting 216
  - displaying 216
  - updating 215
- Close Data icon 57
- collapsing hierarchy 138
- configuration editor 3, 21
- configuration file 4
- copying data 25
- Create Call icon 44
- Create icon, People Registration 64
- Create Problem icon 51
- Create R task 123
- Create Solution icon 67
- customizing the Desktop application 132

## D

- data attribute records 85
  - associating 92
  - creating 88
- data flow, Desktop 3
- data model records
  - associating data attribute, data view records 92
  - changing on host 132
  - Desktop application 131
  - installing on host 10
  - list of, Desktop 177
  - role in Desktop 2
  - tool for building 130
  - types of 85
  - understanding 86
- data properties, associating 142
- data view records
  - associating with Toolkit icons 142
  - overview 85
- database functions, Desktop 3
- default hierarchy properties 199

---

- defining buttons 145
- deleting Toolkit icons 138
- design procedure 175
- designing an application 85
- Desktop
  - application design 175
  - description 1
  - Desktop field groups, defining 96, 101
  - Desktop panel layouts, defining 96, 108
  - Desktop tables, defining 95, 98
  - exporting files 80, 81
  - importing files 80
  - installing 7
  - prerequisites 7
  - program exits 91
  - using 19
- Detail Description icon 48
- dialogs
  - Add Button Data 146
  - Associated Data View Records 143
  - Button List 145
  - Export File 162
  - Export Files 164
  - Import File 162
  - Import Files 165
  - Load 142
  - Rename 142
  - Smart Map 154
- Display R task 120
- drag, drop 25

- E**
- error logs 36
- error messages 33
- errors, communicating with support 36
- expanding hierarchy 138
- exporting files 81, 162, 164

- F**
- family, description 144
- field attributes 132
- field design 3
  - combo box 87
  - dates and calendars 87
  - entry fields 86
  - freeform text 87
  - list data fields 87
  - required fields 87
- field help 27
  - building 158
- field labels 132
- field mapping, smart 78, 153
- field usage values 106, 113
- files, installing 13
- filing records 39

- freeform search 68, 74
- functions, defining panel 143

- G**
- General Information icon 47
- GETAPIDATA control line 167
- graphical components, Toolkit 134

- H**
- hardware requirements
  - Desktop 7
- help
  - about Desktop 27
  - Desktop 27
  - Desktop messages 27
  - field help 27
  - Toolkit 138
- help hierarchy, building 172
- help hierarchy, previewing 174
- hierarchy, processes and tasks 132
- history of a record 79
- host, setting up Desktop 8
- HTTP Server 5, 8

- I**
- icon tree 23
- icons
  - navigating 39
  - process 23, 135
  - task 23, 135
  - toolbar 138
- importing files 80, 162, 165
- IMWX00, REXX DLL 9
- inserting icons, Toolkit 137
- installing
  - Desktop 7
  - Toolkit 12
- invoking TSPs or TSXs 2

- L**
- leaf-level icon 108
- list, data model records 177
- list data fields 87
- list field data 211
- loading data model records 10
- locking and unlocking
  - with Associate Problem to Call 52
  - with People Records 65

---

- locking and unlocking (*continued*)
  - with Update Call Registration 45
  - with Update Change Registration 60
  - with Update Problem Registration 53
- locking records 34
- logging on
  - Desktop 20
  - Toolkit 132
- logs, error 36
- logs, trace 36

## M

- mapping smart fields 78, 153
- menu bar
  - Desktop 26
  - sample application 19
  - Toolkit 136
- messages
  - trace, for debugging 36
  - transaction 36
  - validation errors 33

## P

- panel function 143
- panel type definition, Toolkit 143
- panel types 138, 143
- panes
  - application hierarchy 135
  - Preview 135
  - Properties 135
  - required field processing 144
  - sizing 135
- parent and child records 213
- parent/child function, enabling 152
- parenthetical searches 76
- People icon, Search 72
- people registration 64
- pop-up menu, Toolkit 138
- preferences, setting 28
- previewing application hierarchies 152
- problem registration 47
- Problem Solution Data icon 66
- Problems icon, Search 71
- PROC, Webserver start-up 167
- process icons 23, 135
- program exits, Desktop 91
- progress indicator 139
- properties
  - buttons 135
  - data view records 135
  - sample application 199

## Q

- quick search 120

## R

- rearranging columns, searches 76
- record history, how to view 79
- refreshing Toolkit hierarchy 138
- registering
  - calls 41
  - people 64
  - problems 47
- renaming Toolkit text labels 137
- Requester Data icon 55
- required fields 87, 144
- resetting data 35
- REXX components 5, 8
- REXX EXECs, commonly used 217
- REXX functions 143, 146

## S

- sample Desktop application 1
- saving application hierarchies 162
- SBLMRCDS data set 10
- search results display
  - customizing 120
  - overview 24
- search results list 72
- searching for data 68
- security, Desktop 2
- SETAPIDATA control line 167
- setting user preferences 28
- show children function
  - enabling 152
  - using 213
- smart field, mapping 78, 153
- solution records
  - creating 66
  - enabling 160
  - Toolkit tasks 160
- status bar, sample application 36
- status line, Toolkit 139
- stopping communications 28
- summary of tasks 39

## T

- table panel selection 69
- Table Panels 150
- task icons 23, 135
- tasks, defining 96, 108
- terminal simulator EXEC (TSX) 2, 90, 167
- terminal simulator panel (TSP) 2, 90, 167

---

Text Data icon 59  
Tivoli Information Management for z/OS Desktop window 23  
tool, data model record builder 130  
toolbar  
    Desktop 27  
    Toolkit 138  
Toolkit  
    associating button properties 145  
    associating data properties 142  
    associating tasks with panel type 143  
    building application hierarchies 140  
    building field level help 158  
    changing application hierarchies 141  
    defining table panels 150  
    deleting icons 138  
    description 2, 131  
    enabling the parent/child function 152  
    exporting files to HTTP Server 164  
    getting files from the HTTP Server 162  
    graphical components 134  
    help 138  
    icons 135  
    importing files 165  
    installing 12  
    logging on 132  
    prerequisites 12  
    previewing application hierarchies 152  
    saving application hierarchies 162  
    sending files to HTTP Server 162  
    using with an application hierarchy 140  
    using with application help 172  
    window 133  
trace logs 36  
transacting, Tivoli Information Management for z/OS 36  
TSPs 2  
    invoking 87, 90  
TSXs 2  
    BLGDVLAY 178  
    BLGTDMBL 130  
    BLHRCDSL 10  
    invoking 87, 90

## U

UNIX environment, Desktop 5  
Update Approver Data icon 62  
Update Assignee Data icon 61  
Update Assignee icon 54  
Update Call icon 46  
Update Call Taker icon 46  
Update Caller icon 45  
Update Change Registration icon 60  
Update Close Data icon 61  
Update Detail Description icon 54  
Update General Information icon 53  
Update icon, People Registration 65  
Update R task 123  
Update Requester Data icon 61  
Update Text Data icon 62

updating  
    calls 45  
    problems 53  
user export option, enabling 162  
user preferences, setting 28

## V

validation errors 33

## W

window description 23  
windows, manipulating 19  
work area 23  
writing TSPs and TSXs 167







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