Information Management for z/OS

Problem, Change, and Configuration Management

Version 7.1

SC31-8752-00
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Preface

This book explains how to use the Problem Management, Change Management, and Configuration Management facilities of Tivoli® Information Management for z/OS. You can use this book as an educational tool and as a user’s guide.

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
- Tivoli Service Desk for OS/390® Version 1.2

Who Should Read This Guide

The prerequisites for using this book are that you understand how to use Tivoli Information Management for z/OS and that you are familiar with problem, change, and configuration management concepts. If you need a better understanding of Tivoli Information Management for z/OS, refer to the Tivoli Information Management for z/OS User’s Guide.

This book is intended to help you learn how to manage problems, changes, and the configuration of the data processing system of your organization. It primarily contains step-by-step instructions on creating, updating, searching, and generating reports on problem, change, and configuration records.

Prerequisite and Related Documentation

The library for Tivoli Information Management for z/OS Version 7.1 consists of these publications. For a description of each, see “The Tivoli Information Management for z/OS Library” on page 347.

- Tivoli Information Management for z/OS Application Program Interface Guide, SC31-8737-00
- Tivoli Information Management for z/OS Client Installation and User’s Guide, SC31-8738-00
- Tivoli Information Management for z/OS Data Reporting User’s Guide, SC31-8739-00
- Tivoli Information Management for z/OS Desktop User’s Guide, SC31-8740-00
- Tivoli Information Management for z/OS Diagnosis Guide, GC31-8741-00
- Tivoli Information Management for z/OS Guide to Integrating with Tivoli Applications, SC31-8744-00
- Tivoli Information Management for z/OS Integration Facility Guide, SC31-8745-00
- Tivoli Information Management for z/OS Licensed Program Specification, GC31-8746-00
- Tivoli Information Management for z/OS Master Index, Glossary, and Bibliography, SC31-8747-00
- Tivoli Information Management for z/OS Messages and Codes, GC31-8748-00
- Tivoli Information Management for z/OS Operation and Maintenance Reference, SC31-8749-00
Prerequisite and Related Documentation

- **Tivoli Information Management for z/OS Panel Modification Facility Guide**, SC31-8750-00
- **Tivoli Information Management for z/OS Planning and Installation Guide and Reference**, GC31-8751-00
- **Tivoli Information Management for z/OS Problem, Change, and Configuration Management**, SC31-8752-00
- **Tivoli Information Management for z/OS Program Administration Guide and Reference**, SC31-8753-00
- **Tivoli Information Management for z/OS Reference Summary**, SC31-8754-00
- **Tivoli Information Management for z/OS Terminal Simulator Guide and Reference**, SC31-8755-00
- **Tivoli Information Management for z/OS User’s Guide**, SC31-8756-00
- **Tivoli Information Management for z/OS World Wide Web Interface Guide**, SC31-8757-00

**Note:** Tivoli is in the process of changing product names. Products referenced in this manual may still be available under their old names (for example, TME 10 Enterprise Console instead of Tivoli Enterprise Console®).

### What This Guide Contains

This book is divided into the following sections:

- "What You Need to Know Before Using Tivoli Information Management for z/OS” on page 1 explains some aspects of Tivoli Information Management for z/OS that you need to keep in mind as you use the rest of the book.

- The section on Problem Management begins with "Introducing Problem Management” on page 7, and subsequent chapters describe the problem management process and how to work with problem records.

- The section on Change Management begins with "Introducing Change Management” on page 41; subsequent chapters describe the change management process and how to work with change records.

- The section on Configuration Management begins with "Introducing Configuration Management” on page 75; it and the chapters following describe the configuration management process and how to work with configuration records.

- "Displaying Tivoli Information Management for z/OS Records” on page 241 begins a brief section which describes how to work with Tivoli Information Management for z/OS Records, and how to display, search, and print reports for problem, change, and configuration records.

### How Information Is Presented in This Book

Commands such as END, CONTROL, RESUME, and FIELD appear in capital letters. Although not commands, the user responses YES and NO also appear in capital letters.

Some sample entries in this book contain two consecutive commas. These are not typographical errors: they are part of immediate response chains (IRCs). For more information on IRCs, refer to the [Tivoli Information Management for z/OS User’s Guide](#).
The examples shown in this book assume that you are running under MASTER privilege class, which has master class authority. If you choose to follow the examples using your own data, use the master privilege class appropriate to your organization’s implementation.

The panels represented in this book are base Tivoli Information Management for z/OS panels. They are not meant to be exact replicas of how the panels appear on the screen. The information is correct, but the spacing is not always exact.

The panels shown are examples of the panels as IBM® shipped them. Changes made by your organization are not taken into consideration.

Contacting Customer Support

For support inside the United States, for this or any other Tivoli product, contact Tivoli Customer Support in one of the following ways:

- Send e-mail to support@tivoli.com
- Call 1-800-TIVOLI8
- Navigate our Web site 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.
What You Need to Know Before Using Tivoli Information Management for z/OS

Tivoli Information Management for z/OS observes certain conventions and provides certain services that apply to all types of records.

Data Security

After you define what aspects of your enterprise that Tivoli Information Management for z/OS is to handle and what types of data you need to collect, you should establish procedures for ensuring data security. Tivoli Information Management for z/OS provides two methods for securing data, privilege classes and record ownership. In addition, Tivoli Information Management for z/OS provides logical database partitioning which allows you to divide your database into partitions that are isolated from one another. Users can access only the records in partitions they are authorized for through their privilege class. Refer to the Tivoli Information Management for z/OS Program Administration Guide and Reference for more information on logical database partitioning.

Privilege Classes

Assigning a user to a privilege class authorizes that user to perform specific tasks and access certain facilities. Your organization does not have to use privilege classes, but it is recommended that you create at least a master privilege class. If you do not create a privilege class, all users have the authority to perform every task, including working with stored response chains (SRCs) and privilege class records.

You can authorize users to use Tivoli Information Management for z/OS data through privilege classes. A Tivoli Information Management for z/OS privilege class record identifies the privilege class to which a specific individual or group of individuals belongs. A user can perform only the functions permitted by that privilege class, such as accessing a database, making changes, or displaying and updating fields in records.

The first privilege class that you define to Tivoli Information Management for z/OS becomes the master class. This privilege class can perform all Tivoli Information Management for z/OS functions.

You can define a privilege class for either an individual or a group of users. Because it is often desirable for several users to have access to the same data (if they have similar or complementary job responsibilities), you might want to assign them to the same privilege class. For example, system operators and system programmers might share the same privilege class.
Record Ownership

Your organization can decide to control changes to data records through record ownership. The decision to use ownership for records is based on the amount of data security your organization needs. If it is important to limit the number of users who can update or delete a particular record, that record should be transferred to an owner with update or delete authority.

Tivoli Information Management for z/OS enables you to require that users in specified privilege classes approve changes before implementation. Approver privilege classes for the corresponding change request records should not have update authority. However, because Tivoli Information Management for z/OS neither restricts nor enforces the use of record ownership, it is your responsibility to establish your own standards and enforce those standards within your organization.

If you decide to use ownership, each privilege class to which a record can be transferred must be given update authority so that the record can be transferred to it. Once ownership is established, only users defined in the owning, the transfer-to, and the master privilege classes are authorized to update the record. Likewise, if a record is owned, only the master privilege class and the owning privilege class with delete authority can delete it.

To establish initial ownership of a record, a member of a privilege class with create or update authority for the record type must enter the name of the desired privilege class in the record’s transfer-to field and file the record. Note that the record can be transferred only to a privilege class that has update authority. When the record is filed, the privilege class that created the record (if it is a new record) or updated the record is immediately assigned ownership.

If a user transfers the record to the user’s current class, the transfer-to field is cleared when the record is filed. If a user transfers the record to a class other than the user’s current class, Tivoli Information Management for z/OS clears the transfer-to field, and ownership of the record is reassigned when a member of the transfer-to privilege class accesses the record in update mode and subsequently files it.

If the user who creates a record does not specify an owner, any user with update authority for that record type can assign ownership of the record to himself at any time. Once ownership is assigned, only a user identified in the owning privilege class or the master privilege class can transfer ownership to another privilege class.

Features Common to All Records

Some areas of Tivoli Information Management for z/OS apply to all or most types of records.

Entry and Display Conventions

Tivoli Information Management for z/OS allows only certain values in many Tivoli Information Management for z/OS fields. If you enter a disallowed value for a field, an assisted-entry panel appears that describes allowable values and format for the field entry. In this case, Tivoli Information Management for z/OS does not return you to the prompting sequence until you enter an allowable value. If you need additional help to determine what is allowable, enter the ;HELP VALIDATE command on the assisted-entry panel.
If you do not enter a value for a record identifier field, Tivoli Information Management for z/OS assigns its own identifier for the record.

Program messages can appear on Tivoli Information Management for z/OS panels with or without plus (+) signs attached. A plus sign before the message indicates that there are additional messages that are not currently displayed. A plus sign after the message indicates that there is additional text for the message that is not currently displayed. You can access the additional information by typing help on the command line and pressing Enter.

On many panels, you can enter some types of information more quickly by substituting an equal (=) sign. For example, to enter today’s date into field 4 of the current panel, you can type 4,= on the command line and press Enter.

The List Processor and Line Commands

Some panel dialogs use the list processor program exit (BLG01396). The data entry panel appears as a table display, with distinct line command and data areas. Panel BLGLDVNA, Device Name Entry, is an example.

For those panels that use the list processor table panel, you can enter information on the panel in several ways:

- Move the cursor to the data area, type the data, and press Enter.
- Type l in the line command area next to where you want the data, type the data on the panel’s command line, and press Enter.
- Use the LINECMD command with the L line command on the panel’s command line (for example, linecmd l, sample data) to enter data into the current line. The current line of the table display is the top line that is visible in a list on the table panel. If you want to enter information on a particular line, you can use the DOWN and UP scroll commands to make that line the current line.
The L line command defaults to the first row of the first column on the table panel. If there are multiple columns on the table panel, you can use the L# command to enter data into a particular column. The # is the number of the column. For example, if there are two columns on the table panel, the leftmost column is column number 1 and the next column is column number 2.

If you need more information on the valid values for a column, you can use the L or L# line command with no data to cause the corresponding assisted-entry panel to appear. Type the l or l # line command in the line command area and press Enter, or type linecmd l or linecmd l# on the panel's command line area and press Enter.

You can use the A and R line commands on the last line of the row to expand it to hold more entries, if necessary. You can use the D line command on any line in the row to delete data from that line.

For more information on the list processor, refer to the Tivoli Information Management for z/OS Panel Modification Facility Guide.

Response Chains
Response chains eliminate the need to progress through the prompting sequence one panel at a time to enter data. You can enter immediate response chains (IRCs) at any time on the panel command line. Stored response chains (SRCs) are command macros that can be invoked from the Primary Options Menu command line. The Tivoli Information Management for z/OS User's Guide contains additional information about response chains.

Creating Records from Models
A model is a record that contains basic information common to a particular set of circumstances. The use of models minimizes data entry.

You can create as many models as you need. Copy an appropriate model and then modify the copy to describe a specific situation. Any user who has entry authority for the record type of the model can copy the model.

For problem and change records, you can simply create a template record and copy it as necessary. Because Configuration Management records can be linked to other records, Tivoli Information Management for z/OS provides data entry panels and functions specifically for model configuration records.

For more information about copying template records, refer to the Tivoli Information Management for z/OS User’s Guide. For more information about configuration model records, see “Understanding Model Record Concepts” on page 129.

Record Updates
When you update records, you change or add data to existing records. There are several ways to update records:

- On the command line, type update r rnid, where rnid is the record identifier.
- Select option 7 from the Primary Options Menu or type update on the command line and press Enter, then select option 5 from the BLG1UT00 Utility panel.

You can also update records from a search results list, as follows:

- Type the U (update) line command next to the record number on search results list display and press Enter.
Update multiple records on a search results list display by entering the UU (block update) line command next to the first and last records in the group of records you want to update. In the process, you sequentially update one record at a time within the block update.

Tivoli Information Management for z/OS maintains a history of changes for selected fields when you update records. You can view each of these changes, as well as the initial value of each field, using the history display for that record. See "History Display" on page 255 for more information.

When you file an updated problem, change request, or activity record, immediate notification occurs.

**Notification Management Facility**

You can monitor database activity by using the Notification Management facility. It performs two functions:

- The immediate notification feature informs you when a problem, change request, or activity record is entered or updated. If you have designated an assignee in the Assignee name field, Tivoli Information Management for z/OS notifies that assignee. Otherwise, Tivoli Information Management for z/OS notifies a default assignee.

- The problem escalation feature shows designated users a problem’s status and priority until that problem is closed. If a problem record was created in a version of Tivoli Information Management for z/OS earlier than Version 4, the record does not contain the Escalation level field. This field is added, however, when you file the record in an installation of Tivoli Information Management for z/OS with a version number of 4 or greater.

You can tailor both of these functions to work within your problem management process. The [Tivoli Information Management for z/OS Program Administration Guide and Reference](#) has more information on notification management.

**Special Fields**

Tivoli Information Management for z/OS distinguishes certain data fields apart from the rest of the data in the record: journal fields for history display, and required fields. You can specify any Tivoli Information Management for z/OS field as a journal field. Journal fields are identified by the symbol <H>, which appear after the field name on a display panel.

When you file a record, Tivoli Information Management for z/OS completes certain fields automatically. These fields include:

- Date entered
- Time entered
- Entry privilege class
- Date last altered
- Time last altered
- User last altered
- Approval status for change

You cannot modify these fields, but you can display, search, or report them. Data entered in these fields is maintained chronologically in the history section of the record.

On some data entry panels, data must be collected for certain fields in order to maintain the record. These **required** fields are denoted by an <R> next to the field name.
Information About Your Installation That You Need to Know

Before you begin a Tivoli Information Management for z/OS session, check with your system administrator about the following items:

Defaults

You may set defaults in your profile to control the sessions, screens, data definitions, and output destinations. Tivoli Information Management for z/OS provides defaults for many of the fields. However, if you do not specify your output destination prior to printing a record or running a report, Tivoli Information Management for z/OS will prompt you for it at the appropriate time.

Privilege Classes

If your organization uses privilege classes to identify users, you must be a member of a privilege class to do many of the functions described in this book. If your user ID is included in several privilege classes, you must choose one to use for your session. If you have only one privilege class, Tivoli Information Management for z/OS automatically uses it.

Your Organization’s Procedures

If your organization has modified panels, reports, or privilege classes, the panel flows in this book may differ from those on your system.

Prerequisite Information

For a full explanation of invocation, profiles, panels, and commands, refer to the Tivoli Information Management for z/OS User’s Guide and the Tivoli Information Management for z/OS Program Administration Guide and Reference.
Introducing Problem Management

Tivoli Information Management for z/OS extends your ability to gather, organize and locate information about your data processing installation. Problem Management is an online Tivoli Information Management for z/OS facility that helps you document, review, monitor, and report problems with any hardware, software, procedure, or publication at your organization.

You can use Problem Management to create a record describing the nature of the problem, the system components the problem affects, the people whose authorization is needed to proceed with problem resolution, the people who need to be notified of the problem, and the date by which the problem must be fixed.

Most of the time, the information you initially supplied can be added to or changed during the course of problem resolution. Any additions and changes you make are then recorded in the problem record. You can retrieve and display such records whenever you need them.

Throughout the problem management process, the search function lets you identify selected problem records. For example, you can identify problems for which you are responsible, the problems that have special needs, or the problems that are to be fixed by a certain date. You can use the data that you have collected to analyze trends and anticipate potential problems.

Using the report function, you can display or print a report of the problem information you identify in a search. You can also monitor the status of problems by using the Notification Management facility.

This chapter describes what comprises a problem management system, and how to plan for and use the Problem Management facility.

A Problem Management System

Before you can use the Problem Management facility of Tivoli Information Management for z/OS, you need to define the mission and scope of your problem management system. The scope of the system is determined by the types of problems your organization plans to handle. The system can be comprehensive and handle problems involving:

- Hardware
- Software
- Environment
- Procedures
- Personnel
- Documentation
A problem management system consists of:

- People, whose goal is minimizing problems and disruptions to you as a user. Your organization assigns a problem manager and coordinator and defines their responsibilities as one of the first steps in setting up the problem management system.
- A process or method for controlling problems and for ensuring that problems are solved.
- Data that is used to track and resolve problems.
- Tools, such as the Problem Management facility of Tivoli Information Management for z/OS that can simplify many of the problem management tasks.

The following sections describe some guidelines you should consider when setting up a problem management system.

**The Problem Control Process**

During the initial planning stage, you need to define the procedures you want to use in resolving problems. These procedures should define guidelines for problem entry, problem handling, and problem management.

**Problem Entry**

Problem entry involves first being aware that a problem exists and then reporting and updating that problem. You recognize a problem through a message, observe differences in how the system or device operates, and run reports to highlight any problem trends. Problem reporting and updating involves documenting the problem and updating information as it becomes available.

**Problem Handling**

To establish standards for problem handling, you should define a process for identifying and isolating the cause of a problem (problem determination), what steps are needed to alleviate the problem condition (problem bypass and recovery), and how you plan to develop and apply the solution for the problem (problem resolution).

**Problem Management**

Managing problems involves monitoring how the organization handles problems and correcting the process as needed.

**Data Requirements for Problem Management**

The data requirements of your problem management system depend on the measurements, indicators, and reports you expect to produce. The amount of data you collect and the level of detail of that data must match the objectives of the management system. For example, if you record detail data and do not use it, the time and effort taken to record it is wasted. On the other hand, if you do not capture enough data, the lack of detailed information can keep you from taking full advantage of the capabilities of the system.
To determine the types of data to collect for problem management, consider not only the data you will use to produce reports, but also the data that you will use in problem determination and resolution. A problem management system is concerned with four types of data:

**Descriptive Data**

Descriptive data outlines what actually happened. It includes problem descriptions, activity descriptions, and other noncoded information. It cannot be used for building statistics or for comparison purposes, because there is no precision in the way it is constructed.

**Problem Determination Data**

Problem determination data is archived for historical purposes and often maintained in freeform and descriptive data. It is usually not reported in the management reports of the problem management system, but it must be collected and maintained if problems are to be resolved efficiently.

Use problem determination data to develop answers to the following questions:
- What failed?
- What can be done to recover from or bypass the failure?
- What can be done to fix the problem?

**Tracking Data**

Tracking data is information about what is happening to the problem. It includes information such as who the problem is currently assigned to, the current activity or phase, escalation level, and the status of the problem. It is the data primarily concerned with the management of the problem-solving process. It provides a chronological view of the problem to determine where, by whom, and how time is being spent. Immediate notification and problem escalation are two tracking tools available for your use.

**Control Data**

Control data is the set of standards used to measure the performance of the other elements of the system. It is presented in reports to show adherence to objectives. It is used in meetings to evaluate action plans. It is the basis for exception reports and escalation actions. Control data establishes the limits that guide the everyday running of the system. Immediate notification and problem escalation are two tools that help you control your problem management process.

**Problem Priority and Severity**

If your problem management system handles a large number of problems, you need to prioritize those problems to indicate relative urgency. Prioritizing can help ensure that the attention and resources devoted to a problem are consistent with its importance. Severity shows you how critical the failure is and the alternatives that are available. Severity remains the same throughout the life of the problem. Priority distinguishes between problems of the same severity.

The factors that influence priority and severity include, but are not limited to, the following:
- Duration of the outage
- Bypass availability
- Number of affected users
- Frequency of occurrence
- Business impact associated with the problem

Ideally, each of these factors will be reflected in the priority and severity scheme you develop.

Most organizations communicate the impact of a problem by assigning a severity code. The most critical problems are assigned a severity code of 1. Problems of lesser significance are assigned severity codes of 2, 3, or 4. In order for these codes to be meaningful, clear definitions of each severity level must be developed.

Once the priority for a problem is set, you can increase it if the problem is open for too long, if the outage is excessive, or if the problem recurs. Problem priorities are increased automatically by the problem escalation facility. Your management can also increase the priority based on individual problem review.

You can use the following definitions of severity and priority codes as a starting point for developing your own coding scheme. Depending on your organizational needs, you might want to combine priority and severity into one code.

**Hardware Severity Codes**

1: System or Component down – Critical need, no alternative available
2: Component down – Critical need, alternative available
3: Component down – Normal maintenance, no critical need
4: Component usable – Deferred maintenance, no critical need

**Software Severity Codes**

1: No bypass, no fallback available – Critical operational impact (cannot be used)
2: No bypass, fallback available – Critical operational impact (usable with severe restriction)
3: Bypass or fallback available – Not critical (usable with limited function)
4: Degraded operation available – Not critical (circumvention possible)

**Priority Codes**

**Code 1**

- Target resolution time exceeded by 200%
- Duration of outage exceeds standard by 200%
- Problem recurs more than 10 times
- Management judgment

**Code 2**

- Target resolution time exceeded by 100%
- Duration of outage exceeds standard by 100%
- Problem recurs more than 5 times
- Management judgment

**Code 3**

- Target resolution dates and times exceeded by 50%
- Duration of outage exceeds standard by 50%
- Problem recurs more than twice
- Management judgment
Testing Your Problem Management System

After you establish your problem management system, you need to implement, document, and test it. An approach for implementing a problem management system is first to install a complete, minimum system for a small group of users. The users that you select could be a group of system programmers, operators, or any group that is willing and prepared to use the product extensively.

These first users can help identify concerns with the test system and its procedures. They can also suggest additional modifications and educational requirements. After you have resolved the concerns of the first group, add a new group of users to the system and repeat this system evaluation process until all concerns have been resolved and all users are online.

Because attempting to implement any system across an entire organization at one time is usually impractical, phase the implementation. As the first phase of the problem management system implementation, you might select a narrow scope of problem types, locations, and causes for your system to manage.

As you develop confidence in the problem management system and refine its mechanisms, subsequent implementation phases can broaden the system’s scope, adding new and more comprehensive classifications. A well-documented implementation phase design and plan should be followed to assure that each phase proceeds smoothly.

Summary

In summary, the following guidelines can help you define the mission and scope of your problem management system:

- Assign a problem manager and coordinator and define their responsibilities.
- Determine the types of problems you plan to handle.
- Define the procedures for problem entry, problem handling, and problem resolution.
- Develop an implementation plan and schedule.
- Develop a severity or priority scheme to help order problem resolution.
- Establish standards for key problem management activities.
- Establish criteria for use in immediate notification and problem escalation. For more information on this, refer to the Tivoli Information Management for z/OS Program Administration Guide and Reference and the Tivoli Information Management for z/OS Panel Modification Facility Guide.
- Identify required reports and their frequency of distribution.
- Determine report form requirements.
- Prepare a user’s procedure manual and educate users.

Collecting Data for Problem Management

After you determine the types of problems you intend to manage, you should determine which fields within a problem record must be filled in.

Required Fields

When a problem is reported, Tivoli Information Management for z/OS requires that you enter data in the following fields:
Collecting Data for Problem Management

- Reported by – the name of the person creating the problem record
- Description – a brief description of the problem
- Problem status – the status of the problem indicated by a fixed code

When you close a problem, Tivoli Information Management for z/OS requires that you enter data in the following fields:
- Resolved by – the name of the person who solved the problem
- Date closed – the date the problem was closed
- Problem status – the status of the problem indicated by code number
- Cause code – the general reason for the problem

**Problem Analysis**

If problem analysis is one of your objectives, you should consider using the following fields:
- Key item affected – to identify the major component, procedure, or environmental factor that is affected by the problem.
- Network name, System name, Program name, and Device name – to identify those elements at your organization that are affected by the problem through their relationship with the key item affected.
- Date occurred and Time occurred – to help you pinpoint the problem’s environment. Date occurred is used in the problem calendar report.
- Locations of supplemental data – to help you locate information valuable in problem debugging.
- Symptom and Resolution data – to record the information gathered during problem analysis.

**Problem Tracking**

If problem tracking is one of your objectives, you should consider using the following fields. Tivoli Information Management for z/OS archives the values in several of these fields so you can maintain a problem status history.
- Assignee name, Assignee phone, Assignee department, Time assigned, Date assigned, Time started, and Date started, Time finished and Date finished, and Current phase – to help you evaluate the responsiveness of assignees to problems.
- Vendor number and Vendor status – to help you evaluate the responsiveness of vendors to your problems.
- Contact name and Contact phone – to provide a source of further information about problem status.
- APAR number, PTF number, and IPCS number – to relate your problem description to other applicable information.
- Fix available and Bypass available – to indicate the existence of a solution or temporary bypass that you can apply to this problem or to a duplicate problem.
- Initial priority, Rerun time, Outage, and Network impact, System impact, Program impact, or Device impact – to help you compile a schedule of problem assignments.
Duplicate Problem Recognition

If recognizing and recording duplicate problems is one of your objectives, you should consider using the following fields:

- **Duplicate count and Original problem number** – to help you keep a count of duplicate problems.
- **Symptom information** – to help you recognize duplicates more easily. For software problems, the minimum set of symptoms should include the error code, component name, and routine name. For hardware problems, the minimum set of symptoms should include the external symptom, device type, and device address.
- **Resolution information** – to help you apply the same fix for a similar problem.

Using NetView® To Collect Data

MVS™ organizations that have the NetView Hardware Monitor Interface or NetView Bridge Adapter can automatically have problem records created using data obtained by NetView as a system-detected or a NetView event. You can also use NetView to update the problem records with current data.

You should decide how you want to use the NetView Hardware Monitor Interface, or the NetView Bridge Adapter with the Tivoli Information Management for z/OS NetView-AutoBridge. You can allow all users to enter NetView data in the database, or you can identify the privilege class of those users who can create or update problem records. Optionally, you can identify the Tivoli Information Management for z/OS fields in which the data should be stored. The [Tivoli Information Management for z/OS Planning and Installation Guide and Reference](#) contains additional information; you may also wish to refer to the [Tivoli Information Management for z/OS Guide to Integrating with Tivoli Applications](#).

Using the Problem Management Facility

The Problem Management facility of Tivoli Information Management for z/OS provides an online, automated way to implement your problem management system. You can use it to document and track a problem from its recognition to its resolution.

When reporting a problem with Problem Management, you can provide as little or as much information as you require. A problem can be described on one panel or on several panels, depending on your organization’s data requirements.

When managing a problem, updating the problem information is an ongoing process. For example, you can keep track of the status, who is assigned to the problem, and individuals who have an interest in the problem. When a problem is resolved, you can update the problem record with resolution (fix) information and then close it. The problem remains in the database for historical or trend analysis reporting until it is deleted.

Throughout the problem control process, the search and report functions let you search, display, and report on selected problems. Through a database inquiry, you can:

- Identify problem records with certain characteristics, such as all problems reported by a particular person or all problems assigned to a particular person.
- Identify a problem as:
  - A duplicate of another problem by screening symptom and resolution data
  - Related to a specific part of the data processing environment
Using the Problem Management Facility

- Being fixed by a particular change request recorded in the common database

You can include problem data in reports so that you can monitor the status of problems, analyze trends, and perform outage analyses of the system and its components. Tivoli Information Management for z/OS lets you base the reports on one or more specific characteristics, such as open problems, high-priority problems, or vendor problems. You can also report exceptions by searching on a range of dates, assignment counts, or other criteria. You can run and print reports in batch mode or during an interactive session.
Reporting Problems

With Problem Management, you describe on one panel the reporter, the environment, and some symptoms of the problem. The primary use of this data is for problem determination and for communications with the problem reporter. It might be necessary for someone to contact the reporter and obtain more information about the problem, or, later, provide problem status or resolution.

This chapter describes how to create a problem record and how to enter reporter, status, symptom, and synopsis data.

Creating Problem Records

You create problem records by using the prompting sequences shown in the following examples. You can follow the flow of the panels by using either the sample data shown here or your own data.

Note to Readers

The following instructions and panels illustrate how to create a record using immediate response chains (IRCs). For more information about how to use IRCs to create records, refer to the Tivoli Information Management for z/OS User’s Guide.

Entering Reporter Data

While testing program XMP1, Jones noted that the system displayed a message that did not appear to have any relationship to the response he had just made to a system prompt. He enters the following reporter data to report the problem:

- The person reporting the problem is JONES.
- Jones’s department is PUBS.
- Jones’s phone number is 555-7999.
- The problem status is INITIAL.
- The name of the program that was being tested is XMP1.
- The problem type is SOFTWARE.
- The initial priority of the problem is 03.
- The program failure impact is MEDIUM.
- The user problem number is PROB5.
- The description of the problem is INCORRECT ERROR MESSAGE.

Begin at the Primary Options Menu. To create a problem record, type 5,1 on the command line and press Enter.
Supply whatever information is available to describe the problem. For this example, type the following on the command line and press Enter:

1,jones,2,pubs,3,555-7999,8,xmp1,13,software,14,initial

The information will appear on the screen.

Enter problem reporter data; cursor placement or input line entry allowed.

1. Reported by......<R> JONES
2. Reporter dept....... PUBS
3. Reporter phone...... 555-7999
4. Date occurred....... 
5. Time occurred....... 
6. Network name........ 
7. System name........ XMP1
8. Program name....... 
9. Device name......... 
10. Key item affected... 
11. Date fix required... 
12. Time fix required... 
13. Problem type....... SOFTWARE
14. Problem status....<R> INITIAL
15. User problem number.. 
16. Initial priority..... 
17. Outage............... 
18. Rerun time.......... 
19. Network impact....... 
20. System impact....... 
21. Program impact....... 
22. Device impact....... 
23. User form number..... 
24. Location code........ 
25. Description......<R> _____________________________________________

When you finish, type END to save or CANCEL to discard any changes.
Next, type the following on the command line and press Enter:

15.prob5,16,03,21,medium,25,incorrect error message

The information will appear on the screen. To save the data, type end and press Enter. You return to the Problem Summary panel.

You can now do one of the following:
- Use option 1 to change the information you just entered.
- Use options 2 - 8 to add information to the problem record.
- Use option 9 to file the record.

The rest of the example in this chapter shows you how to add status, symptom, supplemental, and synopsis data to the record. You begin at the Problem Summary panel and return there at the end of each task.

**Entering Status Data**

Management has decided to assign the job of fixing the message problem to Smith, who is familiar with the message section of the XMP1 program code.

The following problem status data must be entered:
- Assign the problem to SMITH.
- Smith’s department is DEV.
- Smith’s phone number is 555-6790.
- The target date for completing a fix is 5 December 1996.

From the previous task, resume entry at the Problem Summary panel.

To add status data to the record, type 2 on the command line and press Enter.
Supply status data for the record. For this example, type the following on the command line and press Enter:

```
1,smith,2,dev,3,555-6790,17,12/05/1996
```

To save the data, type end and press Enter. You return to the Problem Summary panel.

```
--- end
```

### Entering Symptom Data

The Problem Symptom Data panel allows you to enter a symptom abstract and make selections to enter other types of symptom data. The symptom data dialog uses the list processor program exit (BLG01396) to collect symptom data.

Jones noted the following symptoms for this problem:

- The problem was detected during execution of program XMP1.
- The message code that was not valid was 406.

From the previous task, resume entry at the Problem Summary panel.
To add symptom data for this problem, type **4** on the command line and press Enter.

<table>
<thead>
<tr>
<th>Reported by............ JONES</th>
<th>Problem status........ INITIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignee name............ SMITH</td>
<td>Current phase...........</td>
</tr>
<tr>
<td>Tracked by.................</td>
<td>Current priority........... 03</td>
</tr>
<tr>
<td>Network name...............</td>
<td>Ownership privilege class...</td>
</tr>
<tr>
<td>System name...............</td>
<td>Entry privilege class......</td>
</tr>
<tr>
<td>Program name.............. XMP1</td>
<td>Date entered.............</td>
</tr>
<tr>
<td>Device name...............</td>
<td>Time entered..............</td>
</tr>
<tr>
<td>Key item affected.........</td>
<td>Date last altered........</td>
</tr>
</tbody>
</table>

Description............ INCORRECT ERROR MESSAGE

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

2. Status data. 7. Synopsis data.
5. Resolution data. 10. Create solution and file record.

--- 4

To specify the program, type **12** and press Enter.

<table>
<thead>
<tr>
<th>Enter abstract data or make selection to enter other detail data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Symptom abstract... ________________________________________</td>
</tr>
<tr>
<td>2. Device name(s) 12. Program ID(s)</td>
</tr>
<tr>
<td>3. Device type(s) 13. Software level(s)</td>
</tr>
<tr>
<td>4. Feature name(s) 14. Routine name(s)</td>
</tr>
<tr>
<td>5. Serial number(s) 15. Statement(s)</td>
</tr>
<tr>
<td>6. Line/loop type(s) 16. Operation code(s)</td>
</tr>
<tr>
<td>7. Loop ID(s) 18. Error code(s)</td>
</tr>
<tr>
<td>8. Line/circuit number(s) 19. Return code(s)</td>
</tr>
<tr>
<td>9. Line speed(s) 20. Completion code(s)</td>
</tr>
<tr>
<td>10. External symptom(s) 21. Message ID(s)</td>
</tr>
<tr>
<td>11. Environmental condition(s) 22. Publication(s)</td>
</tr>
</tbody>
</table>

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

--- 12

Press the Tab key twice to move the cursor into the first field. Type **xmp1** and press Enter. The cursor returns to the command line.

To save the data, type **end** and press Enter.
To specify the incorrect message noted, type \textbf{21} and press Enter.

Press the Tab key twice to move the cursor into the first field. Type \textbf{406} and press Enter. The cursor returns to the command line.

To save the data, type \textbf{end} and press Enter.
Type end and press Enter to return to the Problem Summary panel after you have entered all the symptom data.

Entering Supplemental Data

Add supplemental information to the record to help the person assigned to fix the problem. In this example, Jones decided to indicate a probable cause of the program failure as SOFTWARE.

From the previous task, resume entry at the Problem Summary panel. To add supplemental data to the record, type 6 on the command line and press Enter.
Supply any supplemental information. For this example, type **23,software** on the command line and press Enter.

To save the data, type **end** and press Enter. You return to the Problem Summary panel.

---

**Entering Synopsis Data**

Synopsis data provides an overview of the problem. In this example, Jones wants to add the name of the system cluster (TSOC) on which the failed program was executing. From the previous task, resume entry at the Problem Summary panel. To add synopsis data to the record, type **7** on the command line and press Enter.
To indicate the cluster on which the problem occurred, type \texttt{14,tsoc} on the command line and press Enter. To save the data, type \texttt{end} and press Enter.

\begin{verbatim}
===> end
\end{verbatim}

\textbf{Entering Freeform Text}

No example of adding freeform text (option 8) is provided in this panel flow. The freeform text entry panel does not present any specific fields to be completed, but it allows you to enter prose descriptions of any aspects of the problem on one or more panels. If you want to add freeform text, select option 8 from the Problem Summary panel and press Enter. Select the type of text to be entered from the BLG0B010 selection panel, then enter your text on the text entry panel.

When you enter all available data in the problem record, save the information by filing the record.

Type 9 on the command line and press Enter.
When you file the problem record, Tivoli Information Management for z/OS informs the assignee that the problem has been entered. In this example, assuming that assignee SMITH and Smith’s user ID or e-mail address are in the USERS record, Smith is notified that problem record PROB5 has been entered. Tivoli Information Management for z/OS also fills in certain date/time fields, privilege class fields, and the problem’s escalation level automatically. You cannot display the escalation level, nor can you print it on your problem management reports. You can, however, perform a freeform search on the prefix ESCL/.

A message appears on this panel confirming that the record was stored successfully.

This ends the example of creating a problem record.
Updating Problem Records

After a problem is reported, it should be updated as new information becomes available until the problem is resolved. You do this using the update function of Tivoli Information Management for z/OS. By recording all problem activities as they occur, you create a retrievable history of the problem management process.

Updating reporter data lets you accurately track and monitor critical information like problem status (INITIAL or OPEN), problem description, and the date and time a fix is required.

Updating status data, such as target dates and assignee data as they become available, makes it easier to track the problem. You can also enter some indicators, such as estimates of risk, effort, and duration, that you can use to measure and control the performance of Problem Management.

Although you can update any type of problem data, the following instructions and panels illustrate how to update the reporter and status data for the problem record created in the previous chapter.

The reporter data is described in the list below, and the status data is described later. You can follow the flow of the panels using either the sample data shown here or your own data.

### Note to Readers

The following instructions and panels illustrate how to update a record using immediate response chains (IRCs). For more information about how to use IRCs to update records, refer to the [Tivoli Information Management for z/OS User’s Guide](#).

### Updating Reporter Data

The following reporter data has changed and needs to be updated:

- Jones’s phone number is now 555-1985.
- Jones’s department is now DEV.

Begin at the Primary Options Menu.

To update a problem record, type the following on the command line and press Enter:

```
7,5,1,5,2,prob5,,1
```
Supply new or changed reporter data.

For this example, type the following on the command line and press Enter:

2,dev,3,555-1985

To save the data, type end and press Enter. You return to the Problem Summary panel.

--- end

**Updating Status Data**

Smith fixed the problem. Smith decides to assign the problem to Harris for testing. The following data needs to be updated:

- The person tracking the problem is JONES.
- Jones’s phone number is 555-1985.
- Jones’s department is DEV.
- Assign the problem to HARRIS.
- Harris’s phone number is 555-7099.
- Harris’s department is PUBS.
- The current type of work in process for the problem is TEST.
The status is OPEN.

From the previous task, resume entry at the Problem Summary panel.

To update the problem status, type 2 on the command line and press Enter.

Suppose new or changed status data. For this example, type the following on the command line and press Enter:

```
1, harris, 2, pubs, 3, 555-7099, 9, jones
```

Next, type the following on the command line and press Enter:

```
10, dev, 11, 555-1985, 12, open, 13, test
```

To save the data, type end and press Enter. You return to the Problem Summary panel.
When you have entered all available data in the problem record, save the information by filing the record. Type 9 on the command line and press Enter.

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

When you have entered all available data in the problem record, save the information by filing the record. Type 9 on the command line and press Enter.

A message appears on this panel confirming that the record was stored successfully.

To return to the Primary Options Menu, type end and press Enter.
When you file the problem record, Tivoli Information Management for z/OS informs the assignee that the problem record has been updated. In this example, assuming that assignee HARRIS and Harris’ user ID or e-mail address are in the USERS record, Tivoli Information Management for z/OS informs Harris that problem record PROB5 has been updated. Tivoli Information Management for z/OS also fills in certain date and time fields automatically.

This ends the example of updating problem records.
Adding Resolution Data and Closing Problems

When a problem has been resolved, the person who fixes the problem should add resolution data indicating how the problem was solved, and then reassign the problem to the person reporting the problem so the person can verify that the problem is fixed before closing the problem record. Adding resolution data is essentially the same as updating the record for any other data type. Closing the record, however, imposes special requirements on the person doing the closing.

To close a record, you need close authority by privilege class to enter information in the following selection fields on the Problem Close Entry panel:

1. Resolved by
2. Resolver dept
3. Resolver phone
4. Resolver class
5. Date closed
6. Time closed
11. Cause code

If you do not have that authority to enter information in these fields, contact the system administrator at your installation.

Problem close data is useful primarily for historical purposes and to identify trends. The Problem Resolution Data panel allows you to enter a resolution abstract and make selections to enter other types of resolution data. The following instructions and panels illustrate how to add resolution data to a problem record. You can follow the flow of the panels by using either the sample data shown here or your own data.

Note to Readers

The following instructions and panels illustrate how to update records using immediate response chains (IRCs). For more information about how to use IRCs to update records, refer to the Tivoli Information Management for z/OS User's Guide.

Adding Resolution Data

Smith fixed the problem by changing an incorrect IF statement in the program. The following information can now be added:

- The program ID of the program that needed to be changed is XMP1.
- The software statement that needed to be changed is an IF statement.
Begin at the Primary Options Menu.

To add resolution data, type the following on the command line and press Enter:

7,5,1,5,2,prob5,,5

The resolution data dialog uses the list processor program exit (BLG01396) to collect data. Table panels make it easy for you to enter new resolution data or update existing data.

To specify the program that needed to be changed, type 9 on the command line and press Enter.

The Program Identity Entry panel allows you to list base system or program component identifiers of the programs that were changed to correct the problem.

For this example, type linecmd L,xmp1 on the command line and press Enter.

The data you typed appears in uppercase in the first field on the panel. To save the data, type end and press Enter.
To specify the software statement that needed to be changed, type 13 on the command line and press Enter.

The Software Statement Entry panel appears.

The Software Statement Entry panel allows you to list commands, statement names, and parameters that were changed to resolve the problem.

For this example, press the tab key twice to move the cursor into the first field. Type `if` and press Enter.

To save the data, type `end` and press Enter. You return to the Problem Resolution panel.
If you want to add or update any other type of resolution data, you can make the appropriate selection from this panel. To save the resolution data, type end and press Enter. You return to the Problem Summary panel.

Adding Resolution Data

If you want to add or update any other type of resolution data, you can make the appropriate selection from this panel. To save the resolution data, type end and press Enter. You return to the Problem Summary panel.

Updating Status Data

The problem is ready to be closed. Harris must transfer the problem back to Jones for closing. The following data needs to be updated:

- Assignee is now JONES.
- Jones’s phone number is 555-1985.
- Jones’s department is DEV.

From the previous task, resume entry at the Problem Summary panel.

To update status data, type 2 on the command line and press Enter.
Adding Close Data

Jones has tested the problem fix and agrees that the problem is corrected. Jones is ready to enter the following close data:

- The status is CLOSED.
- The problem was resolved by SMITH.
- Smith’s phone number is 555-6790.
- Smith’s department is DEV.
- The cause code was PROGRAM.
- The date closed was DECEMBER 4, 1996.
Adding Close Data

From the previous task, resume entry at the Problem Summary panel.

To add close data, type 3 on the command line and press Enter.

```
BLG0BU00 PROBLEM SUMMARY PROBLEM: PROB5

Reported by............ JONES  Problem status........ OPEN
Assignee name............ JONES  Current phase........... TEST
Tracked by............. JONES  Current priority........ 03
Network name............ ________ Owning priv. class...... ________
System name............ ________ Entry priv. class....... MASTER
Program name........... XMP1  Date entered............ 08/27/1996
Device name............ ________ Time entered............ 13:04
Key item affected...... ________ Date last altered....... 08/27/1996

Description............ INCORRECT ERROR MESSAGE

Select one of the following, type END to save your changes, or type CANCEL
to discard your changes.
2. Status data.    7. Synopsis data.
5. Resolution data. 10. Create solution and file record.

===> 3
```

Supply the close data. For this example, type the following data on the command line and press Enter.

```
1,smith,2,dev,3,555-6790,5,12/04/1996,10,closed,11,program
```

To save the data, type end and press Enter.

```
BLG0B300 PROBLEM CLOSE ENTRY PROBLEM: PROB5

Enter problem closing data; cursor placement or input line entry allowed.

1. Resolved by.....<R> SMITH__________ 10. Problem status......<R> CLOSED_
3. Resolver phone..... 555-6790_____ 12. Program name........... XMP1____
4. Resolver class..... ________ 13. Device name............ ________
5. Date closed.....<R> 12/04/1996 14. Original prob. number.. ________
6. Time closed........ _____ 15. Cause change number.... ________
7. Total time......... ________ 16. Fix change number...... ________
8. Duplicate count.... ___ 17. Date rep. notified...... ________
9. Outage............. ________ 18. Rerun time............. ________

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

===> end
```

When you have entered all data, save it by filing the record. Type 9 on the command line and press Enter.
When you file the problem record, assuming that assignee JONES and Jones’ user ID or e-mail address are in the USERS record, Tivoli Information Management for z/OS informs Jones that problem record PROB5 has been updated.

A message appears on this panel confirming that the record was stored successfully.

To return to the Primary Options Menu, type **end** and press Enter.

This ends the example of updating a problem record.
Filing Solutions for Future Problems

Your Tivoli Information Management for z/OS program administrator may decide to set up a knowledge base of solutions that can be used to help solve new problems. A knowledge base can be useful to support help desk operations in your company. For example, you can use the text stored in your existing problem records to create solution records that analysts and users can search to help solve new problems. As new problems come in, help desk agents can apply solutions from problems that have already been reported and corrected. By reusing information this way, your help desk staff can operate more efficiently.

The indexing and searching of freeform text can be done through use of OS/390 Text Search, which is available with OS/390 and z/OS. Tivoli Information Management for z/OS uses the Text Search Engine component of OS/390 Text Search to index and search the freeform text data associated with problem records and other types of records in the database.

If you are using Tivoli Information Management for z/OS to support your problem management process, you should be aware that you can create solution records automatically while filing a problem record. On the BLG0BU00 Problem Summary panel, you can select option 10. Create solution and file record to accomplish this. You can also create solution records directly without having to go through problem record entry panels. However, you must have the proper "solution" authority to file solution records, and the records must contain the correct type of data and be in a CLOSED status. Also, your program administrator must have performed the necessary setup and customization work for Tivoli Information Management for z/OS to be used with OS/390 Text Search. For more information about using a knowledge base with Tivoli Information Management for z/OS, refer to the [Tivoli Information Management for z/OS Program Administration Guide and Reference]. General instructions on how to perform freeform text searches are also available in the [Tivoli Information Management for z/OS User’s Guide].
Reported by............ JONES  
Assignee name......... JONES  
Tracked by............ JONES  
Network name.......... ________  
System name.......... ________  
Program name.......... XMP1  
Device name.......... ________  
Key item affected..... ________  
Date entered............ 08/27/1996  
Time entered............ 13:04  
Date last altered...... 08/27/1996  
Description............ INCORRECT ERROR MESSAGE

Select one of the following, type END to save your changes, or type CANCEL to discard your changes.
2. Status data.  7. Synopsis data.
5. Resolution data.  10. Create solution and file record.

---10
Introducing Change Management

Change Management is an online facility for managing changes to hardware, software, documentation, and procedures within a data processing environment. You can use Change Management to track a change from the time you request it until it is either implemented or rejected.

When a change request is entered into the system, you can include specific completion dates. Your organization can plan these activities and indicate which parts of the system are affected, what resources are required for these changes, and what backup procedures might be needed. The change record can identify the problems it fixes and the system components it modifies.

You can schedule a change by date and identify by privilege class the names of people who must authorize the change before it occurs. Change approvers can then periodically search the database for change records requiring their approval.

After reviewing the change, the approvers can specify in the change record their approval or rejection of the requested change. Individuals who have a need to know of a change can be included as reviewers.

This chapter describes what comprises the change management system and how to plan for and use the Change Management facility.

A Change Management System

Before you can use the Change Management facility of Tivoli Information Management for z/OS, you must define the mission and scope of your change management system. The scope of your system is determined by the number of change types your organization plans to handle. The system can be comprehensive and handle changes involving:

- Hardware
- Software
- Procedures
- Documentation
- Environment.

Or, it can be less comprehensive and handle only some of these areas.

The components of a change management system are:

- People who ensure that changes occur in the most orderly way possible to minimize disruption to users. Your organization’s manager assigns a change manager and a coordinator and defines their responsibilities as one of the first steps in setting up the change management system.
A Change Management System

- A process for controlling changes and ensuring that changes are implemented accurately and in a timely manner.
- Data that is identified, collected, tracked, and analyzed.
- Tools, such as Tivoli Information Management for z/OS and its Change Management facility, that provide an efficient method for controlling the change process.

The following sections describe guidelines you must consider when setting up a change management system for your organization.

The Change Control Process

The change management control process is the procedure used to implement changes. It consists of these main tasks:

- Requesting a change
  Requesting a change involves creating a change request record that includes enough information about the proposed change for others to adequately assess and implement it.

- Evaluating and scheduling the change based on:
  - A technical assessment, which is an evaluation of the change based on technical feasibility, risk, and impact.
  - A business assessment, which is an evaluation of the change based on business timing, risk, and impact.
  - Management approval, which is the decision of whether or not to proceed with the change. If management approves the change, the earlier assessments can be used in determining the schedule.

- Tracking the change
  - Tracking the change involves test monitoring and organization monitoring.
    Test monitoring is done by tracking, documenting, and communicating test progress and results.
    Organization monitoring is done by tracking, documenting, and communicating organization progress and results.

- Reviewing the change process
  Reviewing the change process includes reviewing the status of change requests and reviewing reports.

Data Requirements for Change Management

The data requirements of your change management system depend on the measurements, indicators, and reports you expect to produce. The amount of data you collect and the level of detail of that data must match the objectives of the management system.

For example, if detailed data is recorded and not used, the time and effort taken to record it is wasted. On the other hand, if you do not capture enough data, the lack of detailed information can keep you from taking full advantage of the system capabilities.

To determine the types of data you should collect for change management, consider not only the data that is used to produce the selected reports, but also the data that is used in the process of change assessment and installation. There are four types of data with which a change management system is concerned:
Descriptive Data

Descriptive data includes those items that describe what actually must happen. This data includes change descriptions, activity descriptions, and other noncoded information. This data cannot usually be used for building statistics or for comparison purposes because there is no precision in the way it is constructed.

Change Assessment Data

Change assessment data is used to develop answers to the following questions:

- What are the benefits of the change?
- What is the impact and risk of implementing the change?
- What needs to be done to back out of an unsuccessful change?

Change assessment data must be collected and maintained to evaluate the feasibility of changes.

Scheduling and Tracking Data

Scheduling and tracking data provides information about change activities, responsibilities, and timing. It includes such items as the current assignee, the current activity or phase, dates, and status of the change. It is the data primarily associated with the management of the change control process. It provides a chronological view of the change so you can identify and perform the activities necessary to implement the change.

Control Data

Control data is the set of standards used to measure the performance of the change management system. It is presented in reports to show adherence to objectives. It is used in meetings to evaluate action plans. It is the basis for exception reports. Control data establishes the limits that guide the everyday running of the system.

Change Categories

When properly defined and used, change categories are a powerful method of sorting out change implications. Changes range from those that are harmless and almost insignificant to those that, in the event of problems during and after implementation, could seriously disrupt service. Change categories also provide a method for helping management to allocate resources for implementing changes.

Management must consider these factors when categorizing changes:

Complexity

- Does the change pose new or unfamiliar challenges to its implementers?
- Does the change demand the involvement of various groups for its success?
- Will a combination of the above represent increased difficulty?

Dependencies

Are there prerequisites or corequisites associated with the change that suggest that other organizations should be involved throughout the implementation cycle?

Duration
Does the time it will take to make the change warrant significant management attention? For example, will the change be implemented in stages (migration)? Or can the change be implemented without significant impact on your organization?

Ease of Recovery
Will it be easy to restore the original status if the change does not meet defined criteria or if unforeseen problems arise?

Potential Impact
If the change implementation does not go as planned, what is the greatest effect that the change can have on planned services?

Potential Risk
Is there a possibility that the change can cause problems? Factors that affect risk are the education and training of the change implementers and users and the process required to allocate resources properly for implementation.

On the basis of these factors, changes can be divided into several categories, for example:

Category 1 — Major Impact
These changes are the most critical. They represent a combination of factors that will cause a major impact on the delivery of services if a change implementation failure occurs.

Category 2 — Significant Impact
These changes represent a risk of significant impact on the delivery of services if failure occurs.

Category 3 — Minor Impact
These changes will have a minor impact on services if problems occur.

Category 4 — No Impact
These changes will cause little or no impact during or after their implementation. They are entered primarily because of the need to maintain accurate inventory records of data processing resources.

In addition, within any of these categories, there can be changes that cannot be classified as normal. They are received too late to handle with normal procedures, or they are initiated on an immediate basis to correct problems that impact the delivery of service.

Once you categorize the change, you can identify the amount of lead time required to submit the change before the requested installation date. Lead time is the amount of time required to evaluate and adequately plan for change implementation. Lead time is measured from the time the change is requested until the change is actually installed, and varies with the category of change. A category 1 change requires more time for planning and coordinating than a category 2 change.

Testing Your Change Management System
After all modifications to your Change Management system are made and tested, you should make the system available to a small group of users. The users that you select could be a group of system programmers, operators, or a group that is willing and prepared to use the
system extensively. As the first users, they can help identify concerns. They can also suggest additional modifications and educational requirements.

After you have addressed the concerns of the first group, add a new group of users to the system and repeat the evaluation process until all concerns are resolved and all users are online.

The implementation should be phased because it is usually impractical to implement any system across an entire organization at one time. As the first phase of the implementation, you might select a narrow scope of simple change types. Then, as you develop confidence in the system and refine its mechanisms, you can add more complex change types to the system. You should follow a well-documented, phased implementation plan to assure that each phase of the implementation proceeds smoothly.

Summary
In summary, the following guidelines can help when defining the mission and scope of your change management system:

- Assign a change manager and coordinator and define their responsibilities.
- Determine the types of changes you plan to handle.
- Define the procedures for requesting, handling, and resolving changes.
- Develop a phased implementation plan and schedule.
- Define backout and recovery procedures.
- Define required reports.
- Prepare a user’s procedure manual and educate the users.

Collecting Data for Change Management
During initial planning, you should establish a guideline for the types of changes you intend to manage. Should all hardware, software, procedure, and publication changes be managed? Will you manage the activities within a change? In making this decision for each change type, consider:

- The number of people affected
- The resources required
- The importance of the change type
- The number of people and activities involved in implementation
- The need to display, search, and generate Change Management reports.

After you have determined the change types and activities that you intend to manage, you can decide which fields you wish to record for each.

Required Fields
When you request a change or activity, Tivoli Information Management for z/OS requires the following data:

- Requested by – the name of the person requesting the change or activity
- Change/activity status – a fixed code
- Description – a textual definition of the change or activity
- Activity name – the name of the activity (for activity only).

When you close a change or activity record, Tivoli Information Management for z/OS requires the following data:

- Closed by – the name of the person who closed the record
Completion code – the fixed code representing the success or failure of the change or activity
Change/Activity status – a fixed code
Completion date – the date the change or activity was completed.

Change and Activity Scheduling
If you want to effectively schedule your changes and activities, consider using the following fields:
- Key item affected – to identify the major item to be changed.
- Date required, Time required and Initial priority – to help you create schedules and, along with completion time, to help you assess the efficiency of your change system.
- Problem fixed – to help you to correlate your problem and change management systems. Coupled with problem priority, this field helps you schedule your changes.
- Actual start date, Actual start time, Completion date, Completion time, Actual effort, Actual impact, and Actual duration – to enable you to assess the variation between planned and actual activities.

Change Approval
If one of your objectives is to conduct your change approval process online, you should consider using the following fields:
- Estimated effort, Estimated duration, and Risk assessment – to help you assess the complexity of the change and its activities.
- Coordinator name, Coordinator department, and Coordinator phone – to supply a focal point for registering further information about the planned change.
- Approver privilege class entries – to help you standardize your change approval system and to facilitate communication between involved privilege classes.

Note: If data attribute records are used as direct add fields, then normal file processing is not performed for change records when change approval processing is being performed. That is, if ALL of these five direct adds—DATE/, TIME/, CLAE/, DATM/, and TIMM/—are changed to data attribute records, then date modified, time modified, and user ID are not saved in the record.

Post-Change Reviewing Fields
If it is important for you to assess the accuracy of your change plans and the effectiveness of implemented changes, you should consider using the following fields:
- Actual effort, Actual duration, and Actual impact – to compare the actual figures with the estimated effort, duration, and risk.
- Unexpected problems and Backup plan used, coupled with a text explanation – to inform you that unforeseen events affected the implementation of the change.

Using the Change Management Facility
With change management, you can document and track a change from entry to implementation. The Change Management facility supports a formal system of requesting, reviewing, implementing, and testing modifications to the data processing environment.
A change can be made to any area of your organization’s operations. You can fix, enhance, or make other changes to the software and hardware components of the operating system, procedures, publications, and facilities. For example, a change may involve adding several devices to the host computer, or implementing a new application program.

When entering a change request, you should include all the information necessary to adequately assess and successfully implement the change. You can identify:

- Problems that are fixed by the change
- System components that are modified by the change
- People who must authorize the change (approvers)
- Individuals who have a need to know of the change (reviewers)
- Specific dates by which certain activities should be completed.

You can then plan the activities and indicate the parts of the system that are affected, the resources required for the change, and the appropriate backup procedures.

Change approvers can periodically search the database for change records requiring their approval. After reviewing the change, the approvers can specify (in the change record) their approval or rejection of the change request.

Throughout the change control process, the search and report functions permit you to identify selected changes. Through a database inquiry, you can identify:

- Changes for which you are responsible
- Changes with certain characteristics
- Scheduled dates of changes and activities
- Activities by name or number.

Once data for change requests is collected, you can use it to create reports that reflect the status of changes, to identify change schedules, and to analyze trends. You can base reports on one or more specific characteristics, such as change location, required date, or type. You can report exceptions by searching on a range of dates, approval pending, or other criteria. You can run and print reports in batch mode as well as during an interactive session.
Creating Change Request Records

Change records are created by using the prompting sequences shown in this chapter.

A change request record identifies a planned modification. Associated activity records describe the individual tasks that might be needed to implement the change. For example, to install a new application (change), you might want to define activity records for the following tasks:

- Acquiring the program
- Installing the program
- Testing the program
- Modifying the procedures
- Phasing into production.

A change request record should provide enough detailed information to fully describe the change. With Tivoli Information Management for z/OS, you can create both change records and activity records to describe planned changes. The following instructions and panels illustrate how to create a change record. You can follow the flow of the panels by using either the sample data shown here or your own data.

Note to Readers

The following instructions and panels illustrate how to create change records using immediate response chains (IRCs). For more information about how to use IRCs to create records, refer to the Tivoli Information Management for z/OS User’s Guide.

Before following this example, be sure the Editor selection field in your user profile is set to INFO.

Entering Requester Data

In this example, assume your organization has just installed a new telecommunications system. Smith is responsible for requesting changes to ensure compatibility between the old and new systems. After assessing the new equipment, Smith decides that component 1 (COM1) should be changed to RS-232 and assigns this change request the number A01.

- The person requesting the change is SMITHJ.
- Smith’s phone number is 555-1234.
- The status of the change request is INITIAL.
- The user change number is A01.
- The change description is CHANGE COM1 TO RS-232.

Begin at the Primary Options Menu.
To create a change record, type 5,2 on the command line and press Enter:

Supply requester data. For this example, type the following on the command line and press Enter:

```
1,smithj,3,555-1234,12,initial,14,a01,20,change com1 to rs-232
```

To save the data, type `end` and press Enter.

The Change Request Summary panel appears. You can now do one of the following:

- Use option 1 to change the information you just entered.
- Use options 2 - 6 or 8 to add more information to the change request record.
- Use option 7 to add activities for the change.
- Use option 9 to file the record.

If you choose option 7, what happens next depends on how you created the change request record.

- If you created the change request record by copying a template record that has activities already defined, Tivoli Information Management for z/OS files the change request...
record. For each activity associated with the template record, Tivoli Information Management for z/OS creates and files a corresponding activity record that is associated with the current change request record. Then, you can add other activities to the change request record.

If you created the change request record directly from the entry panel, Tivoli Information Management for z/OS files the change request record and displays the Activity Requester Entry panel.

For this example, the requester decided to supply a prose explanation.

To add freeform text, type 8 on the command line and press Enter.

---

Because the Editor selection field in your profile has been set to INFO, panel BLG1TDES, Description Text, appears.

For this example, type the following in the data area and press Enter:

This is the most advanced telecommunications facility on the market today.
To save the data, type end and press Enter.

Now you can select another text entry, or type 7 and press Enter to end.

For this example, type 7 and press Enter to end.

To file the record, type 9 and press Enter.

If you did not assign a record identifier when you created your record, the system assigns a record identifier. In this example, Smith specified A01 as the record identifier.
When you file the change request record, Tivoli Information Management for z/OS informs the assignee that the change request has been opened. In this example, because you did not enter an assignee name, a default ID or default e-mail address is notified that change record A01 was created. Tivoli Information Management for z/OS also fills in certain date, time, and privilege class fields automatically.

A message appears on this panel confirming that the record was stored successfully.
Entering Requester Data
Once you define a change request record, you should record data to keep track of the activities associated with that record until the change is implemented or rejected.

This chapter begins with the Primary Options Menu and shows you how to access the change request record created in Creating Change Request Records in update mode. This example record is used throughout the chapter to illustrate updating all the parts of the change request record listed on the Change Request Summary panel.

You will notice as you follow the example that Tivoli Information Management for z/OS displays the Change Request Summary panel after you complete each update task. After you complete one task and return to the Change Request Summary panel, you are ready to enter a selection from this panel that will initiate the next task. Task instructions accompany the Change Request Summary panel where you specify the part of the record you want to update.

**Note to Readers**
The following instructions and panels illustrate how to update records using immediate response chains (IRCs). For more information about how to use IRCs to update records, refer to the Tivoli Information Management for z/OS User’s Guide.

### Updating Requester Data

Change request record A01 is used to illustrate how to update a change request record. The following requester data needs to be updated:

- Smith’s phone number changed to 555-4241.
- The date the change is required is 12/23/2000.
- The reason for the change is WORKLOAD.

Begin at the Primary Options Menu.

To update the change request record, type the following on the command line and press Enter:

```
7,5,1,5,2,a01,,1
```
Supply new or changed requester data. For this example, type the following on the command line and press Enter:

```
3,555-4241,9,12/23/2000,13,workload
```

To save the data, type `end` and press Enter to return to the Change Request Summary panel.

```
--- 7,5,1,5,2,a01,,1
```

`end`

**Updating Status Data**

Typically, status information includes such data as the name of the person responsible for the change, risk assessment priority, and planned and actual dates.

You can designate an assignee responsible for all or part of the change. When necessary, you can reassign the record to a different assignee. You can also designate a person as coordinator of the people and departments evaluating or implementing the change.

The assignee or coordinator might be responsible for specifying any prerequisite and corequisite change information.

- Prerequisite changes are change requests that must be implemented prior to this change.
Corequisite changes are change requests that must be implemented at the same time as this change.

However, Tivoli Information Management for z/OS does not verify that prerequisite records exist or that they are complete.

Assigning Changes

You must have change record assignment authority to enter the assignee name, assignee department, assignee phone, date assigned, and time assigned.

Change request record A01 is being assigned to Noland. The following status data needs to be entered:

- The assignee name is NOLANDJ.
- Noland’s department is HARDWARE.
- Noland’s phone number is 555-2774
- The assignment is being done on 10/05/2000.

From the previous task, resume entry at the Change Request Summary panel.

To update status data for record A01, type 2 and press Enter.

To add assignment data, type the following on the command line and press Enter:

1,nolandj,2,hardware,3,555-2774,4,10/05/2000

To save the data, type end and press Enter to return to the Change Request Summary panel.
If you want to reassign a change that was assigned to someone else, complete the same fields as shown above for assigning the change. Be sure to blank out fields (1-6) related to the previous assignee for which you are not supplying any data. Then update assignee information and update fields 12 and 13 to reflect the new status information.

Adding Detail Data

Detail data is the technical description of a change request. Detail data for change records is divided into three categories: software, hardware, and documentation. Use precise wording for detail data because you or someone else may use detail data for search criteria.

The new assignee, Noland, has detail data to add to record A01. A device must be added, a change that affects hardware. The following detail data needs to be entered:

- The device name is RS3278.
- The device serial number is 411228.
- The device is located at the main site (MAINST).

In the panels that follow, only hardware detail data is shown. If you want to add software detail data or documentation detail data, make the appropriate selection from the Change Detail Selection panel (BLG0C040) and then follow a similar procedure to that shown for hardware detail data.

From the previous task, resume entry at the Change Request Summary panel.

To add detail data, type 4 on the command line and press Enter.
### CHANGE REQUEST SUMMARY

- **Change:** A01
- **Assignee name:** NOLANDJ
- **Assignee phone:** 555-2774
- **Coordinator name:**
- **Key item affected:**
- **Date required:** 12/23/2000
- **Planned start date:**
- **Completion date:**
- **Date entered:** 08/27/2000
- **Time entered:** 13:18
- **Description:** CHANGE COM1 TO RS-232

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

1. Requester data.
2. Status data.
3. Close data.
4. Detail data.
5. Approver data.
6. Reviewer data.
7. Activity entry.
8. Freeform text.
10. Software Distribution data.

---

To add hardware detail data, type 2 and press Enter.

---

To add a hardware device, type 1 and press Enter.
To enter the symbolic name of the device, type 1 and press Enter.

For this example, press the Tab key twice to move the cursor into the first field. Type **rs3278** and press Enter.

The cursor returns to the command line. To save the data and continue, type **end** and press Enter.
To enter the serial number, type 2 and press Enter.

For this example, type the following data on the command line and press Enter:

```plaintext
linecmd 1,411228
```

The serial number moves to the first field. To save the data and continue, type **end** and press Enter.
To specify where the device will be installed, type 3 and press Enter.

For this example, type **mainst** on the command line.

Press the Tab key once to move the cursor to the line command area for the first line. Type 1 in the line command area and press Enter. The data you typed on the command line appears on the panel. Press Enter or use the Tab key to move the cursor back up to the command line.

To save the data, type **end** and press Enter.
If you want to add or update any other type of hardware data for an added device, you can make an appropriate selection from this panel.

For this example, type end and press Enter to return to the Change Request Summary panel.

Specifying Change Approvers

Before a change can be implemented, it must be approved by specified approvers. To specify change approvers, enter the approver’s privilege class name on the Change Approver Entry panel. The Change Approver Entry panel enables you to specify a list of approver privilege classes.

When you enter one or more approver privilege classes, Change Management automatically sets the approval status for the change to pending when you file the record. Duplicate entries are removed. The pending status remains in effect until each class either approves or rejects the change. If all the classes approve the change, the status is set to approved. If even one class rejects the change, the status is set to rejected.
Note: If data attribute records are used as direct add fields, then normal file processing is not performed for change records when change approval processing is being performed. That is, if ALL of these five direct adds—DATE/, TIME/, CLAE/, DATM/, and TIMM/—are changed to data attribute records, then date modified, time modified, and user ID are not saved in the record.

The approval status is displayed on the Summary Display panel. You can also search this field to identify changes with a particular approval status.

You register your approval or rejection from a Change Approver Display panel. See "Approver Display" on page 252 for instructions to do this. The change approver summary and detail reports identify all the changes for which approval is pending.

Change request record A01 is used here to illustrate how to specify change approvers. In this example, the MASTER and the HARDWARE privilege classes must approve change request A01. This exercise assumes that these privilege classes exist in your database.

To specify change approvers, type 5 on the command line and press Enter.
Panel BLG0C015 (Change Approver Data) displays. Select **1. Approvers** to display BLGLAPVR (Change Approver Entry) when the approval information is list processor data. (If non-list approver data exists in the record, selecting **1. Approvers** displays BLG0C500. See the note on page 64.)

**Note:** If you select **Option 2. Reset** from BLG0C015, all approval data for the change request will be reset to **pending**.

In panel BLGLAPVR (Change Approver Entry), supply new or changed privilege class names. For example, enter **master** and **hardware** as the privilege class names and press Enter.

To save the data, type **end** and press Enter.

When you end from this panel, the initial status of **pending** is set for each new approver entry.

On this list processor panel, the C (copy) and R (repeat) line commands are not listed at the bottom of the panel, but they are still available for use. To add new entries to the list, use the I (insert) line command. You can generally add as many entries as you want unless your Tivoli Information Management for z/OS administrator has placed a restriction on the maximum row count for this panel.

**Note:** The BLGLAPVR panel is displayed for new records created with this version of the product (or older records not containing change approver data). If panel BLG0C500 is displayed instead, your record was created with an earlier version of the product and it already contained change approver data. If you make updates on panel BLG0C500, file the record, and access the Change Approver Entry panel again, panel BLG0C500 reflects your updates. The data is not collected in a list processor panel as shown in this example.
Specifying Change Reviewers

Change reviewers must be aware of any change that will affect their operations or performance, but their approval is not required. The procedure for specifying change reviewers is just like the procedure for specifying change approvers. To specify change reviewers, enter the reviewer’s privilege class name on the Change Reviewer Entry panel.

The change request record A01 is used here to illustrate how to specify change reviewers. In this example, the BILLING and SOFTWARE privilege classes are added to the change reviewer list. This example assumes that these privilege classes exist in your database.

To add reviewer data, type 6 on the command line and press Enter.

Supply new or changed privilege class names. For this example, type billing and software as the names of privilege classes and press Enter.

To save the data, type end and press Enter.
On this list processor panel, the C (copy) and R (repeat) line commands are not listed at the bottom of the panel, but they are still available for use. To add new entries to the list, use the I (insert) line command. You can generally add as many entries as you want unless your Tivoli Information Management for z/OS administrator has placed a restriction on the maximum row count for this panel.

Note: The BLGLREVR panel is displayed for new records created with this version of the product (or older records not containing change reviewer data). If panel BLG0C700 is displayed instead, then your record was created with an earlier version of the product and it already contained change reviewer data. When you make updates on panel BLG0C700, file the record you are updating, and access the Change Reviewer Entry panel again, the newly displayed panel BLG0C700 reflects your updates. The data is not collected in a list processor panel as shown in this example.

**Adding Activity Records**

Activity records describe the activities associated with a change. Change activities can include ordering, installing, testing, or updating documentation as you update software.

In creating an activity record, Change Management establishes 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. In the following example, you add an activity record by updating a change request record. If you have been following along with example record A01, you are in update mode and can proceed with the example.

The assignee for change A01 (Noland) requests a test of the new device, COM1-232. An activity record with the following data needs to be created for this activity:

- The activity is requested by NOLANDJ.
- The date required is 11/01/2000.
- The activity type is TEST.
- The status of this activity is INITIAL.
- The user activity number is A011.
- The description is INITIAL TEST OF COM1-232.

From the previous task, resume entry at the Change Request Summary panel.

To add activity data, type 7 on the command line and press Enter.
The first time you add an activity to a change record, the Activity Requester Entry panel (BLG0C600) appears. Message BLG09007I appears at the bottom of this panel.

If you add activity records to a change request record that already has activity records, the Activity Record List panel (BLG1TCAC) appears with a list of the activities.

For this example, type the following on the command line and press Enter:

```
1,nolandj,9,11/01/2000,11,test,12,initial,14,a011,21,test1
```

The activity number becomes the activity record ID.

The activity name must be unique for this change; however, the name may be the same as other activity names for other changes. The fields on the Activity Requester Entry panel have the same meaning as those on the Change Requester Entry panel and the Status Entry panel.

Next, type the following on the command line and press Enter:
22. Initial test of com1-232

To save the data, type **end** and press Enter.

---

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

---

The Activity Summary panel appears. You can now do one of the following:

- Use option 1 to change the information you just entered.
- Use options 2, 3, or 4 to add information to the activity record.
- Use option 8 to add a textual description.
- Use option 9 to file the activity record.

If you select options 2, 3, or 4 for status, close, or detail information, the fields for these panels have the same meaning as those described on the change status, close, and detail entry panels. For an activity record, however, you designate a contact instead of a coordinator. The contact name specifies who should be contacted for information concerning the activity.

For this example, type **9** on the command line and press Enter to file the activity record.

---
Adding Activity Records

When you file an activity record, immediate notification occurs. In this example, you did not enter an assignee name, so the default ID or default e-mail address is notified that activity record A011 has been created.

The change record is also updated automatically with the link to the activity record and then filed. Any other modifications to the change record are also filed. However, immediate notification for the change record does not occur.

The Activity Record List panel appears after you file the record. However, you are still in update mode on this change record. The Activity Record List panel is a type of search results panel. It displays a list of activities entered for the current record. By typing line commands in front of the item numbers, you can do the following:

- Add more activity records
- Copy an existing activity record to create a new one
- Update an existing activity record
- Select an activity record for display
- Print an activity record.
- Delete an activity record.

A message appears on this panel confirming that the record was stored successfully. An additional message indicates that the change record is also updated.

For this example, type **end** and press Enter to return to the Change Request Summary panel.

If you created the activity record at the same time that you created the change request record, Tivoli Information Management for z/OS places you in update mode on the change request record.

To file the change record, type **9** on the command line and press Enter.
Immediate notification occurs when you file the change record. In this example, assuming that assignee NOLANDJ and Noland’s user ID or e-mail address are in the USERS record when you file the record, Noland is notified that change record A01 has been updated. For additional information on immediate notification, refer to the Tivoli Information Management for z/OS Program Administration Guide and Reference.

A message appears on this panel confirming that the record was stored successfully.

To return to the Primary Options Menu, Type end on the command line and press Enter.

Closing Changes

After a change has been completed, close the change record by supplying information about the implementation of the change. The change close data can be useful to identify trends. This data includes actual dates and times, duration of time implementing the change, and problems found while implementing the change. All activity records should be closed before you close the change request record.
You must have close authority specified in your privilege class to enter the closer’s name, department, phone number, and privilege class. Close authority is also required to enter the completion date, time, and code.

The Change Request record A01 is used to illustrate how to close a change request record. The change will be closed by Noland. This example uses the following information:

- The change is closed by NOLANDJ.
- Noland’s department is HARDWARE.
- The date of completion is 12/20/2000.
- The status of the change is now CLOSED.
- The completion code is HARDWARE.
- No backup plan was used.

For this example, type the following on the command line and press Enter:

```plaintext
upd r a01
```

To enter close data, type 3 and press Enter.
Supply required data and any optional data. You must have close authority to enter information fields 1, 2, 3, 4, 7, 8, and 10.

Type the following on the command line and press Enter:

```
1.nolandj,2,hardware,7,12/20/2000,9,closed,10,hardware,15,no
```

To save the data, type **end** on the command line and press Enter.

<table>
<thead>
<tr>
<th>BLGOC300</th>
<th>CHANGE CLOSE ENTRY</th>
<th>CHANGE: A01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter change close data; cursor placement or input line entry allowed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Closer dept.............. HARDWARE___</td>
<td>10. Completion code...&lt;R&gt; HARDWARE</td>
<td></td>
</tr>
<tr>
<td>3. Closer phone.............. _____________</td>
<td>11. Actual effort........</td>
<td></td>
</tr>
<tr>
<td>5. Actual start date........</td>
<td>13. Actual duration.......</td>
<td></td>
</tr>
<tr>
<td>6. Actual start time........</td>
<td>14. Unexpected problems..</td>
<td></td>
</tr>
<tr>
<td>7. Completion date.........&lt;R&gt; 12/20/2000</td>
<td>15. Backup plan used..... NO</td>
<td></td>
</tr>
<tr>
<td>8. Completion time........</td>
<td>16. Date req. notified...</td>
<td></td>
</tr>
</tbody>
</table>

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

```
===> end
```

Ensure that all activities associated with the change are closed.

After you have completed closing your change record, select 9 and press Enter to file the record and return to the Primary Options Menu.

<table>
<thead>
<tr>
<th>BLGOCU00</th>
<th>CHANGE REQUEST SUMMARY</th>
<th>CHANGE: A01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignee name.............. NOLANDJ</td>
<td>Change status............ CLOSED</td>
<td></td>
</tr>
<tr>
<td>Assignee phone............. 555-2774</td>
<td>Approval status............ PENDING</td>
<td></td>
</tr>
<tr>
<td>Coordinator name..........</td>
<td>Current priority.........</td>
<td></td>
</tr>
<tr>
<td>Device name................</td>
<td>Owning priv. class.......</td>
<td></td>
</tr>
<tr>
<td>Key item affected..........</td>
<td>Entry priv. class.......</td>
<td>MASTER</td>
</tr>
<tr>
<td>Date required............. 12/23/2000</td>
<td>Date entered............ 08/27/2000</td>
<td></td>
</tr>
<tr>
<td>Planned start date........</td>
<td>Time entered............. 13:18</td>
<td></td>
</tr>
<tr>
<td>Completion date........... 12/20/2000</td>
<td>Date last altered....... 10/05/2000</td>
<td></td>
</tr>
<tr>
<td>Description................ CHANGE COM1 TO RS-232</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following, type **END** to save your changes, or type **CANCEL** to discard your changes.


```
===> 9
```

Immediate notification occurs when you file the change record. In this example, assuming that assignee NOLANDJ and Noland’s user ID or e-mail address are in the USERS record when you file the record, Noland is notified that the change record A01 has been updated. For additional information or immediate notification refer to the Tivoli Information Management for z/OS Program Administration Guide and Reference.
A message appears on this panel confirming that the record was stored successfully.

This ends the example of updating change records.

<table>
<thead>
<tr>
<th>BLG0EN20</th>
<th>--- PRIMARY OPTIONS MENU ---</th>
<th>APPLICATION: MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. OVERVIEW....Display general information and product enhancements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. PROFILE........Display or alter invocation or session defaults.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. APPLICATION....Change application, list available applications.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. CLASS..........Change current class, list available classes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ENTRY..........Create a record.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. INQUIRY........Search for records.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. UTILITY........Copy, display, print, delete, and update records.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. GLOSSARY.......Display a list of searchable words in the database.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. PMF............Modify or create panels.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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BLG03058I Record A01 was stored successfully.

---
Introducing Configuration Management

Configuration Management is a Tivoli Information Management for z/OS facility that extends your ability to gather, organize, and locate information about your data processing installation.

Configuration Management allows you to have up-to-date information about your data processing system and inventory. You create records about your system using Configuration Management. These records are stored in a database. Using Tivoli Information Management for z/OS, you can extract facts about your system, update the records as changes occur, create reports and diagrams, and search for records with specific information.

By using Configuration Management, you can maintain an up-to-date diagram of the hardware and software components on your system and in your inventory. You can also search the database for components that meet specific characteristics, such as all terminals in a network and the locations to which they are assigned. Some components might have special financial information.

With Configuration Management, you can create a financial record specific to one component or to a group of components. Since Configuration Management is a part of Tivoli Information Management for z/OS, you can establish relationships between a component record and any problem or change records in the database.

Figure 1 on page 76 illustrates the record hierarchy and relationships between the configuration management records. Before you design your configuration, review this figure, read this chapter, and follow the exercises presented in this section.
Planning for Configuration Management

Before customizing Configuration Management, you must first design your own configuration management system. Identify what is required based on your objectives. The following list identifies some of the general planning activities for configuration management. Use the list as a guide for creating your configuration management system.
1. Assign a manager and coordinator, and define their responsibilities.
2. Analyze the requirements and set objectives.
3. Define the basic flow of components throughout your organization.
4. Identify the required configuration reports.
5. Define configuration data requirements.
6. Determine configuration form requirements.
7. Determine the procedure for entering data.
8. Prepare a procedures manual and educate the users.
9. Print all the existing configuration panels.
10. Plan any panel modifications using the \textit{Tivoli Information Management for z/OS Panel Modification Facility Guide}.
11. Modify the panels and print the new versions.
12. Tailor the configuration reports.
13. Define the privilege-class structure.
14. Define configuration stored response chains (SRCs).
15. Create model records.

\textbf{Data Requirements for Configuration Management}

The data requirements of your configuration management system depend on the measurements, indicators, and reports you expect to produce. The amount of data you collect and the level of detail for that data must match the objectives of your management.

For example, if detailed data is recorded and not used, the time and effort recording it is wasted. On the other hand, if you do not capture enough data, the lack of detailed information can keep you from using the system to its best advantage.

While the creation and maintenance of a configuration (inventory) database requires considerable effort, the benefits far outweigh the effort when the database is accurate and current. To determine the type of data you should collect for your configuration management, consider:

- How will the database be used?
- What is the hierarchy of components in the network?

Typically, you can use the database for a wide variety of purposes, which include:

- Providing physical configuration information online to allow fast access.
- Assisting in resolving network problems. Configuration data can reduce recovery time by making vital information available to the individual responsible for problem determination. This information includes the name and phone number of the person responsible for the individual components. Component information and physical path connections can be displayed online.
- Assisting systems personnel in system planning and preparation. Once hardware planning data has been completed and entered, configuration information can be used for system planning and other software preparation.
- Assisting in dispatching of support or repair personnel, thus ensuring greater control and closer management of the network as a whole. Vendor and service numbers can be displayed for any component.
- Providing the capability for end users to access information that they need.
Assisting in Engineering Change (EC) level management, to monitor upgrades to components and to ensure consistency of upgrades across the network. Also, configuration data helps isolate problems caused by EC level inconsistencies more quickly.

After identifying the uses of the database, you should identify the benefits you will derive from each use, who will use the data, what data is necessary, and how the database will be maintained.

Based on the usage, you can plan the appropriate hierarchies. The more detailed the configuration, the more assistance it will afford the user. On the other hand, each level of detail requires more database implementation and maintenance effort.

Collecting Data for Configuration Management

Another decision you must make with regard to a configuration management system is to determine the types of components you want to manage. Will you manage all hardware and software components and their features? Will you manage supporting entities such as service organizations, data processing centers, financial data, and systems within a center? In answering these questions, consider these factors:

- Do you want to simply record inventory information, or do you want to manage your configuration? Do you want to locate connections (paths)? Do you want to generate configuration maps?
- How will your data be used? Will it be used for inventory control, for accounting, for problem analysis, or for planning purposes?
- Who will use your data?
- Do you want to keep financial data online?
- Do you want to display and generate management reports?

To manage your network configuration, you can create the following types of records:

- Data center records
- System records
- Service records
- Financial records
  - Hardware
  - Software
- Model Records
  - Model hardware components including features
  - Model hardware subcomponents
  - Model software components including features.
- Hardware records
  - Components
  - Features
  - Connections
  - Subcomponents
- Software records
  - Components
  - Features
  - Connections
The financial, service organization, system administrative, and data processing center records can relate to one or more specific hardware or software components. These relationships can change to reflect changes in your configuration. If you refer to any of these records in the component record, the referenced records must already exist in the database.

**Hardware Components**

Based on the goals you set for your configuration management, define the types of hardware components you want to manage. Some examples of a hardware component are:

- A 3705
- A 3274
- A 3650
- A 3684 and a 3683
- A PS/2®
- A 3279
- A 1403
- A 3081

**Required Fields**

When you create a hardware component record, Tivoli Information Management for z/OS requires:

- A component ID
- A generic device
- A component status
- A description

**Detailed Description**

If you have decided to maintain detailed descriptions of your hardware components, consider recording the device type and model and serial number that uniquely identify the component. You might want to establish a standard convention for assigning component IDs, because this component ID is referred to in other records.

**Maintenance and Problem Analysis**

If improved system maintenance and problem analysis are two of your objectives, consider using the following fields:

- Microcode EC level, to indicate the level of the component
- Maintenance interval, to schedule service for the component
- Location code, to help you create reports by location
- Text, to enter a mailing address and location for use by your organization’s service personnel

**Connectivity**

If you wish to manage your configuration (and not just maintain an inventory), consider using the following fields:

- Component connections, to enable you to obtain path display and reports showing relationships between hardware components
- Display class, to categorize components and control what components are shown in path displays
- Date from and Date to for a connection, to maintain records for historical, current, and planned configurations
Accounting
If you wish to gather information that would help you keep track of data processing costs, consider recording the order number, lease begin date, purchase date, and current book value of components.

Hardware Features
When creating a component record, you can identify the associated features. As part of your guidelines, name the type of data you want recorded for each feature. The Feature name, Description, and Feature status are required fields.

Hardware Subcomponents
Based on the goals you set for configuration management, define the types of hardware subcomponents you want to manage.

You should think of a subcomponent as a feature that can be a stand-alone component and has mobility in the inventory. A subcomponent is detachable from a component, but a feature is not. The advantage of a subcomponent record over a feature record is that you can remove the subcomponent from its hardware component or attach it to another hardware component by updating the subcomponent record. Some examples of a hardware subcomponent are:
- The keyboard on a terminal or PS/2
- The pin pad on a cash register
- The voice box on a cash register
- An external disk drive on a PS/2
- A print train on a 1403

Required Fields
When you create a hardware subcomponent record, Tivoli Information Management for z/OS requires:
- A subcomponent status
- A description

Detailed Description
If you have decided to maintain detailed descriptions of your hardware subcomponents, consider recording the subcomponent type and serial number that uniquely identify the subcomponent. When creating a subcomponent record, you also can enter the hardware component ID to which your subcomponent is linked.

Maintenance and Problem Analysis
If improved system maintenance and problem analysis are two of your objectives, consider using the following fields:
- Microcode EC level, to indicate the level of the subcomponent
- Location code, to help you create reports by location
- Text, to enter a mailing address and location for use by your organization’s service personnel

Software Components
Based on the goals you set for Configuration Management, define the types of software components you want to manage.

Required Fields
When you create a software component record, Tivoli Information Management for z/OS requires:
A component ID
A program type
A component status
A description

**Detailed Description**
If you wish to maintain detailed descriptions of your software components, consider recording the release level, program version, modification level, and fix level that uniquely identify the component.

**Maintenance and Problem Analysis**
If improved system maintenance and problem analysis are two of your objectives, consider using the following fields:
- Contact name, Contact department, and Contact phone number to provide a focal point for problem information
- Location code, to help you create reports by location
- Vendor component number, to correlate your organization’s component number with your vendor’s and help with vendor communications

**Connectivity**
If you wish to manage your configuration (and not just maintain an inventory), recording the component-to names will enable you to obtain path displays and reports showing the relationships among the software components.

**Accounting**
If you wish to gather information to help you keep track of data processing costs, consider recording the order number and the begin license date.

**Software Features**
When creating a software component record, you can choose to record the features. If you do so, you should establish guidelines for the data to be collected. The feature status, feature name, and description are required by Tivoli Information Management for z/OS.

**Financial Data Records**
If you have a need for online financial data associated with a component, you should require users to enter it.

For hardware financial records, Tivoli Information Management for z/OS requires a user financial ID, a financial type, and a description. For software financial records, Management application requires a user financial ID, a license type, and a description.

Sometimes it is not necessary to create a financial record for each component; one financial record can serve as the source of financial data for many components. This guideline can be included with standards for hardware and software component records. It is the reference to a financial data record appearing in your records.

**Service Records**
Maintaining service organization data online is advantageous when a user is displaying a record of a failing component. The user can readily display data about the service organization supporting that component. This data includes the service organization name, prime-shift phone number, and off-shift phone number (which could be important in
emergencies). The hardware and software representatives’ names and phone numbers would also be of value for quick reference. If you use this record type, Tivoli Information Management for z/OS requires a description of the service organization. Hardware and software component and hardware subcomponent records can also refer to the service record.

**Data Center Records**

If you have more than one data processing center, you probably want to maintain online information about each data center. Tivoli Information Management for z/OS requires the Description field. The name of each center and the centers’ phone numbers (help desk, off-shift, emergency, and operations manager) should be recorded. If the center operates multiple shifts, the shift managers’ names and phone numbers are useful. Component, hardware subcomponent, and system records can refer to this record.

**System Records**

If you have more than one data processing system, you can maintain online information about each. Tivoli Information Management for z/OS requires a description. The system name, operator and emergency phones, location code, and manager and contact names and phone numbers are also useful. Software and hardware components and hardware subcomponent records can refer to this record.

**Model Component Records**

Model component records themselves do not hold configuration data, but they make the entry of data easier by allowing the creation of component records from models that hold information common to a number of components (or subcomponents) of the same type. The model capability also provides the ability to build one or many relationships between model features and hardware or software components. Features that are common to many components can be contained in a single model feature record that is referred to by many component records.

You decide on the organization and use of these capabilities when planning your configuration management system. You see immediate benefits provided by:

- A reduction in time required to enter configuration records
- A reduction in the space required in the database. A component record needs only features that are unique to it.

**What You Need to Know Before You Create a Configuration**

If you study the Configuration Management panel flows, you can see that component records refer to data-center, system, service, and financial records. These four types of records are information records. They contain information about the components in your configuration that the component or feature record can reference.

This means you must create data-center records, system records, service records, and financial records before you create component records. It saves time because these records must be defined before they can be referenced in component records.

Figure 1 on page 76 illustrates that you should create both hardware and software components in hierarchical order, with the highest-level components first. This allows you to establish connections as you create the records.

When you need to create several records that are basically the same, such as records for several 3278 terminals, use one of the following options:
Create a model component record using selection 7 from panel BLG0D000, Configuration Entry, and use the model component records as a base for creating component records. You can establish a many-to-one relationship between components and model features when using this method. See Understanding Model Record Concepts for further information on how model records can reduce your data-entry task.

Create a component record, and then copy it and modify the copy to make it unique.

The chapters in this book illustrate how to create and update configuration management records. The examples provide some of the data you need to complete the panels. You can also use information from your organization, such as names and telephone numbers.

An Overview of the Example Configuration

In this section, the configuration you are building centers around a 3274 controller, the PS/2s that attach to the controller, and the associated software. Figure 2 on page 84 shows the configuration record IDs you create and the related chapters. Use this figure as an overview or reference for the small configuration you build in this book. The record IDs you create in the examples are in color in the figure.
Figure 2. Overview of Example Configuration
Creating Configuration Information Records

If you study the Configuration Management record hierarchy, you can see that component records refer to data center, system, service, and financial records. These four types of records are *information* records. They contain information common to your configuration that component or feature records can refer to.

Because Tivoli Information Management for z/OS performs reference checks, you must create data center records, system records, service records, and financial records before you create component records.

Connection records establish a hierarchical order of components. With this in mind, create both hardware and software components in hierarchical order, with the highest-level components first. This allows you to establish connections as you create the records.

When you need to create several records that are basically the same, such as records for several 3278 terminals, use one of the following options:

- Create a model component record using selection 7 from panel BLG0D000, Configuration Entry, and use the model component records as a base for creating component records. You can establish a many-to-one relationship between components and model features when using this method. See [Understanding Model Record Concepts](Tivoli Information Management for z/OS User's Guide) for further information on how model records can reduce your data-entry task.

- Create a component record, and then copy it and modify the copy to make it unique.

The chapters in this section illustrate how to create and update configuration management records. The examples provide some of the data you need to complete the panels. You can also use information from your organization, such as names and telephone numbers.

**Note to Readers**
The following instructions and panels illustrate how to create records using immediate response chains (IRCs). For more information about how to use IRCs to create records, refer to the [Tivoli Information Management for z/OS User's Guide](Tivoli Information Management for z/OS User's Guide).

Creating Data Center Records

For Configuration Management, a data center is the center of all the data processing activities for your organization. It could be the computer room where all or part of your system resides. A data center record contains common personnel and location information about your data center. Sometimes the information in the data center record applies to
component records. If system or component records will be associated with the data center record, you must create the data center record first. When created, the system or component records can refer to the data center record.

The following instructions and panels illustrate how to create a data center record. This record identifies a computer room and can contain names of the people in your computer room and their phone numbers.

This example uses the following information; you can supply the names of the people to contact and their phone numbers:

- The data center name is CENTER1.
- The location code for the data center is DPCTR1.
- The user center ID is DPCTR1. This is the ID for this record. This ID is referenced in system records and in other component records.
- The description for this record is DATA CENTER1.

Remember, this record is referred to by other records in later chapters.

Begin at the Primary Options Menu.

Type 5 and press Enter.

<table>
<thead>
<tr>
<th>BLG0EN20</th>
<th>--- PRIMARY OPTIONS MENU ---</th>
<th>APPLICATION: MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPTIONS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. OVERVIEW...Display general information and product enhancements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. PROFILE......Display or alter invocation or session defaults.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. APPLICATION....Change application, list available applications.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. CLASS........Change current class, list available classes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ENTRY.........Create a record.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. INQUIRY........Search for records.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. UTILITY........Copy, display, print, delete, and update records.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. GLOSSARY.......Display a list of searchable words in the database.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. PMF............Modify or create panels.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

To create configuration records, type 3 and press Enter.
For every data center you have defined, you need to create a data center record.

To do this, type 1 and press Enter.

Supply information about your data center.

For this example, type the following on the command line and press Enter:

```
1,center1,8,dpctr1,10,dpctr1,20,data center1
```

To save the data, type `end` and press Enter.
The Data Center summary panel appears. You can now do the following:
- Use option 1 to change the information you just entered.
- Use option 8 to add text information to the record.
- Use option 9 to file the record.

For this example, type 9 and press Enter to file the record.

When you file the record, you return to the Primary Options Menu.

A message appears on this panel confirming that the record was stored successfully.
Creating System Records

For Configuration Management, a system resides in a data center. A system record describes the system and contains information regarding the personnel and location in the data center. This is the second record you create in your configuration because it can refer to the data center record. If your data center has more than one system residing in it, for example, a Virtual Machine (VM) and Multiple Virtual Storage/Enterprise Systems Architecture (OS/390) system on two 9021s, you need a separate record for each system.

In the following example, assume that your organization has two systems. You can create the first system record and then copy that record to create the second system record. This is a time-saver if most of the information is the same.

Use the following information to create a system record:

- The system name is CPURED.
- The center ID is DPCTR1. This is the data center record ID you created in "Creating Data Center Records" on page 85.
- The user system ID is RED9021. This is the ID for this system record. This ID is referenced in other component records in later chapters.
- The location code for the system is DPCTR1. This is the same location code as the data center.
- The contact department is Z99.
- The description is 9021 CPU KNOWN AS RED9021.

Begin at the Primary Options Menu.

To create a system record, type 5,3 on the command line and press Enter:
For every system you define, you need to create a system record.

To do this, type 2 and press Enter.

Supply information about the system.

For this example, type the following on the command line and press Enter:

1, cpured, 2, dpctr1, 5, dpctr1, 7, red9021, 11, z99, 13, 9021 cpu known as red9021

To save the data, type end and press Enter.
The System Summary panel appears. You can now do one of the following:
- Use option 1 to change the data you just entered.
- Use option 8 to add text to the record.
- Use option 9 to file the record.

For this example, type 9 and press Enter to file the record.

This returns you to the Primary Options Menu.

A message appears on this panel confirming that the record was stored successfully.
Creating Service Records

A service record contains information about the maintenance of one or more components or features. It includes information about the organization and personnel responsible for servicing your equipment and software.

The service record must be created before component and subcomponent records can refer to it. Your organization might have several service records, depending on how you define your system. For example, you could create a service record based on:

- A manufacturer
- A hardware unit
- A software package
- A component type

In the following example, you are creating a service record for your IBM equipment. This record is different from any records you might have for another company’s equipment.

Use the following information to create the service record:

- The service name is IBMSERV and the organization is IBMNSD.
- The phone number for IBM service is 18005553232.
- The user service ID is IBM300. This is the ID for this record. This is referenced in component or subcomponent records.
- The description of the record is IBM SERVICE RECORD.

To create a service record, type 5,3,6 on the command line and press Enter:
Supply information about the service organization. For this example, type the following on the command line and press Enter:

```
1,ibmserv,2,ibmnsd,3,18005553232,6,ibm300,11,ibm service record
```

To save the data, type **end** and press Enter.

```
BLG0D400 SERVICE ENTRY SERVICE: IBM300
Enter service organization data; cursor placement or input line entry allowed.
1. Service name........ IBMSERV_
2. Service org name.... IBMNSD____
3. Service phone....... 18005553232__
4. Off-shift phone..... _____________
5. Transfer-to class... ________
6. User service ID..... IBM300__
7. Hardware rep........ _____________
8. Rep phone........... _____________
9. Software rep........ _____________
10. Rep phone........... _____________
11. Description......<R> IBM SERVICE RECORD______________________________

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

The Service Summary panel appears. You can now do the following:
- Use option 1 to change the information you just entered.
- Use option 8 to add text to the record.
- Use option 9 to file the record.

For this example, type **9** and press Enter to file the record.

This returns you to the Primary Options Menu.
Creating Service Records

A message appears on this panel confirming that the record was stored successfully.

Creating Financial Records

A hardware or software financial record provides data for a single component or for several similar components that share common financial attributes.

An example of a hardware financial record is one relating to a group of terminals that have a common manufacturer, purchase price, depreciation period, and charge-out account.

An example of a hardware financial record is one relating to a set of programs that have a common vendor name, purchase price, license fee, or maintenance class.

In the following examples, you are creating the financial records for the IBM equipment and software at your organization:

- Ten PS/2 computers (purchased)
- Ten 3279 terminals (on lease)
- OS/2® operating system software for the PS/2s.
Creating Financial Records for Purchased Hardware

In this example, you create financial records for the PS/2s your organization has just installed.

- The financial ID and financial name is FINPC.
- The generic device is video display, or VID.
- The device type is PS/2.
- The component count is 10.
- The financial type is PURCHASE.
- The description of the record is FINANCIAL RECORD FOR PURCHASE PS/2s.
- The depreciation period is one year.
- The purchase price is $3000.
- The minimum maintenance rate is $75/hour.

To create a hardware financial record, type the following on the command line and press Enter:

```
5,3,5
```

To create a hardware financial record, type 1 and press Enter.
Supply financial data about the hardware.

For this example, type the following on the command line and press Enter:

```
1,finpc,2,finpc,3,vid,4,ps/2,7,10
```

The value you enter for field 8 on this panel determines which panel appears next. Valid financial types are PURCHASE, LEASE, or RENT.

Type the following on the command line and press Enter:

```
8,purchase,9,ibm,16,financial record for purchase ps/2s
```

To save the data and continue, type **end** and press Enter.
Because you entered a financial type of PURCHASE, panel BLG0D305 Hardware Financial – Purchase Entry appears.

Type the following on the command line and press Enter:

1,01/00,3,3000,7,75

To save the data, type end and press Enter.

The information you entered in BLG0D300 appears on the Hardware Financial Summary panel. You can now do one of the following:

- Use options 1 or 2 to change the information you just entered.
- Use options 3 or 8 to add information to the record.
- Use option 9 to file the record.

For this example, type 9 on the command line and press Enter to file the record. You return to the Primary Options Menu.
Creating Financial Records for Leased or Rented Hardware

Your organization also has ten 3279s on lease, so these components must have a different financial record. Use the following information to create a financial record for the leased 3279s:

- The financial name is FIN3279.
- The user financial ID is FIN3279.
- The generic device is video display, or VID.
- The device type and model is 3279.
- The component count is 10.
- The financial type is LEASE.
- The description is FINANCIAL RECORD FOR LEASE 3279S.
- The lease type is TAP.
- The monthly charge is $100.
- The purchase option percent is 80.
- The maximum accrual period is one year.

Begin at the Primary Options Menu.

To create this record, type the following and press Enter:

5,3,5,1

```plaintext
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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---+ 5,3,5,1

Supply financial data about the hardware.

For this example, type the following on the command line and press Enter:

1,fin3279,2,fin3279,3,vid,4,3279,7,10,8,lease

```plaintext
BLG0D300 HARDWARE FINANCIAL ENTRY FINANCIAL: FIN3279
Enter hardware financial data, cursor placement or input line entry allowed.
1. Financial name....... FIN3279_ 9. Manufacturer...... ___________
2. User financial ID.<R> FIN3279_ 10. Vendor name....... ___________
4. Device type & model.. 3279______ 12. Rep phone......... _____________
5. Charge out account... ___________ 13. System specialist. _______________
6. Charge out rate...... ______ 14. Specialist phone.. _____________
7. Component count...... 10_ 15. Transfer-to class. ________
8. Financial type....<R> LEASE___
16. Description......<R> ___________________________________________

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

--->

Next, type the following on the command line and press Enter:

16,financial record for lease 3279s
To save the data and continue, type **end** and press Enter.

Because you entered a financial type of LEASE, panel BLG0D306 Hardware Financial – Rental/Lease Entry appears.

Type the following on the command line and press Enter:

```
1,tap,2,100,3,80,4,12
```

To save the data, type **end** and press Enter.

The Hardware Financial Summary panel appears. You can now do one of the following:
- Use options 1 or 2 to change the information just entered.
- Use options 3 or 8 to add new information to the record.
- Use option 9 to file the record.

For this example, type **9** and press Enter to file the record. You return to the Primary Options Menu.
Creating Financial Records

In this example, you will create the financial records for the software that came with the new PS/2s. Use the following information to create the software financial record:

- The user financial ID and financial name is FINSOFT.
- The test period is 90 days.
- The license is BASIC.
- The one-time charge is $600.
- The initial license charge is $300.
- The description of this record is FINANCIAL RECORD FOR SOFTWARE PS/2S.

Begin at the Primary Options Menu.

To create a software financial record, Type the following on the command line and press Enter:
To create a software financial record, type 2 and press Enter.

The Software Financial Entry panel appears. The value you enter for field 5 on this panel determines which panel appears next. Valid license types are BASIC or DSLO.

Supply financial data about the software.

For this example, type the following on the command line and press Enter:

1,finsoft,2,90,3,finsoft,5,basic,11,financial record for software ps/2s

To save the data and continue, type end and press Enter.
Because you entered a financial type of BASIC, panel BLG0D353 Software Financial – Basic License Entry appears.

Type the following on the command line and press Enter:

1,600,5,300

To save the data, type end and press Enter.

The Software Financial Summary panel appears. You can now do one of the following:

- Use options 1 or 2 to change the information just entered.
- Use options 3 or 8 to add new information to the record.
- Use option 9 to file the record.

For this example, type 9 on the command line and press Enter to file the record.
A message appears on this panel confirming that the record was stored successfully.

This ends the example of creating software financial record FINSOFT.
Creating Hardware Records

A hardware component record enables you to define and describe a particular device that is part of a system. A hardware component record can have hardware subcomponents and features attached to it.

You can create a hardware component record directly or from model records. To find out more about creating component records from an existing model record, start with Understanding Model Record Concepts.

Creating Hardware Component Records Directly

The following example shows how to create a component record by using a direct panel dialog. You can follow the flow of the panels with the sample data shown here, or you can use your own data.

In this example, you are creating a component record for a 3274A controller. The example uses the following information:

- The component ID is CTL3274.
- The generic device is CTL.
- The device type and model is 3274A.
- The serial number is C4444.
- Microcode EC level is 00133052.
- The status is INSTALL.
- The location code is DPCTR1.
- The display class is 1.
- The description is 3274 CONTROLLER FOR PS/2S.

Begin at the Primary Options Menu.

To create a hardware component record, type 5,3 on the command line and press Enter:
For every hardware device you define, you need to create a hardware record.

For this example, type 3 and press Enter.

To create a hardware component record directly, type 1 on the command line and press Enter.
For this example, type the following on the command line and press Enter:

1,ctl3274,2,ctl,3,3274A,4,c4444,5,00133052

Next, type the following on the command line and press Enter:

7,install,8,=,11,dpctr1,12,1,13,3274 controller for ps/2s

To save the data and continue, type **end** and press Enter.
What panel appears next depends on the generic device type you specified. If the generic device type was LOP, then panel BLG0D172 Loop Component appears. If the generic device type was LIN, then panel BLG0D170 Line Information Entry appears. In either case, supply the data and press Enter to advance to the Hardware Component Summary panel.

Since the generic device specified in this example was neither LIN nor LOP, the Hardware Component Summary panel appears. You can now do one of the following:

- Use option 1 to change the information you just entered.
- Use options 2, 6, 8, 10, 11, or 12 to add information to the record.
- Use option 3 to enter connection records for this component.
- Use option 4 to enter EC levels for this component.
- Use option 5 to change the secondary description information when the generic device type is LIN or LOP.
- Use option 7 to enter feature records for this component.
- Use option 9 to file the record.

If you choose options 3, 4, or 7, Tivoli Information Management for z/OS files this component record and displays the appropriate entry panel.

For this example, type 1 on the command line and press Enter.
You can change some of the data at this time, but notice that Generic Device field becomes a protected field.

For this example, you do not wish to change any of the fields.

Type `cancel` on the command line and press Enter.

To add the support data such as the center ID, system ID and service ID, type `2` on the command line and press Enter.
This panel creates the record link between the center record, system record, and service record you created in previous chapters.

For this example, type the following on the command line and press Enter:

7,dpctr1,8,red9021,9,ibm300

To save the data and continue, type **end** on the command line and press Enter.
Supply financial data about this component. If you created a hardware financial record in Creating Configuration Information Records, enter the record ID in field 1. (To enter the book value and market value, you must be in a privilege class that has financial and configuration entry authority.) For this example, type the following on the command line and press Enter:

4,=

To save the data and continue, type end on the command line and press Enter.

To define this component in a subdiagram, type 11 on the command line and press Enter.
The Hardware Component Diagram Map Data Entry panel appears. If you want this component to start, stop, or create a table for a subdiagram, complete the Sub diagram marker field. For this example, use the following information on BLG0D113:

- The number of ports is 32.
- The subdiagram marker is START.

The Number of ports field is relevant only for controllers. This field is used by Tivoli Information Management for z/OS to calculate the number of spare ports in the configuration subdiagram. For more information on the relationship of this panel to subdiagrams, see Creating and Drawing Configuration Diagrams.

For this example, type the following on the command line and press Enter:

```
1,32,2,start
```

To save the data and continue, type `end` and press Enter.
When you have added all the necessary information to complete the component record, type 9 on the command line and press Enter to file the record.

You return to the Primary Options Menu.

A message appears on this panel confirming that the record was stored successfully.

This ends the example of creating a hardware component directly.

The following example shows how to update the component record you just created. You will be adding three EC levels (03050066, 03050067, and 03050068) to component record CTL3274. These EC levels are different than the Microcode EC level you entered when you created the record.

Begin at the Primary Options Menu.

To update a component record, type the following and press Enter:
To add EC level information, type 4 on the command line and press Enter.

```
4
```

This example uses the list processor program exit BLG01396 to collect EC levels. A table panel makes it easy for you to enter new data and change or delete existing data. For more information on the list processor program exit and lists in general, refer to the Tivoli Information Management for z/OS Panel Modification Facility Guide.

For this example:

1. Press the Tab key twice to move the cursor to the first field. Type 03050066 in the first field.
2. Press the Tab key once to move the cursor to the second field. Type 03050067 in the second field.
3. Press the Tab key once to move the cursor to the third field. Type 03050068 in the third field.
4. Press Enter to move the cursor to the command line.
5. To save the data, type **end** and press Enter.

If there were more data you needed to update, you could make a selection from the bottom of the panel and continue to update the component record.

For this example, type **9** on the command line and press Enter to file the record.

A message appears on this panel confirming that the record was stored successfully.

This ends the task of updating a hardware component record.
Creating Hardware Subcomponent Records

A hardware subcomponent record describes a particular subcomponent device you can link to a hardware component. A subcomponent is linked to a component through the Hardware link ID field. You can remove the subcomponent from its hardware component or attach it to another hardware component by updating the Hardware component link field in the BLG0D140 Hardware Subcomponent Entry panel.

You can create a hardware subcomponent record directly or by using model records. To find out more about creating subcomponent records from an existing model record, start with "Understanding Model Record Concepts" on page 129.

The following example shows how to create subcomponent records directly. You can follow the flow of the panels with the sample data shown here or by using your own data.

The example uses the following information to attach a subcomponent to hardware component record CTL3274.

- The subcomponent type is CABLE.
- The user subcomponent ID is C0001.
- The Hardware link ID is CTL3274.
- The status is INSTALL.
- The description is CABLE ASSEMBLY FOR 3274.

To begin creating the hardware subcomponent record, type 5,3,3 and press Enter:
BLGOEN20 --- 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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For this example, type 3 and press Enter.

Supply subcomponent information. The Hardware link ID field is very important because it links the subcomponent to a component.

For this example, type the following on the command line and press Enter:

```
1,cable,3,c0001,5,ctl3274,6,install,7,=,9,cable assembly for 3274
```

To save the data and continue, type **end** on the command line and press Enter.
Enter hardware subcomponent data; cursor placement or input line entry.

1. Subcomponent type...... CABLE
2. Serial number.......... ________
3. User Subcomp ID........ C0001___
4. Microcode EC Level..... ________
5. Hardware link ID...... CTL3274_
6. Subcomp status......<R> INSTALL
7. Date of status........ 08/08/1996
8. Location code......... ________
9. Description.........<R> CABLE ASSEMBLY FOR 3274______________________

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

The Hardware Subcomponent Summary panel appears. You can now do one of the following:

- Use option 1, 2, 3, 6, and 8 to add information to the record.
- Use option 9 to file the record.

For this example, type 2 on the command line and press Enter.

Supply information about the support and maintenance of a subcomponent.

For this example, type the following on the command line and press Enter:

7.dpctr1.8.red9021.9.ibm300

To save the data, type end and press Enter.
To add specific financial information about this subcomponent, type 6 on the command line and press Enter.

Supply financial data about this subcomponent.

For this example, type the following on the command line and press Enter.

```
4,=
```

To save the data and continue, type end on the command line and press Enter.
Creating Hardware Subcomponent Records

When you have added all the necessary information to complete a subcomponent record, file the record.

To do this, type 9 on the command line and press Enter.

You return to the Primary Options Menu.

A message appears on this panel confirming that the record was stored successfully.

This ends the task of creating a hardware subcomponent record directly.
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 C0001 was stored successfully.

---
Creating Software Records

A software component record enables you to describe a software program running on, or available on, your system. On a large system, the program could be MVS; while on a PS/2, it could be OS/2 or Lotus® 1-2-3®.

You can create a software component record directly through a panel dialog or by using model records. To find out more about creating component records from an existing model record, see Understanding Model Record Concepts.

Creating Software Component Records Directly

The following example shows how to create a component record by using a direct panel dialog. You can follow the flow of the panels with the sample data shown here or use your own data.

Note to Readers

The following instructions and panels illustrate how to create records using immediate response chains (IRCs). For more information about how to use IRCs to create records, refer to the Tivoli Information Management for z/OS User’s Guide.

In this example, you are creating the software record for VM/SP on system RED9021. The example uses the following information:

- The component ID is VMSP.
- The program type is SCP.
- The release level is 0002.
- The version is 2.
- The component status is INSTALL.
- The description on this record is VMSP FOR SYSTEM RED9021.
- The FMID level is JOZ1235.

To create a configuration record, type 5,3 and press Enter:
For every software component you define, you need to create a software record.

To do this, type **4** and press Enter.

To create software component records directly, type **1** and press Enter.
Supply information about the software component.

For this example, type the following on the command line and press Enter:

```
1,vmsp,2,scp,3,2,4,2,10,install,11,=,16,vmsp for system red9021
```

To save the data and continue, type `end` on the command line and press Enter.

```
BLG0D200 SOFTWARE COMPONENT ENTRY COMPONENT: VMSP
Enter software component data; cursor placement or input line entry allowed.

1. Component ID......<R> VMSP____ 9. Vendor component #....
2. Program type......<R> SCP 10. Component status...<R> INSTALL
3. Release level........ 0002 11. Date of status........ 08/08/1996
4. Program version...... 2___ 12. Execution type........
5. Modification level... ____ 13. Order number.......... 
6. Fix level............ ________ 14. Location code......... 
7. Source language...... ________ 15. Display class......... 
8. Model link ID........ ________
16. Description.......<R> VMSP FOR SYSTEM RED9021____________________

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

--- end
```

The Software Component Summary panel appears. You can now do one of the following:

- Use option 1 to change the data you just entered.
- Use options 2, 4, 6, 8, 10, or 12 to add information to the record.
- Use option 3 to enter connection records for this component.
- Use option 7 to enter feature records for this component.
- Use option 9 to file the record.

If you choose option 3 or 7, Tivoli Information Management for z/OS files the component record and displays the appropriate entry panel.
For this example, type 2 on the command line and press Enter.

Supply data about the support and maintenance of a software component.

For this example, type the following on the command line and press Enter:

6,dpctr1,7,red9021,8,ibm300

To save the data, type end on the command line and press Enter.

To add FMID information, type 4 on the command line and press Enter.
This example uses the list processor program exit BLG01396 to collect FMID levels. A table panel makes it easy for you to enter new data and change or delete existing data. For more information about the list processor or lists in general, refer to the Tivoli Information Management for z/OS Panel Modification Facility Guide.

For this example, press the Tab key twice to move the cursor to the first field.

Type the following and press Enter:

joz1235

To save the data, type end on the command line and press Enter.

When you have entered all the necessary information to complete the component record, type 9 on the command line and press Enter to file the record.

This returns you to the Primary Options Menu.
Creating Software Component Records Directly

--- 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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BLG3058I Record VMSP was stored successfully.
Understanding Model Record Concepts

When you have several components in your configuration that are the same, the easiest and most accurate way to create component records for them is to first create a record you can use as a model. For example, assume that your company has 200 terminals, all with the same features and subcomponents. By creating a model component record, you enter the common information for all the components only once, in the model record, thereby increasing both the speed and accuracy of the data entry task.

You might want to create additional model records if your company has 200 terminals with different features and subcomponents. You could create a model record for each combination of terminals and features that exist in your company. After you do this, if a feature changes on one terminal, all you have to do is change one field in the component record (the Model link ID) to the model component record ID that fits the new combination.

This chapter explains the relationship between model records and component records. Using the example, you first create a model component record with two features and one subcomponent. Then, from the model component record, you create a hardware component record with two features and one subcomponent.

The panels in the example and their relationship to each other are shown in Figure 3. The highlighted characters such as A throughout the text correspond to the characters in Figure 3.

**Important**

This chapter does not give you exact instructions on how to create the records. Rather, it explains the concept of model records by showing you the relationship between the fields on the panels and the records. To learn how to create each record and to see the exact panel flow, turn to the appropriate chapter:

- "Creating Model Hardware Records" on page 141
- "Creating Model Software Records" on page 161
- "Creating Hardware Records From Models" on page 173
- "Creating Software Records From Models" on page 187
Figure 3. Relationship Between Model Records and Component Records (Part 1 of 2). The highlighted codes shown here correspond to those appearing throughout this chapter.
Figure 3. Relationship Between Model Records and Component Records (Part 2 of 2). The highlighted codes shown here correspond to those appearing throughout this chapter.

Model Component Records

The first step is to create the model component record.
On BLG0D700 Model Hardware Component Entry A, define the information that is the same for several components and enter the component ID.

```
<table>
<thead>
<tr>
<th></th>
<th>MODEL HARDWARE COMPONENT ENTRY</th>
<th>COMPONENT: M001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter model component data; cursor placement or input line entry allowed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Component ID........&lt;R&gt; M001___</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Generic device.......&lt;R&gt; VID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Device type &amp; model.... PS/2__</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Component status....&lt;R&gt; INSTALL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Date of status......... 12/15/1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Display class.......... 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Description.........&lt;R&gt; PS/2 COMPONENT_______________________________</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

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

The component ID, M001, identifies this model component record. Tivoli Information Management for z/OS uses the ID to create a link between the model component record and the component and subcomponent record. As you follow this example, note that M001 is referenced in different ways. When you create component records from the model, M001 is also the Model link ID. When you create subcomponent records, M001 is also the Model component link ID.

### Model Feature Records

The second model record you create is for the features connected to the model component. These features are reflected in any of the components created from this model. You can create multiple feature records that link to the model component, but for this model you need to create only two feature records.

The first feature is for a keyboard. In panel BLG0D720 Model Hardware Feature Entry B1, assign the User feature ID, **F001**, the Feature name, **KEYBOARD**, and the Storage class, **REFER**.
The significance of assigning storage class REFER is explained in "Component Feature Records" on page 137.

The second feature is for an alarm. In panel BLG0D720 Model Hardware Feature Entry B2, assign the User feature ID, F002, the Feature name, ALARM, and the Storage class, DUP.

The significance of assigning storage class DUP is explained in "Component Feature Records" on page 137.

When you create a feature record, Configuration Management establishes a parent/child relationship between the component record (parent record) and the feature record (child record). That relationship is indicated by the solid line in Figure 3 on page 130. Each model feature record is a separate record and has a unique number (F001 and F002) and name (KEYBOARD and ALARM) that links it to the parent component record. If you do not assign a feature ID, Configuration Management assigns a unique number for you.
Model Subcomponent Records

Next, create a model subcomponent record.

In BLG0D740 Model Hardware Subcomponent Entry C panel, enter the information about the subcomponent that is a part of this model record. Assign a User subcomponent ID of MSC0001, which defines this model subcomponent record. You also enter the Model component link ID, M001.

<table>
<thead>
<tr>
<th>Subcomponent type</th>
<th>PRINTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>User subcomponent ID</td>
<td>MSC0001</td>
</tr>
<tr>
<td>Model component link</td>
<td>M001</td>
</tr>
<tr>
<td>Subcomponent status</td>
<td>INSTALL</td>
</tr>
<tr>
<td>Date of status</td>
<td>12/15/1996</td>
</tr>
<tr>
<td>Description</td>
<td>PRINTER SUBCOMPONENT</td>
</tr>
</tbody>
</table>

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

The Model component link ID creates the relationship between the model subcomponent and model component records. That relationship is indicated by the broken line in Figure 3 on page 130. Note that there is a record link between a subcomponent and a component, and not a parent/child relationship.

Each model subcomponent record is linked to a model hardware component record. You can delete or change the link between a model component and a model subcomponent record by altering the Model component link field in the model subcomponent record.

Using Model Records

After you create the models for your records, you can use them to create the actual component records.

The first record you create is the hardware component record. From BLG0D104 Hardware Component Entry, select option 2, Hardware Component Model, to create a component record from a model component record.
Enter the ID of the model you created, **M001**.

BLG0D107  
**SPECIFICATION FOR HARDWARE MODEL COPY**

Enter **MODEL** Information; cursor placement or input line entry allowed.

**NOTES:** If Model ID is unknown, enter relevant Generic Device type. For a list of all Model records, enter a null reply.

1. **Model ID**................. **M001**
2. **Generic device**........... 

To start function, press Enter without field modification.

BLG0D102 Hardware Component Entry D appears with the information already filled in.
Notice that the Generic device field is protected. You cannot change that field at this time, but you can fill in any information that applies only to this component.

The Component ID field is not already filled in. On this panel, define the hardware component record using the Component ID, **HC000001**.

The Model link ID (M001) refers to the model component record that this component record is linked to, and, in this case, created from.

When you file this component record, panel BLG1TSUB appears with a list of subcomponents that are attached to the model component record you created this component record from.

### Subcomponent Records

Execute the subcomponent record from the list in panel BLG1TSUB Model Hardware Subcomponent List, by typing **e** next to the record.

Panel F, the BLG0D140 Hardware Subcomponent Entry appears.
The fields shown above, except for User Subcomp ID, are already filled in.

You define the User Subcomp ID (SC0001) that identifies this new hardware subcomponent record. The Hardware link ID (HC000001) creates a record link between this record and the hardware component record HC000001. That link is indicated by the broken line in Figure 3 on page 130.

A subcomponent can be linked to a hardware component or it can be a stand-alone record. A subcomponent is linked to a component through a record relationship. That link is indicated by the broken line in Figure 3 on page 130. The subcomponent becomes a stand-alone record when you delete the Hardware link ID (HC000001) from the subcomponent record, thus ending the record link.

If the model subcomponent record is linked to a model component record, the Model Hardware Subcomponent List panel (BLG1TSUB) appears at the time you create the component record. You can choose one or more subcomponent records to link to the new component record.

A model subcomponent record must be linked to a model component record for you to create a subcomponent record from the model. If a given model subcomponent record is not linked to the model component record, the model subcomponent record will not appear on the Model Hardware Subcomponent List panel. (In fact, BLG1TSUB does not appear if a model component record does not have a model subcomponent record linked to it.)

**Component Feature Records**

A model feature record establishes either a one-to-one or a many-to-one relationship between components and model features depending on how the Storage class field is designated in the model feature record.

**Feature Record with Storage Class DUP**

Because model feature record F002 has a storage class of DUP, feature record 00000001 E1 was automatically created as a child record to HC000001 D.
Feature record 00000001 was duplicated from F002 and the system assigned it the unique record number 00000001. In other words, a model feature record created with a Storage Class of DUP is duplicated as a child record (with a unique ID) of the component record created from the model component record. All the information you entered in F002 is automatically entered in this feature record. This is true for all feature records that are created from a model feature record with a Storage class of DUP and all feature records that are created by updating the parent hardware component record.

Note: When a model component record is updated with features using a Storage Class of DUP, the updates are not reflected in any components already created from that model.

**Feature Record with Storage Class REFER**

Because model feature record F001 has a Storage class of REFER, a unique record is not created although a record relationship exists between the component record and the model feature record. The relationship is indicated by the dotted line in Figure 3 on page 130. In other words, model feature records created with a storage class of REFER become implied features of the component record created from the model component record. A many-to-one relationship is generated between components, and the model feature is referenced by these components by way of the model components. You can remove or change the implied features from a component by deleting or changing the Model link ID, M001, in the component record.

The relationship between the implied feature and the component can be seen on BLG1TFEL Related Record List panel E2.
This panel includes a list of model features with a Storage class of REFER and subcomponents linked to the hardware component. You must display the record to view this panel. Features with a storage class of REFER are not shown when the component record is being updated.

To create or update a feature record with a storage class of REFER, you must update the model component record. When a model feature record with a storage class of REFER is updated, the updates are reflected:

- In the components already created from that model
- In any component records whose model link ID is ever modified to refer to that model component record.
Creating Model Hardware Records

A model component record contains the fixed or common information for a particular type of component. A component record is linked to a model component record through the model link ID. The model link ID is stored in the component record and establishes a record reference.

A model feature record contains information about optional features that attach to a component. You can create an unlimited number of feature records for one component. To understand the relationship between component and feature records, turn to Understanding Model Record Concepts.

Some examples of a feature are:
- A keylock on a terminal
- Graphics on a terminal or printer
- A manager’s keylock on a cash register
- Increased storage on a PC or PS/2.

You can create model feature records at the time you create the model component record, or later by updating the model component record.

A model hardware subcomponent record contains all the common information for a particular subcomponent. Model hardware subcomponent records are linked to the model hardware component record through a record link. A model subcomponent record is not used until it is linked to a model component record.

A subcomponent is detachable from a component, but a feature is not. Some examples of a subcomponent are:
- A keyboard on a terminal
- A keylock on a terminal
- A voice box on a cash register
- An external disk drive on a workstation
- A printer on a workstation.

This chapter illustrates the ideas presented in “Understanding Model Record Concepts” on page 129 through a series of examples. You can follow the flow of the panels by using either the sample data shown here or your own data.
Creating Model Hardware Component Records

In the following example, you are creating the component records and two feature records for the PS/2s your organization has just installed. Because much of the information is similar for all 10 computers, you can create one model record.

To create the model hardware component record, use the following information:
- The model component ID is TERMPS00. This is the ID you will use when you create the 10 hardware component records.
- The description of this component is PS/2 COMPONENT. It refers to the components that this model record is created for, not the model record itself.
- The display class is 1.
- The status of the component is INSTALL.
- The component owner is DPT48.

Begin at the Primary Options Menu.

Type 5,3 on the command line and press Enter:

```plaintext
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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---5,3
```

For this example, type 7 and press Enter.
Your selection from this panel depends on the type of model record you are creating. For this example, type 1 and press Enter.

Supply information about the components for which you are building the model record.

For this example, type the following on the command line and press Enter:

1,term00,2,vid,3,ps/2,4,install,5,=,6,1,7,ps/2 component

To save the data, type end and press Enter.
If the generic device is LIN, panel BLG0D770 appears. If the generic device is LOP, panel BLG0D772 appears. After completing the panel, you continue to the Model Hardware Component Summary panel.

Because the generic device shown here is neither LIN nor LOP, the Model Hardware Component Summary panel appears immediately. You can now do one of the following:

- Use option 1 to change the information you just entered.
- Use options 2, 6, 8, or 10 to add specific information.
- Use option 5 to enter secondary description information when the generic device type is LIN or LOP.
- Use option 7 to enter feature records for this component.
- Use option 9 to file the record.

If you choose option 7, Tivoli Information Management for z/OS files the record and displays the feature entry panel.

For this example, type 2 on the command line and press Enter.
Supply information about the support and maintenance of the component. You established this information when you created the data center record, system record, and service record in previous chapters.

For this example, type the following on the command line and press Enter:

```plaintext
1,dpt48,7,dptctr1,8,red9021,9,ibm300
```

To save the data, type **end** and press Enter.

The summary panel returns after every selection you make on this panel except for option 9. From this panel, you can select any option to add data to the record.

For this example, type **6** on the command line and press Enter.

**Note:** To enter the book value and market value, you must be in a privilege class that has financial and configuration entry authority.
Supply information that you established when you created the hardware financial record. For this example, type the following on the command line and press Enter:

1. fnpc

To save the data and continue, type end and press Enter. The Model Hardware Component Summary panel appears.

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

If you have service or system records with a secondary interest in this component, you can identify a secondary support group. A secondary support group does not own the component but has an interest in it. For example, a 3725 owned by department 40 is in the computer room at the main site. Department 90 is in a branch office and transmits to the 3725. So department 90 has a secondary interest in the 3725 component.

To specify a secondary support group, type 10 and press Enter.

For this example, there are no other groups with an interest in this component. Type end and press Enter.
After you have added all the necessary information to complete a model record, type 9 on the command line and press Enter to file the record.

This returns you to the Primary Options Menu.

A message appears on this panel confirming that the record was stored successfully.
This ends the task of creating model hardware component record TERMPS00. Remember, this is the model record you will use when you create records for the 10 PS/2s.

Creating Model Hardware Feature Records

Model feature records are attached to the hardware component record by a parent-child link. For more information on this relationship, read [Understanding Model Record Concepts](#).

You can create feature records at the time you create the model component record or afterwards by updating the model component record.

In this example, you create two model feature records by updating the model component record you created earlier. Use the following information for the first model feature record:

- The feature name is KEYLOCK.
- The feature status is INSTALL.
- The storage class is REFER.
- The feature ID is KEYLOCK.
- The description of this feature is KEYLOCK FEATURE FOR PS/2S REFER.
- The owner of this feature is DPT48.

To update the model hardware record, type the following and press Enter:

```
update r termps00
```
To create the feature record, type 7 on the command line and press Enter.

If there are no feature records associated with this model record, message BLG09007I appears on panel BLG0D720.

Supply feature data. The Storage class field is important in determining the relationship between the model feature record and the model component record.

For this example, type the following on the command line and press Enter:

```
1,keylock,4,keylock,5,install,6,=,7,refer
```
Next, type the following on the command line and press Enter:

8, keylock feature for ps/2s refer

To save the data and continue, type end and press Enter.
Supply information about the support and maintenance of the hardware feature record.

For this example, type the following on the command line and press Enter:

1.dpt48

To save the data and continue, type end and press Enter.

To add financial data about the feature, type 6 on the command line and press Enter.
If you created a hardware financial record previously, enter the record ID on this panel.

For this example, use the record ID you created earlier (FINPC). Type the following on the command line and press Enter:

```
1,finpc
```

To save the data and continue, type `end` and press Enter.

When you have added all the necessary information to complete a model feature record, you can file the record.

To do this, type `9` on the command line and press Enter.
Message BLG03058I appears on this panel. The additional message indicates that the model component record is also updated.

If this were the only feature for this component, you would type **end** on this panel, return to the previous panel, then file the record. In this example, you also need to create a feature record with a storage class of DUP.

To do this, type an **a** next to 1. **KEYLOCK** and press Enter.

The Model Hardware Feature Entry panel appears. Use the following information for the next model feature record:
- The feature name is **8514**.
- The feature type is **MEMORY**.
- The feature ID is **MEMORY**.
- The feature status is **INSTALL**.
- The storage class is **DUP**.
- The description for this feature is **8514 MEMORY EXPANSION KIT PS/2S**.
Supply information about this feature.

For this example, type the following on the command line and press Enter:

1,8514,2,memory,4,memory,5,install,7,dup,8,8514 memory expansion kit ps/2s

To save the data and continue, type end and press Enter.

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

For this example, type 9 on the command line and press Enter.

Message, BLG03058I appears on this panel. The additional message indicates that the model component record is also updated.

You can now use any of the line commands or type end and press Enter to return to the Model Hardware Component Summary panel.

For this example, type end on the command line and press Enter.
Creating Model Hardware Feature Records

If there is information you want to change, you can type an option number at the bottom of the panel to update this record.

For this example, type 9 on the command line and press Enter to file the record.

A message appears on this panel confirming that the record was stored successfully.

This ends the task of creating model hardware feature records.
Creating Model Hardware Subcomponent Records

In this example, all the PS/2s at your organization have APL keyboards. The APL keyboards are considered to be a subcomponent of the PS/2s. Since all the PS/2s have the same type of keyboard, you can create one model hardware subcomponent record for all of them. The example uses the following information:

- The subcomponent type is KEYBOARD.
- The user subcomponent ID is KEYAPL.
- The model component link is TERMPS00. This is the record ID of the model component record you created earlier.
- The status is INSTALL.
- The description of the subcomponent is APL KEYBOARD ON PS/2S.
- The support data are record IDs that you created in previous chapters: DPCTR1, RED9021, and IBM300.

To create a model subcomponent record, type the following on the command line and press Enter:

5,3,7,2
Supply information about the model subcomponent. For this example, type the following on the command line and press Enter:

1, keyboard, 2, keyapl, 3, termps00, 4, install, 5, =, 6, apl keyboard on ps/2s

To save the data, type end and press Enter.

The Model Hardware Subcomponent Summary panel appears. You can now do one of the following:

- Use option 1 to change the information you just entered.
- Use options 2, 6, or 8 to add information to the record.
- Use option 9 to file the record.

For this example, type 2 on the command line and press Enter.
On the next panel, enter information about the support and maintenance of the subcomponent. You established this data when you created the data center record, system record, and service record.

For this example, type the following on the command line and press Enter:

```
7,dpctr1,8,red9021,9,ibm300
```

To save the data, type `end` and press Enter.

You return to the Model Hardware Subcomponent Summary panel, where you can add more information or file the record.

For this example, type `6` on the command line and press Enter.
Suppose the record ID of the hardware financial record associated with this subcomponent.

For this example, type `1,finpc` on the command line and press Enter:

To save the data, type `end` and press Enter.

When you have added all the necessary information to complete a model subcomponent record, you can file the record.

To do this, type `9` on the command line and press Enter.
Creating Model Hardware Subcomponent Records

A message appears on this panel confirming that the record was stored successfully.

This ends the example of creating hardware subcomponent record KEYAPL.

---

Creating Model Hardware Subcomponent Records

--- 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 KEYAPL was stored successfully.

---

Version 7.1
A model software record contains the fixed or common information for a particular software component. A component record is linked to a model component record through the Model Link ID field in the component record. This link establishes a record reference back to the model component record.

A software feature record is a record that describes optional software features attached to a software component. You can create an unlimited number of feature records for each component. The following instructions and panels illustrate how to create a model software component record and model software feature record. In this example, you are creating the model software component and feature record for the software that came with the 10 PS/2s. Because all the PS/2s arrived with the same software, you only need to create one model record.

Creating Model Software Component Records

Enter the following information on the model component panels:

- The component ID is SOFTPS1.
- The program type is SCP (system control program), because OS/2 is an operating system.
- The release level is 3.
- The program version is 1.
- The display class is 1.
- The status is INSTALL.
- The description is OS/2 SOFTWARE FOR PS/2S.
- The financial ID is FINSOFT.

Begin at the Primary Options Menu.

To create a software configuration record, type the following on the command line and press Enter:

```
5,3,7
```
Creating Model Software Component Records

Your selection from this panel depends on the type of model record you are creating.

For this example, type 3 and press Enter.

Supply information about this model software record.

For this example, type the following on the command line and press Enter:

```
1,softps1,2,scp,3,0003,4,1,7,install,8,=,12,1,13,os/2 software for ps/2s
```

To save the data and continue, type `end` on the command line and press Enter.
Enter model component data; cursor placement or input line entry allowed.

1. Component ID...<R> SOFTPS1
2. Program type...<R> SCP
3. Release level...... 0003
4. Program version...... 1
5. Modification level... ____
6. Vendor component #... ___________

7. Component status.<R> INSTALL
8. Date of status....... 09/03/1996
9. Execution type...... __________
10. Source language..... ________
11. Fix level........... ________
12. Display class....... 1

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

The Model Software Component Summary panel appears. You can now do one of the following:

■ Use option 1 to change the data you just entered.
■ Use options 2, 6, 8, or 10 to add information to the record.
■ Use option 7 to enter feature records.
■ Use option 9 to file the record.

If you choose option 7, Tivoli Information Management for z/OS files the component record and displays the model feature entry panel.

To add software support data, type 2 on the command line and press Enter.

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

1. Description.
2. Primary support data.
3. Financial.
4. Feature entry (file record).
5. Freeform text and notes.
6. File record.
7. Secondary support data.

Supply support and maintenance information about the model software component. You established this information when you created the data center record, system record, and service record in previous chapters.

For this example, type the following on the command line and press Enter:
To save the data and continue, type **end** on the command line and press Enter.

The summary panel returns after every option except option 9.

From this panel, you can make any selection to add data to the record.

For this example, type **6** on the command line and press Enter.

If you created a software financial record previously, enter the record ID on this panel.

For this example, use the record ID you created earlier (FINSOFT). Type the following on the command line and press Enter:

**1,finsoft**

To save the data and continue, type **end** on the command line and press Enter.
When you have added all the necessary information to complete a model software record, you can file the record.

To do this, type 9 on the command line and press Enter.

This returns you to the Primary Options Menu.

A message appears on this panel confirming that the record was stored successfully.

This ends the example of creating a model software component record.
Creating Model Software Feature Records

Model software feature records are attached to a model software component record by parent-child link. For more information on this relationship, read Understanding Model Record Concepts.

You can create model software feature records at the time you create the model component record or afterwards by updating the model component record.

In this example, you create a model software feature record by updating the model software record that you created earlier. This example uses the following information:

- The feature type is DISKETTE.
- The Feature name and the User feature ID are DISKET01.
- The status is INSTALL.
- The storage class is REFER.
- The description is OS/2 DISKETTES FOR PS/2S REFER.

To update the model software record, type the following and press Enter:

```
update r softps1
```
To create the feature record, type 7 on the command line and press Enter.

The Model Software Feature Entry panel appears. If no feature records exist for this component, message BLG09007I appears at the bottom of the panel.

The Storage class field is important in determining the relationship between the model feature record and model component record. For more information on model storage classes, see Understanding Model Record Concepts. Supply the information about the feature.

For this example, type the following on the command line and press Enter:

1,diskette,7,disket01,8,install,10,disket01,12,refer
Next, type the following on the command line and press Enter:

13.os/2 diskettes for ps/2s refer

To save the data and continue, type end on the command line and press Enter.

The Model Software Feature Summary panel appears. The Parent component field is filled in with the model component record ID you are updating. You can now do one of the following:

- Use option 1 to change the data you just entered.
- Use options 2, 6, or 8 to add information to the record.
- Use option 9 to file the record.

For this example, type 6 on the command line and press Enter.
If you created a software financial record previously, you could enter the record ID in field 1.

For this example, type the following on the command line and press Enter:

1,finsoft

To save the data and continue, type end on the command line and press Enter.

When you have added all the necessary information to complete a model software record, you can file the record.

To do this, type 9 on the command line and press Enter.
This table panel lists the model feature records attached to a model component record. You can use any of the line commands, or type **end** to continue.

A message appears on this panel confirming that the record was stored successfully.

For this example, type **end** on the command line and press Enter.

You return to the model software component summary panel. If there was information you wanted to change, you could make a selection from the bottom of the panel and continue to the component record.

For this example, type **9** on the command line and press Enter.
A message appears on this panel confirming that the record was stored successfully.

This ends the example of creating a model software feature record.
Creating Hardware Records From Models

In [Creating Hardware Records](#), you learned how to create hardware records directly. This chapter presents a series of examples to illustrate how you can create hardware records from model records. You can follow the flow of the panels with the sample data shown here or by using your own data.

Creating Hardware Component Records From Models

In this example, you create a hardware component record from the model record TERMPS00.

After you create the first record by following this example, then you need to create at least four more hardware component records. You will use these component records later when you create connection records and use the DRAW function.

Attach subcomponent record KEYAPL to the component records. Write down the record ID this example creates. You will need it when you swap records in [Swapping Components in the Configuration](#).

This example uses the following information:

- The first component ID is PS/2A. (Use PS/2B, PS/2C, PS/2D, PS/2E, and so on for subsequent records.)
- The serial numbers start at H6224 and continue consecutively.

The following table can aid you as you create the component records. As you create the records, put an X in the X column.

<table>
<thead>
<tr>
<th>Component ID</th>
<th>Serial Number</th>
<th>X</th>
<th>Component ID</th>
<th>Serial Number</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS/2A</td>
<td>H6224</td>
<td></td>
<td>PS/2F</td>
<td>H6229</td>
<td></td>
</tr>
<tr>
<td>PS/2B</td>
<td>H6225</td>
<td></td>
<td>PS/2G</td>
<td>H6230</td>
<td></td>
</tr>
<tr>
<td>PS/2C</td>
<td>H6226</td>
<td></td>
<td>PS/2H</td>
<td>H6231</td>
<td></td>
</tr>
<tr>
<td>PS/2D</td>
<td>H6227</td>
<td></td>
<td>PS/2I</td>
<td>H6232</td>
<td></td>
</tr>
<tr>
<td>PS/2E</td>
<td>H6228</td>
<td></td>
<td>PS/2J</td>
<td>H6233</td>
<td></td>
</tr>
</tbody>
</table>

To create a hardware component record, type the following on the command line and press Enter:

5,3,3
To create the record from a model, type 2 on the command line and press Enter.

Enter the model record ID from which you are creating this component record. If you do not enter a record ID on this panel, then panel BLG1TM0D appears, and you execute a model record from the list. If you enter only the generic device type, you get a list of model records with that device type.

For this example, type the following on the command line and press Enter.

1,termps00

Press Enter again to continue.
Some of the fields are already filled with data from the model component record. You need to assign a unique record ID to this component record. To do this, fill in the Component ID field.

For this example, type the following on the command line and press Enter:

```
1,ps/2a,4,h6224,8,=
```

To save the data and continue, type **end** on the command line and press Enter.

The Hardware Component Summary panel appears. You can now do one of the following:

- Use option 1 to change the information you just entered.
- Use options 2, 6, 8, 10, 11, or 12 to add information to the record.
- Use option 3 to enter connection records.
- Use option 4 to enter EC levels.
- Use option 5 to enter secondary description information when the generic device type is LIN or LOP.
- Use option 7 to enter feature records.
Use option 9 to file the record.

Use option 11 to add subdiagram markers for configuration diagrams.

If you choose options 3, 4, or 7, Tivoli Information Management for z/OS files the component record and displays the appropriate entry panel.

For this example, type 9 on the command line and press Enter.

---

Model component record termps00 contains a record link to model subcomponent record KEYAPL, so the Model Hardware Subcomponent List panel appears. To complete this example, continue reading through the next section.

Creating Hardware Subcomponent Records from a Component Record That Has a Model Link

In addition to the five hardware component records, you need to create a subcomponent record for five text keyboards that your company ordered. These keyboards are available and kept in a warehouse until they are needed. Create these records so you can use them in a later example. You can follow the flow of the panels using the sample data shown here or by using your own data, as long as the component record that you use was created from a model record with a subcomponent link. This example uses the following information:

- The user subcomponent IDs are KBTEXT1, KBTEXT2, KBTEXT3, KBTEXT4, and KBTEXT5.
- The status is DISCONT.
- The description is KEYBOARD FOR PS/2.

This example continues from the previous section.

For this example, type an e (for execute) by record 1 and press Enter.
Some of the fields are already filled in. Assign a user subcomponent ID.

For this example, type the following on the command line and press Enter.

3.kbtext1,6.discont,9.keyboard for ps/2s

To save the data and continue, type **end** on the command line and press Enter.

The Hardware Subcomponent Summary panel appears. You can now do one of the following:

- Use option 1 to change the information you just entered.
- Use options 2, 3, 6, and 8 to add information to the record.
- Use option 9 to file the record.

For this example, type **9** on the command line and press Enter.
Creating a Record from a Record with a Model Link

A message appears on this panel confirming that the record was stored successfully. If the list contained several subcomponents, you could execute another subcomponent record and create another record at this time. For this example, type **end** and press Enter to file the hardware component record.

A message appears on this panel confirming that the record was stored successfully.

This ends the task of creating a subcomponent record from a component record that has a model link. This also ends the task of creating a hardware component record from a model record.
Creating Hardware Feature Records

A hardware feature record is a record that describes optional features attached to a hardware component. You can create an unlimited number of feature records for each component. Some examples of hardware features are:

- A keylock on a terminal
- Graphics on a terminal or printer
- A manager’s keylock on a cash register
- Increased storage on a PS/2.

You can create a feature record at the time you create the component record or afterwards by updating the component record. The following instructions and panels illustrate how to create a hardware feature record by updating the hardware component record. You can follow the flow of panels by using the sample data shown here or your own data.

In this example, you are adding a graphics feature to one of the PS/2s. Add it to component record PS/2A. After you finish this example, add this feature to component records PS/2B and PS/2C also. The example uses the following information:

- Make the User feature ID field, Feature name field, and Feature type field the same. Use GRAPH01 for PS/2A, GRAPH02 for PS/2B, and GRAPH03 for PS/2C.
- The feature status is INSTALL.
- The description of the record is GRAPHICS FEATURE FOR PS/2.
- The contact department is dpt48.
- The VPA number is 18339.
- The VPA sequence number is 662.

To create a feature record, type the following on the command line and press Enter:

```
update r ps/2a
```
Type 7 on the command line and press Enter.

This component has a feature already linked to it because the component record was created from a model with a feature linked to it.

For this example, type an a next to record 1 and press Enter.
Supply information about the feature.

For this example, type the following on the command line and press Enter:

```
1,graph01,2,graph01,6,graph01,7,install
```

Next, type the following on the command line and press Enter:

```
8,=,10,graphics feature for ps/2s
```

To save the data and continue, type `end` on the command line and press Enter.
The Hardware Feature Summary panel appears. You can now do one of the following:

- Use options 1, 2, 3, 6, and 8 to add information.
- Use option 9 to file the record.

To specify feature support, type 2 on the command line and press Enter.

Supply information about the support and maintenance of the feature.

For this example, type the following on the command line and press Enter:

4.dpt48

To save the data and continue, type end on the command line and press Enter.

---

Creating Hardware Feature Records

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Version 7.1
BLG00157 HARDWARE FEATURE SUPPORT ENTRY FEATURE: GRAPH01

Enter feature support data; cursor placement or input line entry allowed.

1. Feature owner... ___________
2. Transfer-to class... ________
3. Contact name...... _______________
4. Contact department. DPT48______
5. Contact phone...... _____________

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

--- end

To add financial data about this feature, type 6 on the command line and press Enter.

BLG00157 HARDWARE FEATURE SUMMARY ENTRY FEATURE: GRAPH01

Feature type............ GRAPH01 Parent component........ PS/2A
Feature name............ GRAPH01 Location code........... ________
Feature number.......... ___________ Entry priv. class.... ________
Serial number........... ________ Owning priv. class...... ________
Microcode EC level...... ________ Date entered............ __________
Contact name............ _______________ Time entered............ _____
Feature owner........... ___________ Date last altered....... __________
Date of status.......... 08/08/1996 Time last altered...... ________
Feature status.......... INSTALL User last altered....... ________
Description............. GRAPHICS FEATURE FOR PS/2S

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

1. Description.
2. Support data.
3. Hardware EC levels.
5. Freeform text and notes.
6. File record.

---> end

Supply financial data specific to this feature.

For this example, type the following on the command line and press Enter:

4,=,5,18339,6,662

To save the data and continue, type end on the command line and press Enter.
Enter feature financial data; cursor placement or input line entry allowed.

1. Hardware financial ID. ________
2. Lease begin date........ ________
3. Lease end date........ ________
4. Purchase date........ 08/08/1996
5. VPA number............... 18339_____
6. VPA sequence number... 662_____

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

When you have added all the necessary information to complete a feature record, you can file it.

To do this, type 9 on the command line and press Enter.

The Hardware Feature Record List panel appears.

When you file the feature record, the component record is automatically modified to include the link to the feature record and then filed. Any other changes that were made to the component record are also filed.

A message appears on this panel confirming that the record was stored successfully. The additional message states that the component record was also stored successfully.

You can now issue any of the line commands listed at the bottom of the panel. If there were other features for this component, they would be listed on this table.
For this example, type **end** on the command line and press Enter to return to the summary panel.

### BLG1TCFE HARDWARE FEATURE RECORD LIST

<table>
<thead>
<tr>
<th>RECORD ID</th>
<th>NAME</th>
<th>TYPE</th>
<th>DESCRIPTION ABSTRACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>00007772</td>
<td>8514</td>
<td>MEMORY EXPANSION KIT PS/2S</td>
</tr>
<tr>
<td>2.</td>
<td>GRAPH01</td>
<td>GRAPH01</td>
<td>GRAPHICS FEATURE FOR PS/2S</td>
</tr>
</tbody>
</table>

*** BOTTOM OF DATA ***

Line Cmds: A=Add C=Copy D=Delete P=Print S=Select U=Update
Type DOWN or UP to scroll the panel, or type END to exit the panel.
+ BLG03058I Record GRAPH01 was stored successfully.

You can change the data in the component record by selecting an option from the bottom of the panel.

For this example, you do not want to change any data in this component. Type **9** on the command line and press Enter.

### BLG0DU01 HARDWARE COMPONENT SUMMARY

**COMPONENT: PS/2A**

- **Generic device**
- **Device type & model**
- **Serial number**
- **Microcode EC level**
- **Model link ID**
- **Contact name**
- **Date of status**
- **Component description**
- Select one of the following, type END to save your changes, or type CANCEL to discard your changes.
  1. Primary description
  2. Primary support data
  3. Connections
  4. EC Levels
  5. Secondary description
  6. Financial
  7. Feature entry
  8. Freeform text and notes
  9. File record
  10. Secondary support data
  11. Maps data
  12. Source definition

A message appears on this panel confirming that the record was stored successfully.

This ends the example of creating a feature record.
Using the information on page 179, add a feature record to hardware component records PS/2B and PS/2C.
Creating Software Records From Models

In Creating Software Records, you learned how to create software records directly. This chapter presents a series of examples to illustrate how you can create software records from model records. You can follow the flow of the panels by using the sample data shown here or by using your own data.

Creating Software Component Records From Models

In this example, you create a component record from the model record SOFTPS1.

After you create the first record by following this example, you need to create at least four more software component records.

This example uses the following information:

- The first component ID is OS/2A. (Use OS/2B, OS/2C, OS/2D, OS/2E, and so on for subsequent records.)
- The financial record ID for the record is FINSOFT.

To create a software component record, type the following on the command line and press Enter:

5,3,4

To create a component record from a model, type 2 and press Enter.
Enter the model record ID from which you are creating the component record. If you do not enter a record ID, then panel BLG1TSMD appears.

For this example, type **1,softps1** on the command line and press Enter:

Press Enter again to continue.

Some of the fields are already filled in with the data from the model software component record. You need to assign a unique record ID to this component record.

To do this, fill in the Component ID field. Type **1,os/2a** on the command line and press Enter:

To save the data, type **end** on the command line and press Enter.
The Software Component Summary panel appears. You can now do one of the following:

- Use option 1 to change the data you just entered.
- Use options 2, 4, 6, 8, 10, or 12 to add information to the record.
- Use option 3 to enter connection records.
- Use option 7 to enter feature records.
- Use option 9 to file the record.

If you choose option 3 or 7, Tivoli Information Management for z/OS files the component record and displays the appropriate entry panel.

For this example, type 6 on the command line and press Enter.

The Software financial ID field contains the name of the financial record you created in a previous chapter.

For this example, type end on the command line and press Enter to return to the summary panel.
When you have added all the necessary information to complete a software component record, file the record.

For this example, type 9 on the command line and press Enter.

A message appears on this panel confirming that the record was stored successfully.

This ends the example of creating a software component record from a model record.
Using the information on page 187, create at least four more software component records from model record SOFTPS1.

Creating and Updating Software Feature Records

A software feature record is a record that describes optional features associated with a software component. You can create an unlimited number of feature records for each component.

Software features can attach to and enhance the software program but are not necessary for the successful execution of the software program. Some examples of software features are:

- Screen Definition Facility (SDF) on Customer Information Control System (CICS®)
- Execution Diagnostic Facility (EDF) on CICS
- Configuration Management on Tivoli Information Management for z/OS
- Change Management on Tivoli Information Management for z/OS
- Problem Management on Tivoli Information Management for z/OS
- JES2 and JES3 on MVS
- Batch message processing (BMP) on Information Management System (IMS™).

You can create a feature record at the time you create the component record or afterwards by updating the component record. The following instructions and panels illustrate how to create a software feature record by updating the software component record. You can follow the flow of the panels by using the sample data shown here or by using your own data.

In this example, you are adding a program feature to the record OS/2A that you created on page 187. This example uses the following information:

- The feature type is PROGRAM.
- The User feature ID field and Feature name field are FEATOS2A.
- The status is INSTALL.
- The description is PROGRAM FEATURE FOR OS/2.
- The contact department is DEPT48.

To create a feature record, type the following on the command line and press Enter:
update r os/2a

BLG0DU03 SOFTWARE COMPONENT SUMMARY COMPONENT: OS/2A

Program type............ SCP
Program version.......... 1
Execution type.......... 
Release level............ 0003
Vendor component #....... 
Modification level...... 
Model link ID............ SOFTPS1
Entry priv. class....... MASTER
Location code............ 
Owning priv. class...... 
Fix level................. 
Date entered............ 09/03/1996
Contact name............. 
Time entered............. 19:24
Component owner......... 
Date last altered....... 09/03/1996
Date of status.......... 09/03/1996
Component status........ INSTALL
User last altered....... GARTLAN
Description............. OS/2 SOFTWARE FOR PS/2S

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

1. Description. 7. Feature entry.
2. Primary support data. 8. Freeform text and notes.
4. FMID levels. 10. Secondary support data.

If there are no feature records associated with this model record, message BLG09007I appears on panel BLG0D220.

Supply information about the feature.

For this example, type the following on the command line and press Enter:

1,program,7,featos2a,8,install,10,featos2a,13,program feature for os/2

To save the data and continue, type **end** on the command line and press Enter.
The Software Feature Summary panel appears. You can now do one of the following:
- Use options 1, 2, 3, 6, or 8 to add information to the record.
- Use option 9 to file the record.

For this example, type 3 on the command line and press Enter.

Supply information about the support and maintenance of the software feature.

For this example, type 4,dept48 on the command line and press Enter:

To save the data and continue, type end on the command line and press Enter.
When you have added all the necessary information to complete a feature record, file the record.

When you file the feature record, the component record is automatically modified to include the link to the feature record and is then filed. Any other changes that were made to the component record are also filed.

For this example, type 9 on the command line and press Enter.

A message appears on this panel confirming that the record was stored successfully. The additional message states that the component record has also been stored successfully. You can issue any of the line commands. If there were other features for this component, they would be listed on this table panel. For this example, type end and press Enter to return to the Software Component Summary panel.
You can change data in the component record by selecting an option from the bottom of the panel.

For this example, you do not want to change any data in this component. Type 9 on the command line and press Enter.

A message appears on this panel confirming that the record was stored successfully.
<table>
<thead>
<tr>
<th>OPTIONS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. OVERVIEW......Display general information and product enhancements.</td>
</tr>
<tr>
<td>2. PROFILE........Display or alter invocation or session defaults.</td>
</tr>
<tr>
<td>3. APPLICATION....Change application, list available applications.</td>
</tr>
<tr>
<td>4. CLASS..........Change current class, list available classes.</td>
</tr>
<tr>
<td>5. ENTRY..........Create a record.</td>
</tr>
<tr>
<td>6. INQUIRY........Search for records.</td>
</tr>
<tr>
<td>7. UTILITY........Copy, display, print, delete, and update records.</td>
</tr>
<tr>
<td>8. GLOSSARY.......Display a list of searchable words in the database.</td>
</tr>
<tr>
<td>9. PMF............Modify or create panels.</td>
</tr>
</tbody>
</table>

Select an option, enter a command, or type QUIT to exit.
Creating Component Connection Records

A component connection record describes the relationship between two components in a configuration. These components can be hardware, software, or a combination.

Configuration Management recognizes these hardware connection types:
- Hardware-to-hardware – physical
- Hardware-to-hardware – logical
- Hardware-to-software

In most cases, physical and logical connections are the same. For example, a terminal is both physically and logically connected to a cluster controller.

There are cases where physical and logical connections are not the same. For example, a disk control unit logically controls several disk drives, so each drive is logically connected to the controller. However, a disk drive could actually be physically connected to a Head of String (which, in turn, is physically connected to the control unit).

Configuration Management recognizes these software connection types:
- Software-to-software
- Software-to-hardware

An example of a software-to-software connection is Tivoli Information Management for z/OS connected to MVS. Examples of software-to-hardware connections would be OS/2 connected to a PS/2, or a microcode diskette connected to a 3274 controller.

Connection Record Concepts

When you create a connection record, Tivoli Information Management for z/OS establishes a parent/child relationship between the component record (parent record) and the connection record (child record). The connection record contains details about the link between components.

For hardware-to-hardware connections, the component represented in the parent record is the furthest from the Central Processing Unit (CPU). The connection record designates the component closest to the CPU.

For software-to-software connections, the parent record is the from record and the one farthest from the system control program (SCP). The connection record designates the to component and the component closest to the SCP.
The component record (parent) is the basis for the connection record. In the connection record (child), you designate the Component to field or upcomponent. For example, if you connect a 3278 terminal to a 3274 controller, the 3278 connection record is the child record to the 3278 component record. The 3274 component is designated as the component to in the child record. To create the connection record, you update the 3278 component record, putting the 3274 component record ID into the Component to field.

Each connection is a separate record with a unique identifying number. It is linked to the parent component record through this unique number. You define the connection record ID by filling in field 7 on the Hardware Connection Entry panel (Figure 4). If you do not define the ID, you will get a system-generated ID.

You can create connection records at the time you create the component records or afterwards by updating the parent component record. The following examples illustrate how to create hardware and software connection records by updating the parent records. You can follow the flow of the panels using the sample data shown here or by using your own data.

### Creating Hardware Component Connection Records

In this example, you create connection records for the component records you created earlier in this book. You are connecting the PS/2s to the 3274 controller.

The example uses the following information:
- The component to is CTL3274 and its address is 0C1.
- The connection type is PHYSICAL.
- The shift is ONE.
- The status is INSTALL.
- The description is DAY SHIFT CONNECTION TO CTL3274.

After you create the first connection record by following this example, use Table 2 to complete information on panel BLG0D130, Hardware Component Connection Entry, for at
least four more connection records. You will need these connection records later when you draw a configuration diagram.

**Table 2. Configuration Information for Use in Creating Hardware Connection Records**

<table>
<thead>
<tr>
<th>Component ID</th>
<th>Connection Record ID</th>
<th>Path ID</th>
<th>Cable Number</th>
<th>Port Number</th>
<th>Port ID</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS/2A</td>
<td>C3274A1</td>
<td>A1</td>
<td>01</td>
<td>C1</td>
<td>C1</td>
<td>0C1</td>
</tr>
<tr>
<td>PS/2B</td>
<td>C3274A2</td>
<td>A2</td>
<td>02</td>
<td>C2</td>
<td>C2</td>
<td>0C2</td>
</tr>
<tr>
<td>PS/2C</td>
<td>C3274A3</td>
<td>A3</td>
<td>03</td>
<td>C3</td>
<td>C3</td>
<td>0C3</td>
</tr>
<tr>
<td>PS/2D</td>
<td>C3274A4</td>
<td>A4</td>
<td>04</td>
<td>C4</td>
<td>C4</td>
<td>0C4</td>
</tr>
<tr>
<td>PS/2E</td>
<td>C3274A5</td>
<td>A5</td>
<td>05</td>
<td>C5</td>
<td>C5</td>
<td>0C5</td>
</tr>
<tr>
<td>PS/2F</td>
<td>C3274A6</td>
<td>A6</td>
<td>06</td>
<td>C6</td>
<td>C6</td>
<td>0C6</td>
</tr>
<tr>
<td>PS/2G</td>
<td>C3274A7</td>
<td>A7</td>
<td>07</td>
<td>C7</td>
<td>C7</td>
<td>0C7</td>
</tr>
<tr>
<td>PS/2H</td>
<td>C3274A8</td>
<td>A8</td>
<td>08</td>
<td>C8</td>
<td>C8</td>
<td>0C8</td>
</tr>
<tr>
<td>PS/2I</td>
<td>C3274A9</td>
<td>A9</td>
<td>09</td>
<td>C9</td>
<td>C9</td>
<td>0C9</td>
</tr>
<tr>
<td>PS/2J</td>
<td>C3274A10</td>
<td>A10</td>
<td>010</td>
<td>C10</td>
<td>C10</td>
<td>0CA</td>
</tr>
</tbody>
</table>

To update the hardware component record, type the following and press Enter:

**update r ps/2a**

```
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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```

To create a connection record, type 3 on the command line and press Enter.
The Hardware Connection Entry panel appears. If no connection records exist for this component, message BLG09007I appears on this panel.

Supply information about the connection record. This information is used by the Report Format Facility as input for configuration diagrams. For example, the Port ID field is used to calculate the number of spare ports left on a controller.

For this example, type the following on the command line and press Enter:

1,ctl3274,4,0c1,5,physical,6,install,7,c3274a1,8,one,9,a1,11,01,13,c1

Next, type the following on the command line and press Enter:

14,c1,16,day shift connection to ctl3274

To save the data, type end and press Enter.
When you have entered all information necessary for the connection record, file the record.

For this example, type **9** on the command line and press Enter.

When you file the connection record, the component record is automatically updated with the link to the connection record, then filed. Any other changes that you made to the component record are also filed.

The following table panel lists the connection records attached to the component record. You can use any of the line commands at this time, or enter **end** to return to the summary panel.

A message appears on this panel confirming that the record was stored successfully. The additional message states that the component record has also been stored successfully.

For this example, type **end** and press Enter.
<table>
<thead>
<tr>
<th>RECORD ID</th>
<th>COMPONENT TO</th>
<th>GENERIC TO</th>
<th>CONNECTION TYPE</th>
<th>DEVICE ADDRESS</th>
<th>DATE FROM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. C3274A1</td>
<td>CTL3274</td>
<td>CTL</td>
<td>PHYSICAL</td>
<td>0C1</td>
<td></td>
</tr>
</tbody>
</table>

*** BOTTOM OF DATA ***

If there were data you wanted to update, you could make a selection from the bottom of the panel and update other parts of the component record.

For this example, type **9** on the command line and press Enter.

A message appears on this panel confirming that the record was stored successfully.
Creating Software Component Connection Records

In this example, you create the connection record for the software components you created in Creating Software Records From Models. You are going to create a software-to-hardware connection by connecting the software to the hardware components you created in Creating Hardware Records From Models. This example uses the following information:

- The Component-to IDs are PS/2A, PS/2B, and so on.
- The connection type is LOGICAL.
- The connection status is INSTALL.
- The shift number is ONE.
- The Connection IDs are COS/2A, COS/2B, and so on. This is the unique record ID for these connection records.
- The description is OS/2 CONNECTION TO PS/2x (where x corresponds to the letter at the end of the Component-to id).

After you create the first connection record by following this example, use Table 3 to complete the information on the Software Component Connection Entry panel for the other connection records you need to create.

Table 3. Configuration Information for Use in Creating Software Connection Records

<table>
<thead>
<tr>
<th>Component-to ID</th>
<th>Connection ID</th>
<th>Device Address</th>
<th>Component-to ID</th>
<th>Connection ID</th>
<th>Device Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS/2A</td>
<td>COS/2A</td>
<td>0C1</td>
<td>PS/2F</td>
<td>COS/2F</td>
<td>0C6</td>
</tr>
<tr>
<td>PS/2B</td>
<td>COS/2B</td>
<td>0C2</td>
<td>PS/2G</td>
<td>COS/2G</td>
<td>0C7</td>
</tr>
<tr>
<td>PS/2C</td>
<td>COS/2C</td>
<td>0C3</td>
<td>PS/2H</td>
<td>COS/2H</td>
<td>0C8</td>
</tr>
<tr>
<td>PS/2D</td>
<td>COS/2D</td>
<td>0C4</td>
<td>PS/2I</td>
<td>COS/2I</td>
<td>0C9</td>
</tr>
<tr>
<td>PS/2E</td>
<td>COS/2E</td>
<td>0C5</td>
<td>PS/2J</td>
<td>COS/2J</td>
<td>0CA</td>
</tr>
</tbody>
</table>
As mentioned previously, you will create the software connection record by updating a software component record.

Type the following on the command line and press Enter:

update r os/2a

To create a connection record, type 3 on the command line and press Enter.

The Software Component Connection Entry panel appears. If no connection records exist for this component, message BLG09007I appears on this panel.

Supply information about the connection record. This information is used by the Reports facility to obtain input for configuration diagrams.

For this example, type the following on the command line and press Enter:

1,ps/2a,4,0c1,5,one,6,logical,7,install,8,cos/2a
Next, type the following on the command line and press Enter:

**10, os/2 connection to ps/2a**

To save the data, type **end** on the command line and press Enter.

When you have entered all necessary information for connection record, file the record.

For this example, type **9** on the command line and press Enter.
When you file the connection record you are creating, the component record is automatically updated with the link to the connection record, then filed. Any other changes that were made to the component record are also filed.

The following table panel lists the connection records attached to the software component record. You can use any of the line commands at this time, or type `end` on the command line and press Enter.

A message appears on this panel confirming that the record was stored successfully. The additional message states that the component record has been stored successfully.

For this example, type `end` on the command line and press Enter.

You return to the Software Component Summary panel. At this time, you can make a selection from the bottom of the panel to update other parts of the component record.

For this example, type `9` on the command line and press Enter.
<table>
<thead>
<tr>
<th>BLG0DU03</th>
<th>SOFTWARE COMPONENT SUMMARY</th>
<th>COMPONENT: OS/2A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program type............ SCP</td>
<td>Program version.... 1</td>
<td></td>
</tr>
<tr>
<td>Execution type.......... __________</td>
<td>Release level ....... 0003</td>
<td></td>
</tr>
<tr>
<td>Vendor component #...... __________</td>
<td>Modification level.... __________</td>
<td></td>
</tr>
<tr>
<td>Model link ID............ SOFTPS1</td>
<td>Entry priv. class.... MASTER</td>
<td></td>
</tr>
<tr>
<td>Location code........... ________</td>
<td>Owning priv. class.... ________</td>
<td></td>
</tr>
<tr>
<td>Fix level.............. ________</td>
<td>Date entered......... 09/03/1996</td>
<td></td>
</tr>
<tr>
<td>Contact name............ _______________</td>
<td>Time entered......... 19:24</td>
<td></td>
</tr>
<tr>
<td>Component owner......... ___________</td>
<td>Date last altered..... 09/03/1996</td>
<td></td>
</tr>
<tr>
<td>Date of status......... 09/03/96</td>
<td>User last altered..... GARTLAN</td>
<td></td>
</tr>
<tr>
<td>Component status....... INSTALL</td>
<td>Date last altered..... 19:30</td>
<td></td>
</tr>
</tbody>
</table>

Description............. OS/2 SOFTWARE FOR PS/2S

Select one of the following, type END to save your changes, or type CANCEL to discard your changes.
10. Source definition.

A message appears on this panel confirming that the record was stored successfully.

Using the information on page 203, create at least four more connection records for the software component records created earlier.
Renaming Configuration Management Records

The RENAME command allows you to change the record identifier (record ID) of a configuration record. When you rename a record, all references to it in the database are changed from the old name to the new name.

The rename function is useful if you want to change record IDs to make them easier to remember or more descriptive of the records they identify. For example, after you have created a number of records and assigned record IDs to them (or allowed the system to assign record IDs to them), you find that your work would be easier if the records had more meaningful names. The rename function allows you to add meaningful names to your records without affecting the data in any other way.

To rename a configuration record issue the RENAME command with or without the current record ID and the new record ID. If you do not include both the old record ID and the new record ID, you are asked for them and for the database you want to work with. Then, a panel corresponding to the current record type is presented to verify that you want the record renamed.

When using the RENAME command, keep in mind the following:

- When you rename a record, all references to that record are also changed to refer to the renamed record by its new record ID.
- If you try to assign a record ID that already exists, an error message appears.
- The RENAME command renames only configuration records. However, references to the record that occur in records other than configuration records (for example, in problem or change records) are also updated.
- References to renamed records are identified in the Rename Field Qualification panel. For more information, refer to the Tivoli Information Management for z/OS Panel Modification Facility Guide.
- If RENAME is not successful, the database remains unchanged.
- No other users can access the database until RENAME is complete.

The following instructions and panels illustrate how to rename a system record ID. You can follow the flow of the panels by using the sample data shown here or by using your own data.
It turns out that RED9021 was not a very descriptive name for a system record, so in this example you will rename the system record you created in "Creating System Records" on page 89. On the panel, change the system record ID from RED9021 to SYSTEMA.

To rename a record, type **RENAME** on the command line and press Enter.

```
In field 2, type the existing record ID. In field 3, type the new record ID.
```

For this example, type the following on the command line and press Enter:

```
2,red9021,3,systema
```

Press Enter again to continue.

The panel that appears depends on the type of record you are renaming. See "Examples of Some Rename Verification Panels" on page 212 for examples of Rename Verification Panels.

The upper portion of the following panel is a description of the current record. Verify that this is the record you want to rename. Below the description are two options. If this were the wrong record, you could cancel the rename function by selecting option 1.
For this example, type 2 on the command line and press Enter to rename the record.

```
BLG0DU72  SYSTEM RENAME VERIFICATION  SYSTEM: RED9021

System name........ CPURED  Contact name......<H> _______________
Center ID........... DPCTRL1  Contact dept......... 299
System manager...... _______________  Contact phone........
Manager phone........ DPCTRL1  Owning priv. class.<H> _______________
Location code........ DPCTRL1  Entry priv. class..... MASTER
Transfer-to class.<H> _______________  Date entered.......... 08/08/1996
Emergency phone...... _______________  Time entered......... 17:11
Operator phone....... _______________  Date last altered..<H> 08/08/1996

Description.......... 9021 CPU KNOWN AS RED9021

Select one of the following to cancel or verify your request.

1. Cancel rename request.
2. Verify rename request.
```

----> 2

A message appears on this panel confirming that the record was renamed successfully.

You can rename other records at this time.

Type **end** on the command line and press Enter to return to the Primary Options Menu.

```
BLG1UT02  RENAME COMPONENT DIALOG  RENAME

Enter RENAME component ID's; cursor placement or input line entry allowed.

1. Database.............<R> 5
2. Component ID (OLD)...<R> RED9021
3. Component ID (NEW)...<R> SYSTEMA

To start the function, press Enter without field modification.

BLM18007I The specified component RED9021 has been renamed to SYSTEMA.

----> end
```

This ends the example of renaming record ID RED9021.
Examples of Some Rename Verification Panels

BLGIDU57 HARDWARE COMPONENT RENAME VERIFICATION COMPONENT: ________

Generic device........... ___ Display class........... _
Device type & model.... _ Location code........... __
Serial number........... __ Entry priv. class.... _
Microcode EC level...... __ Owning priv. class...<H> ___
Model link ID........... ___ Date entered.......... ___
Contact name............<H> ___ Time entered.......... ___
Component owner.......<H> ___ Date last altered...<H> ___
Date of status.......<H> ___ Time last altered...<H> ___
Component status.....<H> ___ User last altered...<H> ___

Description............. _____________________________________________

Select one of the following to cancel or verify your request.

1. Cancel rename request.
2. Verify rename request.

BLGIDU61 HARDWARE FINANCIAL RENAME VERIFICATION FINANCIAL: ________

Financial name....... ________ Generic device........... ___
Financial type....... ________ Component count.......<H> ___
Vendor name.......... ___________ Charge out rate......... ______
Contact name............<H> ___ Minimum VPA quantity....
Marketing rep.........<H> ___ Maximum VPA quantity....
System specialist.....__<H> Entry priv. class....
VPA name........... ________ Owning priv. class...<H> ___
VPA number........... ________ Date entered.......... ___
VPA duration .......... ___ Time entered.......... ___
VPA start date....... ___ Date last altered...<H> ___
Device type & model.. ___ Time last altered...<H> ___
Charge out account... ___ User last altered...<H> ___

Description............. _____________________________________________

Select one of the following to cancel or verify your request.

1. Cancel rename request.
2. Verify rename request.
### Examples of Some Rename Verification Panels

#### BLG0DU62 SOFTWARE COMPONENT RENAME VERIFICATION

<table>
<thead>
<tr>
<th>Component: ________</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program type</strong>...</td>
</tr>
<tr>
<td><strong>Execution type</strong>..</td>
</tr>
<tr>
<td><strong>Vendor component #</strong></td>
</tr>
<tr>
<td><strong>Model link ID</strong>....</td>
</tr>
<tr>
<td><strong>Location code</strong>....</td>
</tr>
<tr>
<td><strong>Fix level</strong>.......</td>
</tr>
<tr>
<td><strong>Contact name</strong>....&lt;H&gt;</td>
</tr>
<tr>
<td><strong>Component owner</strong>&lt;H&gt;</td>
</tr>
<tr>
<td><strong>Date of status</strong>.&lt;H&gt;</td>
</tr>
<tr>
<td><strong>Component status</strong>.&lt;H&gt;</td>
</tr>
<tr>
<td><strong>Description</strong>.....</td>
</tr>
</tbody>
</table>

Select one of the following to cancel or verify your request.

1. Cancel rename request.
2. Verify rename request.

---

#### BLG0DU60 HARDWARE SUBCOMPONENT RENAME VERIFICATION

<table>
<thead>
<tr>
<th>Subcomp: ________</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subcomponent type</strong>...&lt;H&gt;</td>
</tr>
<tr>
<td><strong>Serial number</strong>......</td>
</tr>
<tr>
<td><strong>Microcode EC level</strong>....</td>
</tr>
<tr>
<td><strong>Hardware link ID</strong>.....</td>
</tr>
<tr>
<td><strong>Contact name</strong>....&lt;H&gt;</td>
</tr>
<tr>
<td><strong>Subcomponent owner</strong>&lt;H&gt;</td>
</tr>
<tr>
<td><strong>Date of status</strong>.&lt;H&gt;</td>
</tr>
<tr>
<td><strong>Subcomponent status</strong>.&lt;H&gt;</td>
</tr>
<tr>
<td><strong>Description</strong>.....</td>
</tr>
</tbody>
</table>

Select one of the following to cancel or verify your request.

1. Cancel rename request.
2. Verify rename request.

---

---

### 19. Renaming CM Records

Problem, Change, and Configuration
The SWAP command allows you to interchange two components or subcomponents in your configuration. If you exchange one terminal, keyboard, or display device for another in your configuration, the SWAP command lets you modify database records to represent that exchange.

The SWAP command is useful in configuration management if you maintain an inventory of spare components and subcomponents. When you replace a faulty component or subcomponent in your configuration with a component or subcomponent from your inventory of spare components, you can record the exchange in the database with just a single command.

The SWAP command is also useful if you want to interchange two components or subcomponents within your configuration. Again, the SWAP command allows you to change the necessary records in the database by using a single command.

When you exchange two components using the SWAP command, the following changes to the database are made automatically:

- The component locations in the two component records are interchanged.
- The component status value in the two component records are interchanged.
- The status date for both components is set to the date of the exchange.
- The subcomponents that are attached to the components being swapped are interchanged. For example, if a particular subcomponent is recorded as attached to a terminal before a swap, then after the swap that same subcomponent is recorded as being attached to the terminal that was exchanged for the original terminal.
- Connection records involving either or both of the components being swapped are modified as follows:
  - You modify connection records for future connections (either proposed or planned) by replacing references to the first component with references to the second component, and vice versa. For example, if a connection is planned for a terminal that is later exchanged with a terminal from your inventory of spare components, the same planned connection is recorded for the terminal swapped from that inventory. In other words, plans are retained for the new component.
  - Connection records for current connections generate two records:
    - A historical connection record for the connection as it existed up to the date of the swap
    - A current connection record for the connection as it exists after the date of the swap.
  - Existing historical connection records are not altered by the SWAP command.
**Note:** A historical connection record is one where the *to date* occurs on or before the date of the swap. A current connection record is one where the *from date* occurs on or before the date of the swap and the *to date* occurs after the date of the swap. A planned connection record is one where the *from date* occurs after the date of the swap.

In summary, after you use the SWAP command, the location, status, subcomponents, and existing and planned connections recorded for each component accurately represent the existing conditions even though the actual identity of the components has changed.

When you exchange two subcomponents using the SWAP command, the following database changes are made automatically:

- The subcomponent locations in the two subcomponent records are interchanged.
- The subcomponent status values in the two subcomponents are interchanged.
- The date of status for both subcomponents is set to the date of the exchange.
- The component link values on the subcomponents are interchanged as follows:
  - If neither subcomponent is linked to a component, then neither subcomponent is linked to a component after the swap.
  - If the first subcomponent is linked to a component (for example, CTLRED), but the second is not linked to any component, then after the swap the second subcomponent is linked to component CTLRED and the first subcomponent is not linked to any component.
  - If the first subcomponent is linked to one component (for example, CTLRED) and the second subcomponent is linked to another component (for example, CTLBLUE), then after the swap the first subcomponent is linked to component CTLBLUE and the second component is linked to component CTLRED.

In summary, after you use the SWAP command, the location, status, and links recorded for each subcomponent accurately represent the existing condition even though the actual identity of the subcomponents has changed.

Each time you interchange two component records or two subcomponent records you must issue the SWAP command, either with or without the following values:

- The record ID of the first record to be swapped
- The record ID of the second record to be swapped
- The effective date of the swap.

An error message is displayed when you:

- Try to swap records other than hardware component records, software component records, or hardware subcomponent records. You cannot swap model records.
- Try to swap records that are not of the same type, such as a hardware component record and a hardware subcomponent record.

If SWAP is not successful, the database remains unchanged. No other users can access the database until SWAP is complete.
References to swapped records are identified in the Swap Field Qualification panel. For more information, refer to the *Tivoli Information Management for z/OS Panel Modification Facility Guide*.

The following instructions and panels illustrate how to SWAP two subcomponent records. You can follow the flow of the panels using the sample data shown here or by using your own data.

In this example, swap two keyboard records. Swap subcomponent record ID KBTEXT1 with record KBTEXT2.

To swap records, type **swap** on the command line and press Enter.

Supply the record IDs of the two components you want to swap.

For this example, type the following on the command line and press Enter:

```
2,kbtext1,3,kbtext2,4,=
```

Press Enter again to continue.
The upper portion of this panel is a description of the first of the components to be swapped. Verify that this is one of the records you want to have swapped.

For this example, type 2 on the command line and press Enter.

The upper portion of the Swap Verification panel is a description of the second component you are swapping. Verify that this is the second record you want to exchange.

You can now do one of the following:
- Use option 1 to cancel the swap request.
- Use option 2 to proceed with the swap.
- Use option 3 to proceed with the swap and update this subcomponent record after the swap is complete.

Sometimes, swapped records do not reflect the correct configuration after a swap because some of the fields do not change. For example, if you swap subcomponent A, which has a status of INSTALL, with subcomponent B, which has a status of TEST before the swap, the status is exchanged during the swap, but the desired status of subcomponent A is not TEST but INSTALL.

If you select option 3, you can correct the fields to reflect the new configuration for this record. You could also delete the connection records when the summary panel appears. If you do not choose to update during the swap process, you need to search on a date range and delete the connection records.

For this example, type 2 on the command line and press Enter.
A message appears on this panel confirming that the records were swapped successfully.

At this time, you can repeat the process to swap other configuration records. For this example, type end to leave the panel without swapping other records.

This ends the example of swapping records.
Swap Verification Panels

Panel BLG0DU74 Hardware Component Swap Verification appears when you enter a hardware component ID in panel BLG1UT20 Swap Components.

Panel BLG0DU75 Hardware Subcomponent Swap Verification appears when you enter a subcomponent ID in panel BLG1UT20 Swap Components.
Swap Verification Panels

Panel BLG0DU76 Software Component Swap Verification appears when you enter a software component ID in panel BLG1UT20 Swap Components.

---

Select one of the following to cancel or verify your request.

1. Cancel swap request.
2. Verify swap request.
3. Verify swap and update after swap.

---

Problem, Change, and Configuration 221
A configuration diagram is a collection of subdiagrams. Each subdiagram is a picture of a network of hardware components and all connected components. Subdiagrams are defined by subdiagram markers in the component record. An example of a configuration diagram is shown in Figure 5 on page 239.

Subdiagram Markers

Before you request a report, set the subdiagram markers on panel BLG0D113 Hardware Component Diagram Map Data Entry. This panel appears when you select 11, Maps Data, from panel BLG0DU30, Hardware Component Summary. This is explained in Creating Hardware Records. The subdiagram markers must be set before you issue the REPORT command.

BLG0D113 HARDWARE COMPONENT DIAGRAM MAP DATA ENTRY COMPONENT: ________

Enter diagram map data; cursor placement or input line entry allowed.

1. Number of ports........ __
2. Sub diagram marker 1... ________
3. Sub diagram marker 2... ________
4. Sub diagram marker 3... ________
5. Sub diagram marker 4... ________
6. Sub diagram marker 5... ________
7. Sub diagram marker 6... ________
8. Sub diagram marker 7... ________
9. Sub diagram marker 8... ________

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

Each component that has a subdiagram marker flag set to START or TABLE01 is selected by the report to begin a subdiagram. A subdiagram marker-flag value of TABLE01 causes the subdiagram to appear in a table format. The TABLE value in a component means any component below it and up-connected to it will be in the table format. For example, if you specify the TABLE01 value for a 3274 controller, all the terminals connected to that controller would appear in a table format. Figure 6 on page 240 is an illustration of this example. A value of START can cause the subdiagram to appear in the hierarchical format. Subdiagram markers are required in a component record to start a subdiagram. A value of
STOP can cause the subdiagram to end before the actual end of path. In other words, you do not put a subdiagram marker in every component record, but only the component records to begin or end a subdiagram.

The component that has subdiagram marker 1 set to START or TABLE01 appears at the head of a subdiagram. This record is obtained by the initial search criteria in the RFT. All other records within a subdiagram are obtained by searching for down connections from the current component. Their presence in the report is controlled indirectly, as follows:

- The search argument in the RFT is applied to the connection records linking one component to another in the subdiagram. If no connection records between components meet the search criteria, the search is terminated and the component does not appear in the subdiagram.

  For example, suppose you have two connections for one component, one for first shift and the second for third shift. If you look for second shift, the search would not find that connection and it would stop the path.

- Components with a value of STOP for subdiagram marker 1 terminate a path in the subdiagram, even though there can be connection records linking additional components to them in the path.

### Subdiagram Formats

Subdiagrams can be produced in three formats: hierarchical, table, and compressed hierarchical. [Figure 5 on page 239](#) shows an example of a subdiagram in hierarchical format. This is the default format and can be used to represent any subdiagram in your network.

Starting at [Figure 6 on page 240](#) is an example of a subdiagram in table format. This format can show a large group of similar components up-connected to one component. You define this format on panel BLG0D113 Diagram Map Data.

[Figure 7 on page 240](#) is an example of a subdiagram in a compressed hierarchical format. This format can show on one page IO strings and collections of devices attached to the same component. Each connection is distinguished by a left-facing arrow, <------. This indicates that this component is connected the same way as the immediately preceding component. You define this format on panel BLG1UT07 Configuration Diagram Parameter Entry or BLG0P300 in your profile.

If you request the subdiagram index on BLG1UT07 Configuration Diagram Parameter Entry, it is printed after all subdiagrams. The index is printed in one or two columns across the page, depending on the page width available.

### Diagram Procedure

A suggested procedure for producing a configuration diagram is:

1. Set up your profile for diagram data sets. Turn to "Modifying Your Profile to Use DRAW" on page 225 for instructions.
2. Decide which components are likely to start a subdiagram path. (For example, all CPUs or 3705s are good components with which to start a subdiagram.)
3. Create the diagram.
4. Look at the diagram and then:
a. Decide which components should stop a subdiagram path (if necessary).

b. Determine which configuration subdiagrams you need to see.

c. Look in the subdiagram index for components that occur more than once. These components have two or more paths and can be set as subdiagram headings.

d. Determine which subdiagrams are to be in table format and set the markers to TABLE01. For example, a 3274 with one level of connections could be in a table format.

e. Decide what data is to appear in each table column.

f. Decide on the data to be shown as text against the components and connections.

g. Look for diagrams showing only one component. This means there is a subdiagram marker on a component that does not have anything connected to it or the connections did not satisfy the selection criteria. You should check the connections or remove the subdiagram marker on the component.

5. Re-create the diagram.

6. Repeat the procedure from step four above until the diagram looks the way you want it to.

Changing Your Diagram

Configuration Management uses the subdiagram marker 1 field to determine the contents of the diagram. You can produce various diagrams using the other subdiagram markers provided in panel BLG0D113 Diagram Map Data. Setting other markers along with changing the search criteria of the report RFT to select markers 2 through 8, produces different diagrams. To use markers 2 through 8, you must create your own RFT. Only subdiagram marker 1 is supported by the product.

The contents of the configuration diagram data set are controlled both by the setting of subdiagram marker flags in component records and by the information held in component and connection records. Any connection record satisfies the RFT search, but you might want to vary the search that draws the configuration by specifying only physical connections or historical connections. You can vary the contents of the configuration diagram by changing either the flag value or your search criteria in the report RFT until you arrive at a satisfactory diagram.

Modifying Your Profile to Use DRAW

Because it takes the REPORT and the DRAW commands to create a configuration diagram, the values you set in your PROFILE affect the configuration diagram. As a Configuration Management user, you should modify your profile to accommodate the DRAW command. To do this, specify your Draw report destination and your Standard report destination in your profile. You should set up the report output, data set, or DDNAME destinations before you use the DRAW command. For a description of the profile fields, refer to the Information Management for z/OS User’s Guide.

The following example illustrates how to modify your profile to indicate where the results of the DRAW command should go. The panels do not tell you what values to set the profile values to. The panel flow points out the fields in the profile panels related to the DRAW command.
To change your user profile, type 2 on the command line and press Enter.

<table>
<thead>
<tr>
<th>BLGEN2D</th>
<th>PRIMARY OPTIONS MENU</th>
<th>APPLICATION: MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPTIONS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. OVERVIEW....Display general information and product enhancements.</td>
<td>2. PROFILE........Display or alter invocation or session defaults.</td>
<td></td>
</tr>
<tr>
<td>3. APPLICATION....Change application, list available applications.</td>
<td>5. ENTRY........Create a record.</td>
<td></td>
</tr>
<tr>
<td>6. INQUIRY........Search for records.</td>
<td>7. UTILITY........Copy, display, print, delete, and update records.</td>
<td></td>
</tr>
<tr>
<td>8. GLOSSARY.......Display a list of searchable words in the database.</td>
<td>9. PMF............Modify or create panels.</td>
<td></td>
</tr>
</tbody>
</table>

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

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Type 1 on the command line and press Enter.

<table>
<thead>
<tr>
<th>BLGPU00</th>
<th>PROFILE SUMMARY</th>
<th>USER ID: SUSANC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invocation application........ MANAGEMENT</td>
<td>PF key data location..... SUFFIX</td>
<td></td>
</tr>
<tr>
<td>Invocation class...............</td>
<td>Recall stack depth....... 00</td>
<td></td>
</tr>
<tr>
<td>Command detection...............</td>
<td>Scroll up/down amount.... PAGE</td>
<td></td>
</tr>
<tr>
<td>Back command operation.........</td>
<td>Scroll left/right amount. PAGE</td>
<td></td>
</tr>
<tr>
<td>Print output destination.......</td>
<td>Field output columns....... NO</td>
<td></td>
</tr>
<tr>
<td>Standard report destination...</td>
<td>Maximum screen lines..... 024</td>
<td></td>
</tr>
<tr>
<td>Draw report destination........</td>
<td>Recall command operation. CMDLINE</td>
<td></td>
</tr>
<tr>
<td>Database.......................</td>
<td>Date last altered........ 10/28/1996</td>
<td></td>
</tr>
<tr>
<td>Logical files...................</td>
<td>Time last altered........ 14:37</td>
<td></td>
</tr>
</tbody>
</table>

OPTIONS:

1. Session control defaults. 7. Data definition defaults.
2. Screen control defaults. 8. Reset profile and end.
4. Print output destination. 10. Permanent profile end.
12. User-defined profile values.

Specify the values do not specify SYSOUT as a value that should be used to control your session in fields 32 (Standard report destination) and 33 (Draw report destination), if they are not already set.

To use the DRAW command as described in the next example, you should set the report destinations to DSNNAME.

When you have finished entering the session default values, type end on the command line and press Enter to return to the Profile Summary panel.
Type 3 on the command line and press Enter.

This panel requires that most of the fields be filled in. The default values shown in this panel can be changed to your report output specifications.

When you have finished entering the new default values, type end on the command line and press Enter.
**Modifying Your Profile to Use DRAW**

Type **5** on the command line and press Enter.

Make your selection *do not select SYSOUT.* and complete the information on the appropriate panel.

Type **end** on the command line and press Enter to return to the Profile Summary panel.
This panel appears if you selected DSNAME from panel BLG0P500.

Complete the DSNAME destination information.

To use the DRAW command as described in the next example, set 1 to SUSANC.EXAMPLE or any other fully qualified data set name.

Type **end** on the command line and press Enter.

This panel appears if you selected DDNAME from panel BLG0P500.

Complete the DDNAME destination information. Type **end** on the command line and press Enter.
Enter ddbname characteristics; cursor placement or input line entry allowed.

1. Filename .............<R> ________
2. Lines per page........<R> 00000060
3. Output in uppercase...<R> NO

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

Type 11 on the command line and press Enter.

You can define up to three destinations for the formatted report output. You identify which one you want to use on panel BLG0P100 Session Defaults.

Make your selection and complete the information on the appropriate panel.

Type end on the command line and press Enter.
If you selected DSNAME from panel BLG0P800, the Draw Report Data Set Destination Entry panel appears.

Supply destination information for the report data set.

To use the DRAW command as described in the next chapter, set 1 Data set name to SUSANC.DIAGRAM or any other fully qualified data set name.

Type **end** on the command line and press Enter.

If you selected DDNAME from panel BLG0P800, the Draw Report DDNAME Destination Entry panel appears.

Supply destination information for DDNAME, then type **end** on the command line and press Enter.
You have made the necessary changes to your user profile. You can select option 9 or option 10 to store the changes.

For this example, type **10** on the command line and press Enter to save your changes permanently.

A confirmation message appears on this panel.

All supplied values have taken effect.
Creating the Diagram

Creating a configuration diagram is a two-step process. First, you issue the REPORT command, then you issue the DRAW command.

The REPORT command prompts you for profile information if it is not already set up, then extracts from the database information on hardware components and connection records. It then displays the data as a series of keywords and values. For more information on the Report Format Tables (RFTs) refer to the Tivoli Information Management for z/OS Data Reporting User’s Guide.

The DRAW command processes the data produced by the REPORT command to produce a configuration diagram. If your user profile does not contain values for the draw report destination, you are prompted for it by the system as you are for any report. You are always prompted for the input data set when you use DRAW.

Enter the file name of your input data set on panel BLG1UT31 or the data set name of your input data set on panel BLG1UT32.

When DRAW command processing is complete, you return to the panel on which you entered the DRAW command.

The following example illustrates how to create a configuration diagram. You can follow the flow of the panels by using the sample data below or by using your own data.

In this example, you draw the configuration you have been building throughout this book. This example assumes that you set up your profile correctly and you select DSNAME from BLG0P801. If you have not set the values in your profile, you are prompted for them as you create a diagram. The prompts are not explained in this example.

The example uses the following information on panel BLG1UT07:
- Script and Index are YES.
- The diagram title is 3274 WITH PS/2S.
- The data set name is EXAMPLE.
The configuration diagram is illustrated beginning on Figure 5 on page 239 (The index portion is not illustrated.)

Figure 6 on page 240 is an illustration of the diagram in table format. Figure 7 on page 240 is an illustration of the diagram in compress format.

To create a configuration diagram, type `report` on the command line and press Enter.

```
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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```

If you have a personally customized RFT using subdiagram marker 1-8, type 8 and press Enter.

Otherwise, type 4 and press Enter.

```
BLG0M500 REPORT ENTRY
Identify the type of report to be created.

  1. GENERAL..........Summary reports for all applications.
  2. PROBLEM..........Problem management reports.
  3. CHANGE..........Change management reports.
  4. CONFIG..........Configuration management reports.
  8. USER RFT.........Specify user report format table name.
 10. BROWSE/PRINT.....Browse or print existing report data set.

Select item.

BLG15001I The REPORT command is using database 5.
<-- 4
```

To customize the diagram, type 6 on the command line and press Enter.
The fields limit the data you get on your configuration diagram. The more fields you fill in, the more you limit your diagram.

For this example, type the following on the command line and press Enter:

```
1,09/03/1996,2,physical, 3,install,4,one
```

When you press Enter, the report diagram RFT executes and creates a data set.

A message appears on this panel confirming that the report was written successfully.

The report function is complete. To obtain the data created by the REPORT command, type `draw` on the command line and press Enter.
All fields on this panel must be filled in.

The data set created by the REPORT command is processed.

For this example, type the following on the command line and press Enter:

**7,3274 with ps/2s**

To continue, press Enter.

---

A message appears to remind you that your output data set must be properly defined in order to receive the output. Select the destination of the diagram input.

For this example, type **1** on the command line and press Enter.
This panel appears when you select option 1 (DSNAME) from BLG1UT30.

The data set name is preset to the name of the standard report output data set, as defined in the user profile.

Type end on the command line and press Enter to continue.

A message appears on this panel confirming that the diagram was written successfully.

This ends the example of drawing a configuration diagram.
BLGEN20 --- 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.
Figure 5. Illustration of a Configuration Diagram in Hierarchical Format
Creating the Diagram

Figure 6. Illustration of a Configuration Diagram Output in Table Format

<table>
<thead>
<tr>
<th>PORT ID</th>
<th>PORT NUMBER</th>
<th>CABLE NUMBER</th>
<th>CONNECT STATUS</th>
<th>TYPE</th>
<th>DEVICE ID</th>
<th>SERIAL ID</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>C1</td>
<td>101</td>
<td>INSTALL PHYSICAL</td>
<td>IPS/2</td>
<td>PS/2A</td>
<td>H6224</td>
<td>PS/2</td>
<td>COMPONENT</td>
</tr>
<tr>
<td>C2</td>
<td>C2</td>
<td>102</td>
<td>INSTALL PHYSICAL</td>
<td>IPS/2</td>
<td>PS/2B</td>
<td>H6225</td>
<td>PS/2</td>
<td>COMPONENT</td>
</tr>
<tr>
<td>C3</td>
<td>C3</td>
<td>103</td>
<td>INSTALL PHYSICAL</td>
<td>IPS/2</td>
<td>PS/2C</td>
<td>H6230</td>
<td>PS/2</td>
<td>COMPONENT</td>
</tr>
<tr>
<td>C4</td>
<td>C4</td>
<td>104</td>
<td>INSTALL PHYSICAL</td>
<td>IPS/2</td>
<td>PS/2D</td>
<td>H6226</td>
<td>PS/2</td>
<td>COMPONENT</td>
</tr>
<tr>
<td>C5</td>
<td>C5</td>
<td>105</td>
<td>INSTALL PHYSICAL</td>
<td>IPS/2</td>
<td>PS/2E</td>
<td>H6227</td>
<td>PS/2</td>
<td>COMPONENT</td>
</tr>
</tbody>
</table>

Figure 7. Illustration of a Configuration Diagram Output in Compress Format. Notice the arrow direction for the boxes.

The arrows point inward in a compressed format.
Displaying Tivoli Information Management for z/OS Records

This chapter tells you how to display information about Tivoli Information Management for z/OS records.

The DISPLAY command enables you to display a specific record in the database. For example, when you display a problem record's status data, you can see the assignee's name and department, problem status, current phase of completion, and related information. You can also use the DISPLAY command to request separate displays that concentrate on more specific classes of information.

It is through the display function that you can see the relationship between configuration records. For example, when you display a component record, you can see the system, data center, financial, and service records that are associated with it.

You can display Tivoli Information Management for z/OS records in several ways:

- Follow the prompting sequence from the Primary Options Menu. This prompting sequence is presented in the following section, "Using the Prompted Display Sequence" on page 242.
- Issue the DISPLAY command with or without the ID of the record you want to display. If you do not include the record ID, the system prompts you for the record ID and the number of the database.
- Enter the S (select) line command next to the record on the Search Results List panel. You can use S in the line-command area only. You can also display multiple records from the search results list by entering the SS block line command.
Using the Prompted Display Sequence

Begin at the Primary Options Menu.

To display a record, type 7 and press Enter.

<table>
<thead>
<tr>
<th>BLGEN20</th>
<th>--- PRIMARY OPTIONS MENU ---</th>
<th>APPLICATION: MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPTIONS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. OVERVIEW........Display general information and product enhancements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. PROFILE.........Display or alter invocation or session defaults.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. APPLICATION....Change application, list available applications.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. CLASS..........Change current class, list available classes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ENTRY............Create a record.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. INQUIRY.........Search for records.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. UTILITY.........Copy, display, print, delete, and update records.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. GLOSSARY.......Display a list of searchable words in the database.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. PMF.............Modify or create panels.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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--- 7 ---

Type 1 and press Enter.

| + BLGIUTOO ----------- UTILITY ----------------------------- |
| | RECORD UTILITY DIALOG ENTERED, SELECT ITEM |
| | 1. DISPLAY.....Display a record in a database. |
| | 2. PRINT.......Print an existing record. |
| | 3. COPY........Create a duplicate of an original record. |
| | 4. DELETE......DELETE a record from a database. |
| | 5. UPDATE......Update an existing record. |

--- 1 ---

Type the record ID of the record you want to display.

For this example, type the following on the command line and press Enter:

2.prob5

Press Enter again to continue.

Because PROB5 is a problem record, the Problem Summary Display panel appears.
Sections later in this chapter present examples of displaying records for Problem Management, Change Management, and Configuration Management.

- For information on displaying records for problem management, see 243.
- For information on displaying records for change management, see 248.
- For information on displaying records for configuration management, see 254.

Displaying Problem Management Records

When you have requested the display of a Problem Management record, Tivoli Information Management for z/OS displays the Problem Summary Display panel.

<table>
<thead>
<tr>
<th>BLG0S010</th>
<th>PROBLEM SUMMARY DISPLAY</th>
<th>PROBLEM: PROBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported by......... JONES</td>
<td>Problem type.........&lt;H&gt; SOFTWARE</td>
<td></td>
</tr>
<tr>
<td>Assignee name.......&lt;H&gt; JONES</td>
<td>Problem status.......&lt;H&gt; CLOSED</td>
<td></td>
</tr>
<tr>
<td>Tracked by.........&lt;H&gt; JONES</td>
<td>Current phase.......&lt;H&gt; TEST</td>
<td></td>
</tr>
<tr>
<td>Network name.........</td>
<td>Current priority.......&lt;H&gt; 03</td>
<td></td>
</tr>
<tr>
<td>System name.........</td>
<td>Owning priv. class.....</td>
<td></td>
</tr>
<tr>
<td>Program name......... MP1</td>
<td>Entry priv. class..... MASTER</td>
<td></td>
</tr>
<tr>
<td>Device name.........</td>
<td>Date entered........... 08/27/1998</td>
<td></td>
</tr>
<tr>
<td>Key item affected....</td>
<td>Time entered........... 13:04</td>
<td></td>
</tr>
<tr>
<td>Cause code......... PROGRAM</td>
<td>Date last altered...&lt;H&gt; 12/04/1998</td>
<td></td>
</tr>
<tr>
<td>Date closed......... 12/04/1998</td>
<td>Time last altered...&lt;H&gt; 09:46</td>
<td></td>
</tr>
<tr>
<td>Vendor status.......&lt;H&gt;</td>
<td>User last altered...&lt;H&gt; Z123BC</td>
<td></td>
</tr>
<tr>
<td>Description......... INCORRECT ERROR MESSAGE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

1. Reporter display. 6. Detail display.
2. Status display. 7. Supplemental data display.
3. Close display. 8. Interested privilege classes.
5. Freeform text and notes. 10. Record utilities.
11. TSD Bridge display.

Several displays that you can request from this panel are similar to the data-entry panels used to create the problem description. They are:
- Reporter (option 1)
- Status (option 2)
- Close (option 3)
Displaying Problem Management Records

- Supplemental data (option 7)
- Synopsis (option 9).

These displays contain the same fields as their corresponding data-entry panels, so these displays are not shown here. The other options that are available from the Problem Summary Display panel are described in the following paragraphs.

History Display

The history display shows the initial value and each subsequent value for journal fields. To get this display from the Problem Summary Display panel, type 4 and press Enter.

<table>
<thead>
<tr>
<th>BLGITDHG</th>
<th>HISTORY DISPLAY</th>
<th>LINE 1 OF 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>TIME</td>
<td>USERID</td>
</tr>
<tr>
<td>ALTERED</td>
<td>ALTERED</td>
<td></td>
</tr>
<tr>
<td>08/27/1998 13:04</td>
<td>GARTLAN</td>
<td>CODM/SOFTWARE DATT/12/04/1996 ESCL/1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/04/1998 09:46</td>
<td>Z123BC</td>
<td>CODC/PROGRAM GROA/DEV PERA/JONES</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** BOTTOM OF DATA ***

Type DOWN or UP to scroll the pane, or type END to exit the pane.

The date and time when the field was altered and the user ID of the person who altered it are included for each entry in a history display. You can use the SCROLL command to view any entries that are not initially displayed on the panel. You cannot modify any of the data displayed on this panel, but you can display or include the data in reports.

**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:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/20/2001</td>
<td>21:00</td>
</tr>
<tr>
<td></td>
<td>02:00</td>
</tr>
</tbody>
</table>

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, 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.
**Freeform Text and Notes**

The text display lets you view text information that was previously entered for a record. You cannot modify any of the data on this panel, but you can display or include the data in reports. To get to the actual text display panel from the Problem Summary Display panel, type 5 and press Enter.

The Display Problem Text panel appears. Choose the type of text display you want.

If you choose option 1, the Description Text panel appears.

Use the SCROLL command to view any lines of text that are not initially displayed on the panel. To see the time or the user ID associated with the text, scroll the date column using the COL operand with the SCROLL command, either RIGHT or LEFT.

**Detail Display**

The detail display lets you view all of the nonadministrative data in a problem record, including problem symptom and resolution data. To get this display from the Problem Summary Display panel, type 6 and press Enter.
You cannot modify any of the data displayed on this panel, but you can display, search, or include the data in reports. Use the SCROLL command to view any entries that are not initially displayed on the panel.

**Interested Privilege Classes**

The interested class display lets you indicate that you are interested in this problem. To get this display from the Problem Summary Display panel, type 8 and press Enter.

The upper portion of the panel has spaces for privilege class names. The lower portion contains two selections by which you can add or delete your privilege class name. You do not need update authority to make a selection.

When you add a privilege class, the system inserts your current privilege class name in the next available space. When your class is included on this list, you can periodically search for problem records containing your privilege class name. You can then determine their status.

When you are no longer interested in the problem, you can delete your privilege class name from the list.
Record Utilities

The Record Utilities panel lets you select several utility functions. To get this panel from the Problem Summary Display panel, type 10 and press Enter.

Option 1 (List record references) is unique to display mode. It lets you display all of the records that refer to the current record. These records appear on the List Record References panel.

The List Record References panel includes all problem records that have this problem ID in the original Problem number field. The panel also shows all change records that have this problem ID in the Problem fixed field.

The List Record References panel is useful when you want to copy, update, or delete a record. For example, you can decide not to delete a problem record if it is the original of a duplicate problem that is still open, or if it is related to or referenced by other problem records.

Other standard utility functions provided by the Record Utilities panel are Print, Copy, Delete, and Update.

The copy function is useful in minimizing data entry when you want to enter a new problem that is similar to an existing problem record. You can copy the record and then modify the copy.

When you select a utility function from the Record Utilities panel, that function is performed and you return to the Problem Summary Display panel.

For more information on these utility functions, refer to the Tivoli Information Management for z/OS User’s Guide.

TSD Bridge Display

The TSD Bridge display shows Tivoli Service Desk Bridge information for the record and allows you to resume ownership, refresh, or send a solution. To get this display from the
Problem Summary Display panel, type 11 and press Enter. For additional information about the Tivoli Service Desk Bridge, refer to the Tivoli Information Management for z/OS Guide to Integrating with Tivoli Applications.

### Displaying Change Management Records

When you have requested the display of a change record, Tivoli Information Management for z/OS displays the Change Summary Display panel.

### Displaying Problem Management Records

The lower portion of the summary panel lists options to show other sections of the record. For activity records, only options 1 through 6 and 10 are available.

Several displays that you can request from this panel are similar to the data-entry panels used to create the change request and activity records. They are:

- Requester (option 1)
- Status (option 2)
- Close (option 3)
- Freeform text and notes (option 5)
- Reviewer display (option 9, change requests only).
- Software distribution data (option 11, change request only; refer to [Tivoli Information Management for z/OS Guide to Integrating with Tivoli Applications](#) for additional information).

You cannot modify these fields in display mode, but you can display, search, or report them. The other options that are available from the Change Summary Display panel are described in the following paragraphs.

**Note:** The History, Freeform text and notes, Detail, and Record utilities displays are common to both change request and activity records. Activity list and approver displays are unique to change request records.

### History Display

The history display shows the initial value and each changed value for journal fields. To get this display from the Change Summary Display panel, type 4 and press Enter.

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>USERID</th>
<th>JOURNALIZED HISTORY DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/27/98</td>
<td>13:18</td>
<td>USER01</td>
<td>STAC/INITIAL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DATA/10/05/96 DATD/12/23/96</td>
</tr>
<tr>
<td>11/26/98</td>
<td>12:22</td>
<td>BOSTOCK</td>
<td>STAP/PENDING</td>
</tr>
<tr>
<td>12/20/98</td>
<td>12:11</td>
<td>NOLANDJ</td>
<td>CODC/HARDWARE DATF/12/20/96</td>
</tr>
</tbody>
</table>

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

The date and time when the field was altered and the user ID of the person who altered it are included for each entry in a history display. Use the SCROLL command to view any entries that are not initially displayed on the panel.

You cannot modify any of the fields on this panel, but you can display, search, or report them.

**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:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/20/00</td>
<td>21:00</td>
</tr>
<tr>
<td>02/21/01</td>
<td>02:00</td>
</tr>
</tbody>
</table>

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, the Eastern Time user’s view does not display a date change either. However, because
Freeform Text and notes

The text display shows you the textual information that has been entered into a record. You cannot modify any of the data on the panel, but you can display or include the data in reports. To get the text display from the Change Summary Display panel, type 5 and press Enter.

Note: The following description applies to displaying the text for change request records. You display the text for activity records in a similar manner.

The Display Change Text panel appears. Choose the kind of text you wish to see.

For this example, type 1 and press Enter.

The Description Text panel appears.

Type DOWN or UP to scroll the panel, or type END to exit the panel.
Displaying Change Management Records

Use the SCROLL command to view any entries that are not initially displayed on the panel. To see the time or the user ID associated with the text, scroll the date column. You cannot modify any of the data on this panel, but you can display or report the data.

**Detail Display**

The detail display lets you view all of the nonadministrative data in a record. To get this display from the Change Summary Display panel, type 6 and press Enter.

**Activity List Display**

The activity list display provides a search results list containing all activities for the current change record. To get this display from the Change Summary Display panel, type 7 and press Enter.

The Related Record List panel appears.

---

This allows you to view change detail data. You cannot modify any of the fields on this panel, but you can display, search, or report them. Use the SCROLL command to view any entries that are not initially displayed on the panel.
You can select an activity to display by entering the item number or by entering the S line command next to the record. When you select an activity record for display, the Activity Summary Display panel appears.

From this panel, you can select other detail sections of the record to view. From those panels, type ca or end and press Enter to return to the Activity Summary Display panel.

<table>
<thead>
<tr>
<th>BLG0S060</th>
<th>ACTIVITY SUMMARY DISPLAY</th>
<th>ACTIVITY: A011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity name.............. TEST1</td>
<td>Parent change number.... A01</td>
<td></td>
</tr>
<tr>
<td>Assignee name.............&lt;H&gt;</td>
<td>Assignee dept.............&lt;H&gt;</td>
<td></td>
</tr>
<tr>
<td>Contact name...............&lt;H&gt;</td>
<td>Current priority.........&lt;H&gt;</td>
<td></td>
</tr>
<tr>
<td>Program name...............&lt;H&gt;</td>
<td>Owning priv. class.......&lt;H&gt;</td>
<td></td>
</tr>
<tr>
<td>Device name...............&lt;H&gt;</td>
<td>Entry priv. class.........&lt;H&gt;</td>
<td></td>
</tr>
<tr>
<td>Key item affected..........&lt;H&gt;</td>
<td>Date entered............. 08/27/1998</td>
<td></td>
</tr>
<tr>
<td>Date required...............&lt;H&gt;</td>
<td>Time entered............. 14:06</td>
<td></td>
</tr>
<tr>
<td>Planned start date..........&lt;H&gt;</td>
<td>Date last altered....... 12/20/1998</td>
<td></td>
</tr>
<tr>
<td>Description............... INITIAL TEST OF COM1-232</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following, or type END or CANCEL to leave this panel.

1. Requester display.  5. Freeform text and notes.
2. Status display.  6. Record utilities.
3. Close display.  7. Detail display.
4. History display.

--->

**Approver Display**

A change approver display lets you register your approval or rejection of a change. To get this display from the Change Summary Display panel, type 8 and press Enter.

<table>
<thead>
<tr>
<th>BLGLAPST</th>
<th>Change Approver Display</th>
<th>LINE 1 OF 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter A to approve or R to reject this change request in the action field for the approver.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RECORD: A01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action</th>
<th>Approver</th>
<th>Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASTER</td>
<td>PENDING</td>
<td></td>
</tr>
<tr>
<td>HARDWARE</td>
<td>PENDING</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>-</td>
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<td></td>
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<tr>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Type DOWN or UP to scroll the pane, or type END to exit.

--->

In the Action column, type the letter A to accept the change request, or the letter R to reject the request. If your user ID is defined in multiple approver privilege classes, you can approve or reject a change for an approver class even though it may not be your current privilege class.
Multiple accept or reject responses can be entered at the same time (for example, you can enter 'A' next to several classes). However, this does not apply if you are using an API program to interact with the change record. API programs are limited to one class per transaction.

If your privilege class approves a change, you can still reject it later. Likewise, if you reject a change, you can still approve it later.

Once all approvers approve a change, Tivoli Information Management for z/OS automatically changes approval status to APPROVED. If any approver rejects a change, Tivoli Information Management for z/OS automatically changes approval status to REJECTED.

Note: The BLGLAPST panel is displayed for new records created with this version of the product (or older records not containing change approver data). If panel BLG0M500 is displayed instead, your record was created with an earlier version of the product and it already contained change reviewer data. If you make updates on panel BLG0C700, file the record, and access the Change Reviewer Entry panel again, panel BLG0C700 reflects your updates. The data is not collected in a list processor panel as shown in this example.

Note: If data attribute records are used as direct add fields, then normal file processing is not performed for change records when change approval processing is being performed. That is, if ALL of these five direct adds—DATE/, TIME/, CLAE/, DATM/, and TIMM/—are changed to data attribute records, then date modified, time modified, and user ID are not saved in the record.

Record Utilities Panel

The Record Utilities panel lets you select utility functions and display all of the records that refer to the current record. To get this panel from the Change Summary Display panel, type 10 and press Enter.

<table>
<thead>
<tr>
<th>BLG05021</th>
<th>RECORD UTILITIES</th>
<th>CHANGE: A01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignee name.......&lt;H&gt; NOLANDJ</td>
<td>Change type..........&lt;H&gt;</td>
<td></td>
</tr>
<tr>
<td>Assignee phone......... 555-2774</td>
<td>Change status..........&lt;H&gt; CLOSED</td>
<td></td>
</tr>
<tr>
<td>Coordinator name....&lt;H&gt; _______________</td>
<td>Approval status..........&lt;H&gt; PENDING</td>
<td></td>
</tr>
<tr>
<td>Device name............</td>
<td>Owning priv. class......</td>
<td>MASTER</td>
</tr>
<tr>
<td>Key item affected......</td>
<td>Entry priv. class......</td>
<td></td>
</tr>
<tr>
<td>Date required.......&lt;H&gt; 12/23/1998</td>
<td>Date entered............ 08/27/1998</td>
<td></td>
</tr>
<tr>
<td>Planned start date..&lt;H&gt;</td>
<td>Time entered............ 13:18</td>
<td></td>
</tr>
<tr>
<td>Completion date....&lt;H&gt;</td>
<td></td>
<td>12/20/1998</td>
</tr>
<tr>
<td>Description............ CHANGE COM1 TO RS-232</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following, or type END to return to the Summary Display.

1. List record references.
2. Print this record.
3. Copy this record.
4. Purge this record.
5. Update this record.

For each record type, only the applicable utility functions are listed. For example, the copy function is not included for activities.
When you type 1 and press Enter from the Record Utilities panel, a search results list displays all other change, activity, and problem records that have this record’s ID in a field.

- For a change record, the list shows:
  - All problem records that include this change in the cause change or fix change number field
  - All change records that include this change in the corequisite or prerequisite field
  - All activity records attached to the change.

- For an activity record, the list shows:
  - All activity records that include this activity in the corequisite or prerequisite field
  - All change records that include this activity in the corequisite or prerequisite field.

The List Record References display is useful in identifying records that refer to a particular change or activity when you want to copy, update, or delete that record. For example, you would not delete a change record if it is a corequisite or a prerequisite to another change. If you are copying a change record that is part of a group, you may want to copy all change records in that group. When you copy a change record, all activity records associated with the change are also copied.

When you select a utility function from the Record Utilities panel, that function is performed and you return to the panel.

Displaying Configuration Management Records

The following sections describe some of the display panels that are available for Configuration Management records.

If you request the display of a hardware configuration record, this summary display panel appears.

```
BLG00100 HARDWARE COMPONENT SUMMARY DISPLAY

Generic device........... ________
Device type & model....... __________
Serial number............... ________
Microcode EC level....... ________
Model link ID............. ________
Component owner......<H> ________
Date of status.......<H> ________
Component status.....<H> ________
Description............. _____________________________________________

Select one of the following, or type END or CANCEL to leave this panel.
1. Primary description.
2. Support display.
3. Connectivity display.
5. Financial display.
6. Feature record list display.
7. Freeform text and notes.
8. History display.
9. Record utilities.
10. Maps data display.
11. Source definition display.

===>
```

Displays Common To All Configuration Records

Four displays—summary, freeform text and notes, history, and record utilities—are common to all types of configuration records. For data center, system, and service records, they are the only displays available.
### Summary Display

The summary display panel appears when you first issue the Display command for a record. This panel shows all of the description data for the configuration record.

<table>
<thead>
<tr>
<th>BLGON1D0</th>
<th>HARDWARE COMPONENT SUMMARY DISPLAY</th>
<th>COMPONENT: ________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic device.</td>
<td>Display class.</td>
<td></td>
</tr>
<tr>
<td>Device type &amp; model.</td>
<td>Location code.</td>
<td></td>
</tr>
<tr>
<td>Serial number.</td>
<td>Entry priv. class.</td>
<td></td>
</tr>
<tr>
<td>Microcode EC level.</td>
<td>Owning priv. class.</td>
<td></td>
</tr>
<tr>
<td>Model link ID.</td>
<td>Date entered.</td>
<td></td>
</tr>
<tr>
<td>Contact name.</td>
<td>Time entered.</td>
<td></td>
</tr>
<tr>
<td>Component owner.</td>
<td>Date last altered...&lt;H&gt;</td>
<td></td>
</tr>
<tr>
<td>Date of status...&lt;H&gt;</td>
<td>Time last altered...&lt;H&gt;</td>
<td></td>
</tr>
<tr>
<td>Component status...&lt;H&gt;</td>
<td>User last altered...&lt;H&gt;</td>
<td></td>
</tr>
<tr>
<td>Description.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The upper portion of this panel is a descriptive overview of the record. The lower portion contains a list of displays you can select to see other sections of the record.

If this summary panel does not provide the information that you need, choose the appropriate item from the list of supplemental displays. Whenever you end the supplemental display, you return to this panel. For a hardware component, all 12 types of configuration displays are listed; for other records, only some of the displays are listed.

### Text Display

If you choose option 8 (Freeform text and notes) from the list of selections, you are presented with a panel of text options. For financial and service records, only three options are displayed:

- DESCRIPTION
- NOTES
- END

For data center and system records and for hardware and software components and features, you can also choose ADDRESS.

Choose one of these options to display the corresponding text panel. The text panel that appears does not have a line command area, because line commands are not valid; otherwise, the display text panel is the same as the corresponding one for creating text.

### History Display

The History Display panel shows the initial value and each changed value for journal fields. The date altered, time altered, and user ID are included.
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, 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.

Record Utilities

The Record Utilities panel lets you select utility functions and display all records that refer to the current record. For each record type, only the applicable utility functions are listed. For example, copy is not included for feature records.

When you choose option 1 (List record references) from the list of selections, a search results list appears that contains all other configuration records that have this record’s ID in a field. This option is useful for identifying other records that reference a particular component.

When you choose a utility function from the Record Utilities panel, Tivoli Information Management for z/OS performs the function and returns you to the Record Utilities panel.
Hardware, Software, and Model Displays

A group of hardware and software display panels provide information for the user. Hardware displays described in this chapter are:

- Support
- Detail
- Feature record list
- Secondary description
- Connectivity
- Financial
- Diagram map data
- Source definition.

Hardware financial record displays are:

- Primary description
- Secondary description
- VPA description.

Software financial record displays are:

- License charges
- VLA display
- IBM DSLO data.

Model component displays are:

- Feature record list
- Secondary descriptions
- Financial display.

Support Display

The Support Display panel shows support and maintenance information about a hardware or software component record, feature record, or hardware subcomponent record.

| Display data center record. |
| Display system record. |
| Display service record. |
| Display secondary support data. |

The upper portion of this panel shows the support information for the component record. The lower portion contains a list of associated record types that you can choose to display:

- Data center
- System
- Service
Secondary support groups.

If you choose any of the first three types and the record ID for that record is defined on this panel, a summary panel for that record type appears. You can then display the text or history for that record.

The display for secondary support groups presents secondary support data.

**Detail Display**

The detail display lets you view all of the nonadministrative data in the record, including EC and modification levels. If you select the detail display for a hardware component, a panel similar to this one appears:

```plaintext
ENTRY RECS=CONFIG RECS=HARDWARE HARDWARE COMPONENT DIRECT DESCRIPTION 
RNID/CTL3274 TYPD/CTL DEVS/3274A NUMX/C4444 LVLX/00133052 
STAC/INSTALL DATC/06/15/1998 LOCC/DPCTR1 DISC/1 
3274 CONTROLLER FOR 3270/PCS Primary support data RNDR/DPCTR1 
RNSY/RED3033 RNSR/IBM300 Financial DATX/10/01/1998 
Maps data NUMT/0032 SDM/START DATE/06/15/1998 
TIME/01:27 CLAE/MASTER MIGR/CREATEV22 DATM/06/15/1998 TIMM/01:34 
USER/SPENCER 5 LVLS/03050066 LVLS/03050067 LVLS/03050068 File record 
*** BOTTOM OF DATA ***
```

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

If all the items do not fit on the screen, use the SCROLL command. Type end and press Enter to return to the summary panel.

**Feature Record List Display**

From the Hardware Component Summary Display panel, choose option 7 (Feature record list display) to get the Related Record List panel. This panel contains a list of all features associated with the current component record as well as any linked subcomponents. The display also includes a list of the model features with a storage class of REFER that are linked to the model component. The related record display for a hardware component is shown here:
You can select a feature or subcomponent for display by entering the option number or by entering the S line command next to the record. When you request a record for display, the Record Summary Display appears.

**Secondary Description Display**

The Secondary Description Selection represents hardware components with a Generic device type of either LIN or LOP. Depending on the device, one of the following displays appears:

The line information display contains line information for hardware records that describe communication lines.

The loop information display contains loop information for hardware components that describe communication loops.
Connectivity Display

When you choose option 3 (Connectivity) from the Hardware Component Summary Display panel, the following panel appears:

Connectivity displays enable you to look at up and down connections for a component (up is towards the CPU or SCP) or to display the path that connects two components. These displays allow you to see the relationship between components as well as display the actual connection records for a given component.

Figure 8 on page 261 is an example of a configuration network diagram. It is the basis for the descriptions of the connectivity displays that are given on the next few pages.

The left side of the diagram contains software components and the connections between them; for example, components IMSPROD and TSO run under MVSPROD. The right side of the diagram shows connections between hardware components.
The arrows running from software components to hardware components show the connections between software and hardware.

The number in the upper right-hand corner of a box is the component device type, and the number in the lower right-hand corner is the display class for that component.

Figure 8. Configuration Network Diagram
**Up Connection List Display**

The Up Connection List panel shows components that are directly connected, in the up direction, from the current component.

The Up Connection List display for component record NCPCTL01 is:

```
BLGITAUP UP COMPONENT LIST LINE _ OF_
COMPONENT: NCPCTL01

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>TYPE</th>
<th>DEVICE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CHANA1</td>
<td>CHN</td>
<td>PHYSICAL</td>
<td>CHANNEL TO CPUA</td>
</tr>
<tr>
<td>2. CHANA2</td>
<td>CHN</td>
<td>PHYSICAL</td>
<td>CHANNEL TO CPUA</td>
</tr>
</tbody>
</table>

*** BOTTOM OF DATA ***
```

Line Cmds: C=Copy D=Delete P=Print S=Select U=Update
Type DOWN or UP to scroll the pane l, or type END to exit the pane.

Only the two components that are directly connected to component NCPCTL01 in the up direction are included.

**Down Connection List Display**

The Down Connection List panel shows components that are directly connected to the current component in the down direction, that is, going away from the CPU or SCP.

A down connection is established when you enter the ID of this component in a connection record of another down-connected component. For example, to establish a connection between MODEM01 and NCPCTL01, and between MODEM03 and NCPCTL01 (see Figure 8 on page 261), you must enter NCPCTL01 as the component to in connection records for both components.

When you enter NCPCTL01 in the connection record, Tivoli Information Management for z/OS automatically establishes a down connection between NCPCTL01 and these components.

The down component list display for NCPCTL01 is:
Up and Down Synopsis Display

By choosing option 3 (Synopsis) on the Connectivity Display Options panel, you can display both the up and down connections for a component. Only those components that are directly connected to the current component are listed, with up components listed first and down components listed second. Connections are established as described in the earlier sections on up component list displays and down component list displays.

It is possible that no records are defined for a particular part of the display. When this occurs, that part is simply bypassed.

The synopsis display for hardware component NCPCTL01 is:

Connectivity Path Display

The connectivity path display shows the paths between two components.

The Component from and Component to name fields indicate the beginning and ending points for the path: from is the point furthest from the CPU or SCP, and to is the point closest to the CPU or SCP.
The Display class field determines which components in a path are listed on the table panel. These numbers range from 1 to 9. All components that have a display class equal to or less than the number you enter are displayed. A component with a display class of 0 is never displayed. If more than one path exists between two components, all paths are listed.

The date of configuration is used to determine which connection records are to be displayed, based on Date from and Date to of the connection, while Connection type allows you to nominate either specific connections or all connections. Path ID enables you to display a specific path between components.

For example, suppose you want to display all components with a display class of 1 through 3 between components TERM01 and NCPCTL01 (see Figure 8). Enter TERM01 in the Component from field, NCPCTL01 in the Component to field, and 3 in the Display class field. The resulting display is:

Notice that MODEM01 and MODEM02 are not displayed; they have a display class greater than 3. If you enter a display class of 4, then MODEM01 and MODEM02 are also displayed.
When multiple paths exist between two hardware components or between two software components, each path is presented starting with the component furthest from the CPU or SCP.

When multiple paths exist between a hardware and software component, all paths for hardware components are presented first, starting with the component furthest from the CPU. All software paths are presented next, starting with the component closest to the SCP.

**All Connection Records Display**
The Connection Record List panel shows all connection records that are children to the current component. (See Figure 8 on page 261.) The connection record list for NCPCTL01 is:

```
COMPONENT: NCPCTL01

<table>
<thead>
<tr>
<th>RECORD ID</th>
<th>COMPONENT</th>
<th>GENERIC</th>
<th>CONNECTION</th>
<th>DEVICE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>00000032</td>
<td>CHANA1</td>
<td>CHN</td>
<td>PHYSICAL</td>
<td>01/01/1998</td>
<td></td>
</tr>
<tr>
<td>00000034</td>
<td>CHANA2</td>
<td>CHN</td>
<td>PHYSICAL</td>
<td>01/01/1998</td>
<td></td>
</tr>
</tbody>
</table>
```

Line Cmds: P=Print  S=Select
Type DOWN or UP to scroll the panel, or type END to exit the panel.

**Financial Display**
The financial display shows information about the financial characteristics of hardware and software components and features, and hardware subcomponents.

**Note:** To display the book value and market value, you must be in a privilege class that has financial and configuration display authority.

```
COMPONENT: ________

Hardware financial ID.....
Lease begin date...........
Lease end date............
Purchase date.............
VPA number.................
VPA sequence number......
Current book value...<H>
Current market value..<H>
```

Select one of the following, or type END to return to the Summary Display.

1. Display financial record

```
The upper portion of this panel shows the financial information for the component or feature record. The lower portion lets you display an associated financial record, which would present you with a summary panel for that record.

**Diagram Map Data Display**

The diagram map data display shows information relating to the configuration diagram facility.

<table>
<thead>
<tr>
<th>BLGON113</th>
<th>HARDWARE COMPONENT DIAGRAM MAP DATA DISPLAY</th>
<th>COMPONENT: ________</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of ports....... __ __ __ __ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subdiagram marker 1.. ________ __ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subdiagram marker 2.. ________ __ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subdiagram marker 3.. ________ __ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subdiagram marker 4.. ________ __ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subdiagram marker 5.. ________ __ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subdiagram marker 6.. ________ __ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subdiagram marker 7.. ________ __ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subdiagram marker 8.. ________ __ __ __ __</td>
<td></td>
</tr>
</tbody>
</table>

Type END or CANCEL to return to the Summary Display.

--->

**Source Definition Display**

The source definition display shows information relating to the network environment for the hardware or software.

<table>
<thead>
<tr>
<th>BLGON105</th>
<th>HARDWARE COMPONENT SOURCE DISPLAY</th>
<th>COMPONENT: ________</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Network name........ __ __ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Node name........____ __ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program name........____ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTERM ID (IMS).....____ __ __ __</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CICS ID..........____ __ __ __ __</td>
<td></td>
</tr>
</tbody>
</table>

Type END or CANCEL to return to the Summary Display.

--->
Hardware Financial Displays

In addition to the common displays illustrated previously, the displays for hardware financial records include information specific to the type of record.

### Primary Description Display

The Primary description selection on the summary display lets you display all primary data for the component.

### Secondary Description Display

This display is based on the financial type that was recorded.

The Purchase Display panel includes information relating to the purchase of a hardware component.
The Rental/Lease Display panel includes information relating to the rental or lease of a hardware component.

**Volume Purchase Agreement (VPA) Description Display**

The Volume Purchase Agreement (VPA) Display panel shows information relating to the VPA of hardware components.
Software Financial Displays

In addition to the common displays illustrated on the preceding pages, the displays for software financial records include information specific to the type of record.

License Charges Display

The Basic License Display panel includes license charge details for software components.

Volume License Agreement (VLA) Display

The Volume License Agreement (VLA) Display panel shows information relating to the VLA of software components.
Distributed System License Options (DSLO) Display

The Distributed System License Options (DSLO) display shows information about DSLO for software components.

Model Component Display

In addition to the common displays illustrated on the preceding pages, the displays for model component records include information specific to the type of record.

Primary description allows you to display all primary data, including date and time fields, for the model component.
The support display panel displays information about the support and maintenance of a model hardware or software component record and its features, and model hardware subcomponents.

The upper portion of this panel displays the support information for the model component record. The lower portion contains a list of associated record types you can look at:

- Data center
- System
- Service.

If you select any of these types and the record ID is defined on this panel, you are presented with a summary panel for that record type. You can then display the text or history for that record.

The display for secondary support groups presents a detail display used for EC or FMID levels.

**Feature Record List Display**

The Feature record list selection presents the related record display, which is a search results list containing all features of the current model component record and any linked model subcomponents. The display also includes a list of model features with a storage class of REFER that are linked to the model component. The related record display for a hardware component is:
You can select a feature or subcomponent for display by entering the option number or by entering the S line command next to the record. The line commands perform the same functions as those described for the search results list.

When you request a record for display, the Record Summary Display appears.

**Secondary Description Display**

The Secondary description selection shows hardware components with a generic device of either LIN or LOP. Depending on the device, the following information is displayed:

The line information display contains line information for hardware records that describe communication lines.

The loop information display contains information for hardware components that describe communication loops.
Financial Display

The financial display shows information about the financial characteristics of hardware and software components and features, and subcomponents.

Note: To display the book value and market value, you must be in a privilege class that has financial and configuration display authority.

---

BLGON172 HARDWARE COMPONENT LOOP DISPLAY COMPONENT: ________

Loop ID................... ________
Loop speed................ _____
Direction of flow......... ________
Loop type................... ________

Type END or CANCEL to return to the Summary Display.

---

BLGON753 MODEL HARDWARE COMPONENT FINANCIAL DISPLAY COMPONENT: ________

Hardware financial ID..... ________
Current book value.......<H> ________
Current market value...<H> ________

Select the following option, or type END to return to the Summary Display.

1. Display financial record.

---
The inquiry (search) function of Tivoli Information Management for z/OS lets you retrieve information from the database when you are not sure of the specific records you want. A search consists of comparing items in a search argument with data items in records in a database, and then displaying the matches in a search results list.

The search function is flexible and versatile. Tivoli Information Management for z/OS provides a simple method of searching that is suitable even for inexperienced users, and more sophisticated methods that provide flexibility for more advanced users.

This chapter describes two ways of searching Tivoli Information Management for z/OS records:

- Quick search
- Structured search.

For more information on the SEARCH command and a description of other search methods, refer to the Tivoli Information Management for z/OS User’s Guide.

### Using Quick Search

The quick search function consists of a set of data-entry panels that are similar to the panels used in creating records. Additionally, quick search includes summary and help panels, as well as some assisted-entry panels.

**Important**

You can use the quick search inquiry path only if you have changed the session control defaults in your user profile. On panel BLG0P100, Session Defaults, type yes next to Quick search? and press Enter to select quick search as your default. Refer to the Tivoli Information Management for z/OS User’s Guide for more information on user’s profiles.

To create the search arguments in quick search, you enter data on data-entry panels. As you enter values, Tivoli Information Management for z/OS collects the data as your argument. You can use the VIEW command at any time to see the data collected. You may also include freeform search arguments at any time by issuing the ARGUMENT command. When you finish creating your argument, you can perform the search by either issuing the SEARCH command or by selecting the Search option on the Inquiry Summary panel.
After you have requested the search, the Search Results List panel displays the records that satisfy your search argument. This includes an item number, record ID, and a brief description of the record. If you do not have display authority for any of the records retrieved by your search, only the item number and record ID are displayed. Text normally found in the description column is replaced by ‘UNAUTHORIZED’.

The number of records that satisfy the argument is listed in the upper right corner. If the total is too large, consider modifying your argument.

To leave a search results list, type **end** and press Enter, or type **cancel** and press Enter. If you had entered a search+ argument, **end** saves the added keywords, and **cancel** deletes them. If you enter line commands on the search results list, you return to the search results list when the line command is completed.

Remember the following when you use quick search:

- If you start a search operation in quick search and then change the profile setting for quick search panels to NO, the search results can be unpredictable.

- The order of processing quick search arguments is not determined by the order in which you type them unless you press Enter after each argument. You should press Enter after every value to construct a specific structured search argument when using the quick search panels.

When you type data directly into quick search data entry fields, the order in which the entries are collected is determined by the order in which their fields appear on the panel, unless you press Enter after each entry.

- If you issue the **BACK** command after using quick search to get a search results list, you may find that the exact sequence of panels shown prior to the SEARCH command may not appear.

- If you enter more than one value for the same field, the most recently entered value supersedes all other values entered for that field.

- Any time you want to search on an item whose prefix is used for multiple purposes (such as a phone number or a department), you might receive results that are out of context. For more information, refer to the *Tivoli Information Management for z/OS User’s Guide*.

- Watermark characters are in the range of ‘X’BA’ - ‘X’BF’. They are used to identify structured words and also correspond to certain Katakana characters. Therefore, it is possible in the search of data beginning with one of these Katakana characters to also display records containing structured words as well as the data you are seeking. If you use one of these characters followed by a period (abbreviation operator), almost all the records in the database can be displayed.

Sections later in this chapter present examples of how quick search can be used on Problem Management, Change Management, and Configuration Management records.

- For information on quick search for Problem Management records, see 277.
- For information on quick search for Change Management records, see 292.
- For information on quick search for Configuration Management records, see 304.
Using Structured Search

In the structured search prompting sequence, you are presented with selections and assisted-entry panels. Data on data-entry panels appear as menu selections. Assisted-entry panels are then presented, on which you can enter specific values for the fields.

When you use structured search, data is collected as you progress from panel to panel. You do not see your search argument as it is built, but you can use the VIEW command at any time to see all of the data that has been collected, and you can also use the ARGUMENT command at any time to add keyword search arguments to the search argument.

You can stop creating your argument at any point in the prompting sequence and enter the SEARCH command.

The structured search path is used when the Quick search? field in your profile is set to NO. Refer to the Tivoli Information Management for z/OS User’s Guide for additional information about your profile and about structured search.

After you have requested the search, the Search Results List panel displays the records that satisfy your search argument. This list includes an item number, record ID, and a brief description of the record. If you do not have display authority for any of the records retrieved by your search, only the item number and record ID are displayed. The description column is replaced with ‘UNAUTHORIZED’.

To leave a search results list, type end or cancel. If you had entered a search = argument, end saves the added keywords and cancel deletes them. If you enter other line commands on the search results list, you return to the search results list when the command is completed. All actions are nested within the search.

Sections later in this chapter present examples of how structured search can be used on Problem Management, Change Management, and Configuration Management records.

- For information on structured search for Problem Management records, see page 281.
- For information on structured search for Change Management records, see page 296.
- For information on structured search for Configuration Management records, see page 307.

Searching Problem Management Records

This section presents examples of how Tivoli Information Management for z/OS’s Inquiry function can be used to search Problem Management records. Task examples appear in the following order:

- Quick search
- Structured search
- Typical search arguments, and how they might be performed in quick or structured search.

Using Quick Search on Problem Management Records

In this example, you use quick search to find closed problems reported by Jones in department DEV for product XMP1. The Quick search? field in your user profile has been set to YES.

To request a search, type 6 and press Enter.
To limit your search to problem records, type 1 and press Enter.

Add the data for the search.

For this example, type the following on the command line and press Enter:

```
1,jones,2,dev,8,xmp1,14,closed
```

To save the data, type **end** and press Enter.
The Problem Inquiry Summary panel appears. At this time, you can do one of the following:
- Use option 1 to change the information you just entered.
- Use options 2 – 6 or 8 to add other information to the search argument.
- Use option 9 to start the search.
- Use option 10 to enter search arguments for freeform text data on panel BLG1TTSA, Text Search Arguments. More information about searching freeform text data can be found in the Tivoli Information Management for z/OS User’s Guide.

For this example, type 5 and press Enter.

To search for problem records whose resolution included correcting an IF statement, type the following on the command line and press Enter:

13,if

To start the search, type se on the command line and press Enter.
Searching Problem Management Records

The records that matched your search argument are presented on the Search Results List panel. From this panel, you can issue line commands to perform tasks such as copying or updating a record.

To return to the Primary Options Menu, type `init` on the command line and press Enter.

This ends the example of quick search for problem records.
Using Structured Search on Problem Management Records

In this example, you use structured search to find closed problems reported by Jones in department DEV for product XMP1. The Quick search? field in your user profile has been set to NO.

To request a search, type 6 and press Enter.

To limit your search to problem records, type 1 and press Enter.
To search on reporter information, type 1 and press Enter.

To search on the reporter’s name, type 1 and press Enter.
To specify the reporter’s name, type \texttt{jones} and press Enter.

To search on the reporter’s department, type \texttt{2} and press Enter.
To specify the reporter’s department, type dev and press Enter.

To search on the program name, type 7 and press Enter.
To specify the program name, type **xmp1** and press Enter.

To save the data and continue, type **end** and press Enter.
To search on status information, type 2 and press Enter.

Page 1 of the Problem Status panel appears. To move to page 2, press Enter.
To search on problem status, type 1 and press Enter.

To specify current status, type closed and press Enter.
To save the data and continue, type **end** and press Enter.

To search on resolution information, type **5** and press Enter.
Supply resolution information.

For this example, type the following on the command line and press Enter:

13. if

To start the search, type se on the command line and press Enter.

The records that matched your search argument are presented on the Search Results List panel. From this panel, you can issue line commands to perform tasks such as copying or updating a record.

To return to the Primary Options Menu, type init and press Enter.
Typical Search Arguments for Problem Management Records

This section identifies typical problem search arguments and different techniques for entering them. [Table 4 on page 291](#) lists examples for both search criteria and arguments.

To use a structured search, the Quick search? field in your profile must be set to NO. Proceed through the panels, making the appropriate selections and entering assisted-entry values. To use a quick search, the Quick search? field in your profile must be set to YES. Enter values on the quick search panels. To use a freeform search, enter keywords on the SEARCH command or on the argument panel. In some cases, freeform can be combined with quick or structured search to keep record types you are not interested in from being in your search.

In the following table, SE is an abbreviation for the SEARCH command.
### Table 4. Typical Problem Search Arguments

<table>
<thead>
<tr>
<th>SEARCH CRITERIA</th>
<th>STRUCTURED SEARCH ARGUMENT</th>
<th>QUICK SEARCH ARGUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify all nonclosed problem records (status of OPEN or INITIAL)</td>
<td>Select INQUIRY, PROBLEM, STATUS, press Enter, select PROBLEM STATUS, type open</td>
<td>Select INQUIRY, PROBLEM, STATUS, type open</td>
</tr>
<tr>
<td></td>
<td>initial, press Enter</td>
<td>initial</td>
</tr>
<tr>
<td></td>
<td>6,1,2,,1,open</td>
<td>initial,se</td>
</tr>
<tr>
<td>Identify all problems at a specific location (for example, St. Louis = stlou)</td>
<td>Select INQUIRY, PROBLEM, REPORTER, press Enter twice, select LOCATION, and type stlou</td>
<td>Select INQUIRY, PROBLEM, LOCATION CODE, and type stlou</td>
</tr>
<tr>
<td></td>
<td>stlou 6,1,1,,5,stlou,se</td>
<td>stlou 6,1,24,stlou,se</td>
</tr>
<tr>
<td>Retrieve all problems that occurred in the month of May.</td>
<td>If you use a 2-digit internal year: se dato/96/05/01 – dato/96/05/31 or se dato/96/05/01 – 31</td>
<td>Same as structured sequence</td>
</tr>
<tr>
<td>(Use keywords. dato (date occurred) is unique to problem records.)</td>
<td>If you use a 4-digit internal year: se dato/1996/05/01 – dato/1996/05/31 or se dato/1996/05/01 – 31</td>
<td></td>
</tr>
<tr>
<td>Identify all problems reported by a specific person (for example, Jones).</td>
<td>Select INQUIRY, PROBLEM, and enter SEARCH with PERS/JONES keyword</td>
<td>Same as structured sequence</td>
</tr>
<tr>
<td></td>
<td>6,1,se + pers/jones</td>
<td></td>
</tr>
<tr>
<td>Identify all problems that were opened last week (12/1–7) and are not closed.</td>
<td>Select INQUIRY, PROBLEM, type arg, enter keywords on Argument panel: 6,1,argument</td>
<td>Same as structured sequence</td>
</tr>
<tr>
<td>(Use the ARGUMENT command. stac is status and date is date entered.)</td>
<td>If you use a 2-digit internal year, on panel, enter: stac/closed date/96/12/01 –7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If you use a 4-digit internal year, on panel, enter: stac/closed date/96/12/01 –7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>On input line, type se</td>
<td></td>
</tr>
<tr>
<td>Retrieve all records assigned to Smith that are not closed. (Use a</td>
<td>se stac/closed pera/smith</td>
<td>Same as structured sequence</td>
</tr>
<tr>
<td>keyword search to search the entire database. Retrieves problem,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>change, and activity records assigned to Smith. stac and pera are common</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to all three record types.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Searching Change Management Records

This section presents examples of how Tivoli Information Management for z/OS’s inquiry function can be used to search Change Management records. Task examples appear in the following order:

- Quick search
- Structured search
Typical search arguments, and how they might be performed in quick or structured search.

**Using Quick Search on Change Request Records**

In this example, you use quick search to find all change request records requested by Smith. The Quick search? field in your user profile has been set to YES.

To request a search, type 6 and press Enter.

```
===> 6
```

To limit the search to change records, type 2 and press Enter.

```
To limit the search to change records, type 2 and press Enter.
```

Identify the type of change record you want to include in the search.

To restrict your search to change request records, type 1 and press Enter.
To search for change request records requested by Smith, type the following on the command line and press Enter:

1. smithj

To save the data, type end and press Enter.

If you wish to add more information to your search argument at this time, select the part of the change request record from the options at the bottom of the summary panel.

- If you type 1 and press Enter, you return to panel BLG0F190, Change Requester Inquiry. Enter the specific values.
- If you type 3 and press Enter, you see data-entry panel BLG0F390, Change Close Data Inquiry.
- If you type 4 and press Enter, you see selection panel BLG0C040, Change Detail. You can then make a selection searching for changes that relate to software, hardware, or documentation.
If you type 5 and press Enter, you see data-entry panel BLF0F590, Change Approver Data Inquiry. You are prompted for an approval status: pending, accept, reject, or all. On an assisted-entry panel, you can identify the privilege class names.

If you type 6 and press Enter, you see data-entry panel BLF0F890, Change Control Data Inquiry. Enter data for privilege classes, or record IDs, and other system-completed fields, such as Date last altered or Approver status.

Use option 7 to enter search arguments for freeform text data on panel BLG1TTSA, Text Search Arguments. More information about searching freeform text data can be found in the Tivoli Information Management for z/OS User’s Guide.

After you select any of the above options and enter your data, type end and press Enter to return to the Change Request Summary selection panel.

To start the search, type 9 and press Enter.

The records that matched your search argument are presented on the Search Results List panel. From this panel, you can issue line commands to perform tasks such as copying or updating a record. For more information on line commands, refer to the Tivoli Information Management for z/OS User’s Guide.

Use line commands as necessary, then type end and press Enter.
If you have completed your search of change records, type init and press Enter to return to the Primary Options Menu.

--- init

This ends the example of quick search for change records.
Using Quick Search on Activity Records

The quick search panels for activity records are similar to those for change request records, but the data applies specifically to activity records. The quick search panels for all change records (change request and activity, option 3 on panel BLG0F000), are also similar, but only the fields that are common to both record types are included in the panels.

Using Structured Search on Change Request Records

In this example, you use structured search to find all change request records requested by Smith. The Quick search? field in your user profile has been set to NO.

To request a search, type 6 and press Enter.

To limit your search to change records, type 2 and press Enter.
Identify the type of change record you want to include in the search.

To limit your search to change request records, type 1 and press Enter.

Select the item that indicates the part of the change request record to which your search relates.

Since you want to search for change request records requested by Smith, type 1 and press Enter for requester data.
If you select any of the other options, note the following:

- If you select **STATUS**, **CLOSE**, or **DETAIL**, select the fields you want to search from the selection panels displayed. Enter the specific values on the assisted-entry panels.

- If you select **APPROVERS**, you are prompted for an approval status: pending, accept, reject, or all +. On the assisted-entry panel, you can identify the privilege class names.

- If you select **REVIEWERS**, identify privilege classes that are specified as reviewers for the change record. An assisted-entry panel displays for this selection.

- If you select **CONTROL**, enter data for privilege classes, record IDs, and other system-completed fields such as Date last altered or Approval status.

- If you select **ACTIVITIES**, identify the activity name for the argument. An assisted-entry panel displays for this selection.

After you describe as much information as needed, you can enter **end** to return to the Change Inquiry Selection panel where you can select another option or you can enter the **SEARCH** command to perform the search. The **SEARCH** command can be issued from any panel in the prompting sequence.

To specify the name of the person that requested the change, type 1 and press Enter.
Type **smithj** on the command line and press Enter.

Specify other search criteria if needed. Then type **se** on the command line and press Enter.
The records that matched your search argument are presented on the Search Results List panel. From this panel, you can issue line commands to perform tasks such as copying or updating a record. For more information on line commands, refer to the Tivoli Information Management for z/OS User's Guide.

Use line commands as needed, then type end and press Enter.

If you have completed your search of change records, type init and press Enter to return to the Primary Options Menu.
Using Structured Search on Activity Records

When you restrict your structured search to activity records, the REQUESTER, STATUS, CLOSE, CONTROL, and ACTIVITIES options are similar to those for change records. The only exceptions are that all data applies to activity records, and in the CONTROL section, the Approval status field is replaced by the Parent change field.

When you search for all records (change and activity), only the fields that are common to both record types are included. When you select an option, you are presented with a series of selection and assisted-entry panels to identify the records. You can enter data for any sections of the records, including system-completed fields in the control section.

Typical Search Arguments for Change Management Records

This section identifies typical change search arguments and different techniques for entering them. Table 5 on page 302 lists examples for both search criteria and arguments.
To use a structured search, the Quick search? field in your profile must be set to NO. Proceed through the panels, making the appropriate selections and entering assisted-entry values. To use a quick search, the Quick search? field in your profile must be set to YES. Enter values on the quick search panels. To use a freeform search, enter keywords on the SEARCH command or on the argument panel. In some cases, freeform can be combined with quick or structured search to keep record types you are not interested in from being in your search.

In the following table, SE is an abbreviation for the SEARCH command.

**Table 5. Typical Change Search Arguments**

<table>
<thead>
<tr>
<th>SEARCH CRITERIA</th>
<th>STRUCTURED SEARCH ARGUMENT</th>
<th>QUICK SEARCH ARGUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify all open change records (have a status of open or initial).</td>
<td>Select INQUIRY, CHANGE, CHANGE, STATUS, CHANGE STATUS, and enter OPEN</td>
<td>INITIAL 6,2,1,2,8,open</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify all changes and activities for a system (MVS).</td>
<td>Select INQUIRY, CHANGE, ALL+, REQUESTER, SYSTEM NAME, and enter MVS 6,2,3,1,4,mvs,se</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select INQUIRY, CHANGE, ALL+, SYSTEM NAME, and enter MVS 6,2,3,4,mvs,se</td>
<td></td>
</tr>
<tr>
<td>Retrieve all changes that you plan to start next month (October).</td>
<td>Select INQUIRY, CHANGE, CHANGE, STATUS, press Enter, PLANNED DATE and enter 10/01/96 – 10/31/96 6,2,1,2,.3,10/01/96 – 10/31/96,se</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select INQUIRY, CHANGE, CHANGE, enter END, STATUS, PLANNED START DATE, and enter 10/01/96 – 10/31/96,se 6,2,1,end,2,14,10/01/96 – 10/31/96,se</td>
<td></td>
</tr>
<tr>
<td>Identify all changes and activities at a specific location (stlou).</td>
<td>Select INQUIRY, CHANGE, ALL+, REQUESTER, Enter, LOCATION, and enter stlou 6,2,3,1,.5,stlou,se</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select INQUIRY, CHANGE, ALL+, LOCATION and enter stlou 6,2,3,12,stlou,se</td>
<td></td>
</tr>
<tr>
<td>Identify all incomplete changes or activities scheduled for this month (September). (Use the ARGUMENT command. stac is status, datd is date required, and datt is planned end date.)</td>
<td>Select INQUIRY, CHANGE, ALL+, enter ARGUMENT, enter keywords on Argument panel: 6,2,3,argument If you use a 2-digit year, on argument panel, enter: stac/closed datd/96/09/01 -30 datt/96/09/01 -30 If you use a 4-digit year, on argument panel, enter: stac/closed datd/1996/09/01 -30 datt/1996/09/01 -30 On command line, enter: se</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Same as structured sequence</td>
<td></td>
</tr>
<tr>
<td>SEARCH CRITERIA</td>
<td>STRUCTURED SEARCH ARGUMENT</td>
<td>QUICK SEARCH ARGUMENT</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Identify all changes that require approval by SYSPROG privilege class. (Use keywords. stap is approval status and sp** is approver classes.)</td>
<td>Select INQUIRY, CHANGE, and enter SEARCH with keywords 6,2,se + stap/pending sp**/SYSPROG</td>
<td>Same as structured sequence</td>
</tr>
<tr>
<td>Identify all changes that require approval by SYSPROG privilege class (for approval data collected only through a list processor panel BLGLAPVR)</td>
<td>Select INQUIRY, CHANGE, and enter SEARCH with keywords 6,2,se + apst/pending spar/SYSPROG</td>
<td>Same as structured sequence</td>
</tr>
<tr>
<td>Retrieve all records that are not closed and are assigned to Smith. (Use keyword search to search the entire database. Retrieves problem, change, and activity records assigned to Smith. STAC and PERA are common to all three record types.)</td>
<td>se stac/closed pera/smith</td>
<td>Same as structured search</td>
</tr>
<tr>
<td>View all changes to devices identified by five DBCS characters beginning with &lt;WPWR&gt; (Use keywords and the W* operator to indicate positions that will accept any DBCS character.)</td>
<td>Select INQUIRY, CHANGE, and enter SEARCH with keywords. 6,2,search + comd/&lt;WPWRW<em>W</em>W*&gt;</td>
<td>Use prompting sequence</td>
</tr>
<tr>
<td>Identify all changes having a reason code beginning with DBCS &lt;WA&gt; (Use keywords and the W operator to indicate you want the search to recognize any code beginning with &lt;WA&gt;)</td>
<td>Select INQUIRY, CHANGE, and enter SEARCH with keywords. 6,2,search + codr/&lt;WA&gt;</td>
<td>Use prompting sequence</td>
</tr>
</tbody>
</table>
Searching Configuration Management Records

This section presents examples of how Tivoli Information Management for z/OS’s Inquiry function can be used to search Configuration Management records. Task examples appear in the following order:
- Quick search
- Structured search
- Typical search arguments, and how they might be performed in quick or structured search.

Using Quick Search on Configuration Management Records

In this example, the Quick search? field in your user profile has been set to YES.

To request a search, type 6 and press Enter.

```
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

  ==> 6
```

To limit your search to configuration records, type 3 and press Enter.

```
BLG00001 INQUIRY 1 OF 1
USE....Identify type of information to be added to the inquiry.
  1.PROBLEM.......Enter data processing problem description.
  2.CHANGE........Enter change request for system/procedure.
  3.CONFIGURATION..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 data.

  SELECT ITEM
```

Identify the type of record you want to include in your search.
To restrict your search to data center records, type 1 and press Enter.

Complete this panel to specify the information about the record you want to see.

To search on the center name, type 1,center1 on the command line and press Enter:

To save the data, type end and press Enter.

To start the search, type 9 and press Enter.
The records that matched your search argument are presented on the Search Results List panel. From this panel, you can issue line commands to perform tasks such as copying or updating a record. For more information on line commands, refer to the Tivoli Information Management for z/OS User's Guide.

Use line commands as needed, then type **end** and press Enter.

If you have completed your search of configuration records, on the command line type **init** and press Enter to return to the Primary Options Menu.
This ends the example of quick search for configuration records.

Using Structured Search on Configuration Management Records

In this example, the Quick search? field in your user profile has been set to NO.

Begin structured search at the Primary Options Menu. Type 6 and press Enter.
Searching Configuration Management Records

To limit your search to configuration records, type 3 and press Enter.

To search on data center information, type 1 and press Enter.
Using the configuration inquiry, identify the type of information to be added to the inquiry:

1. Center
2. System
3. Hardware
4. Software
5. Financial
6. Service
7. Model
8. Control

--->

To search on data center description information, type 1 and press Enter.

To search on the data center name, type 1 and press Enter.
To specify the data center name, type **center1** and press Enter.

To start the search, type **se** and press Enter.
The records that matched your search argument are presented on the Search Results List display. From this panel, you can issue line commands to perform tasks such as copying or updating a record. For more information on line commands, refer to the *Tivoli Information Management for z/OS User’s Guide*.

Use line commands as needed, then type **end** and press Enter.

---

**Typical Search Arguments for Configuration Management Records**

This section identifies typical configuration search arguments and different techniques for entering them. Table 6 on page 312 lists examples for both search criteria and arguments.

To use a structured search, the Quick search? field in your profile must be set to NO. Proceed through the panels, making the appropriate selections and entering assisted-entry values. To use a quick search, the Quick search? field in your profile must be set to YES. Enter values on the quick search panels. To use a freeform search, enter keywords on the
SEARCH command or on the argument panel. In some cases, freeform can be combined with quick or structured search to keep record types you are not interested in from being in your search.

In the following table, SE is an abbreviation for the SEARCH command.

<table>
<thead>
<tr>
<th>SEARCH CRITERIA</th>
<th>STRUCTURED SEARCH ARGUMENT</th>
<th>QUICK SEARCH ARGUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify all configuration records.</td>
<td>Select INQUIRY and CONFIGURATION, 6,3,se</td>
<td>Same as structured sequence</td>
</tr>
<tr>
<td>Identify all hardware components.</td>
<td>Select INQUIRY, CONFIGURATION, HARDWARE, and COMPONENT, 6,3,3,1,se</td>
<td>Same as structured sequence</td>
</tr>
<tr>
<td>Retrieve all devices installed last month (August).</td>
<td>6,3,3,1,1,1,1,2, install,argument</td>
<td>Enter SE</td>
</tr>
<tr>
<td></td>
<td>If you use a 2-digit internal year Enter: date/96/08/01 -31</td>
<td>Enter SE</td>
</tr>
<tr>
<td></td>
<td>If you use a 4-digit internal year Enter: date/1996/08/01 -31</td>
<td>Enter SE</td>
</tr>
<tr>
<td>Identify all components at a specific location (stlou).</td>
<td>For hardware: 6,3,3,1,1,7, stlou,se</td>
<td>For hardware: 6,3,3,1,10, stlou,se</td>
</tr>
<tr>
<td></td>
<td>For software: 6,3,4,1,1,4, stlou,se</td>
<td>For software: 6,3,4,1,14, stlou,se</td>
</tr>
<tr>
<td>Identify all programs that have source language of PL/1.</td>
<td>Select INQUIRY, CONFIGURATION, SOFTWARE, COMPONENT, DESCRIPTION LANGUAGE, enter PL1, 6,3,4,1,6,pl1,se</td>
<td>6,3,4,1,6,pl1,se</td>
</tr>
<tr>
<td>Identify all configuration records with a specific contact or owner.</td>
<td>6,3,3,1,3,2, moore, end, 2,1, oper4,2, oper4,se</td>
<td>6,3,3,1,14,moore,, 3,11,oper4,9, oper4,se</td>
</tr>
<tr>
<td>Identify all records that identify Matthews as the contact.</td>
<td>se perc/matthews</td>
<td>Same as structured sequence</td>
</tr>
</tbody>
</table>
This chapter describes the reports you can create using Tivoli Information Management for z/OS data.

**Setting Up Reports** provides a general description of Tivoli Information Management for z/OS report facilities and additional information for MVS/ESA™ users.

The remaining sections describe the standard reports that are available for problem, change, and configuration records. For more information about which Tivoli Information Management for z/OS fields appear in which reports, see the Tivoli Information Management for z/OS Report Fields.

**Setting Up Reports**

You can control the records that are included in a report by building a search argument before you issue the REPORT command, or by building a search argument directly with the REPORT command.

You can run standard reports in either interactive or batch mode. In MVS/ESA, batch-mode reports are started with JCL that uses a TSP, TSX, SRC, or IRC to start Tivoli Information Management for z/OS.

You can direct the report output to a SYSOUT data set, a preallocated file (DDNAME), or a dynamically allocated data set. The output destination is determined by the values in your user profile.

In your user profile, you can provide information about each destination for standard, customized, and PRINT command output. If the destination information in your profile is blank, you are prompted for the output destination each time you choose to produce a report and the first time you select the PRINT command during a session.

In addition to the reports discussed here, you can print any record with the PRINT command, any table panel (including all lines of data) with the PRINT ALL command, and any screen with the ISPF PRINT command.

You can also use the graphics facility to create, display, and print reports in formats such as histograms, line graphs, bar charts, and pie charts, among others. For more information on the graphics facility, refer to the Tivoli Information Management for z/OS Data Reporting User’s Guide.
Output Destinations for MVS/ESA

For OS/390, the following output destination definitions apply:

**SYSOUT**

Identifies the device to be used for the output. If you have either of the following special requirements:

- Advanced Function Printing™
- Printing reports containing mixed data

you must also specify an output descriptor name. For more information about specifying output descriptors in Tivoli Information Management for z/OS, refer to the [Tivoli Information Management for z/OS User's Guide](#). For more information about valid output descriptor names, refer to the MVS/ESA JCL Reference manual.

You can also send output to a remote system node and user ID. For more information, refer to the [Tivoli Information Management for z/OS User's Guide](#).

**DSNAME**

Identifies a data set to receive the output. The data set’s status can be NEW, OLD, or MOD. If MOD is specified and the data set cannot be found, the data set is allocated as NEW. If the disposition is not specified, the data set is allocated as OLD if it exists, or NEW if it cannot be found.

**DDNAME**

Identifies a preallocated file name to receive output. When you use a preallocated file name, the file must have been described by a previously issued TSO ALLOCATE command.

For more information, refer to the [Tivoli Information Management for z/OS User's Guide](#) and the [Tivoli Information Management for z/OS Data Reporting User's Guide](#).

Requesting Reports from the Primary Options Menu

At the Primary Options Menu, type **REPORT** and press Enter.

The Report Entry panel appears. You can request reports from the following report categories:
You can also browse or print a report data set.

<table>
<thead>
<tr>
<th>BLGOWS0O REPORT ENTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify the type of report to be created.</td>
</tr>
<tr>
<td>1. GENERAL........Summary reports for all applications.</td>
</tr>
<tr>
<td>2. PROBLEM.........Problem management reports.</td>
</tr>
<tr>
<td>3. CHANGE..........Change management reports.</td>
</tr>
<tr>
<td>4. CONFIG..........Configuration management reports.</td>
</tr>
<tr>
<td>8. USER RFT........Specify user report format table name.</td>
</tr>
<tr>
<td>10. BROWSE/PRINT.....Browse or print existing report data set.</td>
</tr>
</tbody>
</table>

Choose the appropriate report by typing the item number on the command line and pressing Enter.

For each of these report categories except Browse/Print, you can control the records that appear in a report by varying your search argument. If you do not specify a search argument, the search returns all records in the database that meet the report’s selection criteria. If your search argument results in no matches, a message is displayed and no report processing occurs.

Browse/Print enables you to look at an existing report data set and to print a graphics report that is in an existing report data set.

For a record type to appear in any of these reports, you must be running under a privilege class with display authority for that record type.

The following sections in this chapter provide information on generating reports for different types of records.

- For information on generating reports for Problem Management records, see 316.
- For information on generating reports for Change Management records, see 318.
- For information on generating reports for Configuration Management records, see 321.

For information on general, user RFT, and customized reports, refer to the Tivoli Information Management for z/OS Data Reporting User’s Guide.
Problem Management Reports

To display this panel from the Report Entry panel, type 2 and press Enter.

The following standard reports are available from the Problem Reports panel:
- Periodic Status (option 1)
- Calendar (option 2)
- Assignee (option 3)

A general description of each report type follows.

**Periodic Status Reports**

A periodic status report lists information about the status and schedule of a set of problem records. To get a periodic status report from the Problem Reports panel, type 1 and press Enter.

Before a periodic problem status report is generated, you see the Periodic Problem Status Report panel. If you have not previously specified the values displayed on this panel, Problem Management generates them for you using the current date and the Current period date range field from your profile. The length of each period is initially set at seven days. You can verify the dates shown on this panel or specify new ones.

Only those periods for which you specify dates are included in the periodic status report. Tivoli Information Management for z/OS does not check to make sure that the periods occur in chronological order or do not overlap. Problem records that do not include a date do not appear in the report.

The problem report lists problem records whose entered or closed date falls within the specified range of dates. These problems are then grouped into three sections based on their dates and the problem status:

- **Problems Entered This Period**
  Problems whose date entered falls within the report date range.

- **Problems Closed This Period**
  Problems whose date closed falls within the report date range.
Priority 1 Hold-over Problems

Nonclosed problems, entered prior to the report date range, whose current priority is 1.

In the “Problems Entered This Period” and “Priority 1 Hold-over Problems” sections, the records are sorted by date entered and problem number. In the “Problems Closed This Period” section, the records are sorted by date closed and problem number.

If no records found in the search-results list meet the selection criteria for one of the report selections, the section heading appears followed by a message.

At the end of the report is a summary of totals for the following:
- Open problems in the database, even if they do not appear in the report
- Problems entered during the report date range
- Problems closed during the report date range
- Priority 1 holdover problems listed in the report
- Open problems in the search-results list by individual priority from 1 to 10
- Open problems in the search-results list with priorities of 11 to 99
- Open problems in the search-results list with no assigned priority.

When report processing is completed, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

Calendar Reports

A problem calendar report displays information relating to the dates contained in a set of problem records. In addition, the report shows the problem type, status, and current priority of each problem presented. To get a calendar report from the Problem Reports panel, type 2 and press Enter.

When report processing is completed, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

Assignee Reports

The problem assignee report lists all problems currently assigned to individuals and departments, and unclosed problems not assigned. This report is useful in tracking who is assigned to problems and for making assignments to problems. To get an assignee report from the Problem Reports panel, type 3 and press Enter.

The report extracts, from the records that meet the search criteria, all problems that are assigned, and all unclosed problems that are not assigned. These problems are then grouped into three sections based on their assignment status:

Assigned to Individuals
- Problems that have an assignee name

Assigned to Departments
- Problems that have a department name but no assignee name

Unassigned and Not Closed
- Problems that have no assignee or department name and are not closed.

The report sorts the assignee names and presents each at the top of a new page followed by a list of all problems assigned to that person.
The problem records are sorted by date entered and problem number. For each problem assigned, the report lists a single line of data containing the status, priority, phase, description, and dates and times pertinent to the assignment. A summary is presented at the end of this list.

When all assignees have been listed, the departments are presented in the same manner.

After departments have been listed, all problems that are unassigned and not closed are presented starting on the next page. A single line of the data appears for each problem, followed by a summary. In place of the assignment date and time, this part of the report presents the problem type, the key item affected, the reporter name, and the date a fix is required.

For each section, the summary includes totals of the following categories:

- Problems listed
- Problems by status (initial, open, and closed)
- Problems by individual priorities from 1 to 10
- Problems with priorities of 11 to 99
- Problems with no assigned priority.

It is possible that no records meet the selection criteria for a particular section. When this occurs, the report section is simply bypassed.

When report processing is completed, the system displays the panel on which you entered the REPORT command.

### Change Management Reports

To display this panel from the Report Entry panel, type 3 and press Enter.

The following standard reports are available from the Change Reports panel:

- Periodic Status (option 1)
- Calendar (option 2)
- Approver Summary (option 3)
- Approver Detail (option 4)
- Changes With Related Activities (option 5, Change Activities)
A general description of each report type follows.

**Periodic Status Report**
A periodic status report lists information about the status and schedule of a set of change records. To get a periodic status report from the Change Reports panel, type 1 and press Enter.

Before a periodic status report is generated, the Periodic Change Status Report panel is displayed. If you have not previously specified the values displayed on this panel, Change Management generates them for you using the Current date and the Previous period date range, Current period date range and Next period date range fields in your profile. The length of each period is initially set at seven days in your profile. You can verify the dates shown on this panel or specify new ones.

Only those periods for which you specify dates are included in the periodic status report. Tivoli Information Management for z/OS does not perform any checks to ensure that the periods occur in chronological order or that they do not overlap.

When you generate the periodic status report, the change records whose required dates fall within the specified periods are extracted from the database, and information about them appears in the report. Change records that do not specify a date required are not included in the report.

When the report processing is completed, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

**Calendar Report**
A calendar report displays information relating to the dates contained in a set of change and activity records. To get a calendar report from the Change Reports panel, type 2 and press Enter.

The change type, status, and current priority are presented for change records, and the parent change number, status, and current priority are presented for activity records. Only changes and activities that have a date in the Date required field are presented in the report.

When the report processing is completed, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

**Approver Summary Report**
A change approver summary report provides change approvers with a summary of those changes still requiring their approval. To get this report from the Change Reports panel, type 3 and press Enter.

The change approver summary report lists all of the change records that are not closed and for which approval is pending for one or more privilege classes. These records are listed by privilege class name and are sorted by the date on which they are required.

When the report processing is completed, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.
Approver Detail Report

A change approver detail report provides change approvers with a detailed description of those changes requiring their approval. To get an approver summary report from the Change Reports panel, type 4 and press Enter.

The selection criteria used to generate the change approver summary report is used to generate this report, but the changes for each approver are sorted by change number. If no records meet the criteria in the search argument, a message is displayed and no report is generated.

Change close information is not included in a change approver detail report.

When the report processing is completed, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

Changes with Related Activities Report

A changes with related activities report provides a list of the relationships between a set of changes and their associated activities. Such a report can help you to track and coordinate the changes. To get this report from the Change Reports panel, type 5 and press Enter.

Of the records that meet the search criteria, only those that have associated activities are listed. The changes and their activities are sorted by current status and record ID. A change record is identified by a horizontal line before and after it. The activities that are listed are obtained directly from the database, rather than from the records that meet the search criteria. As a result, their presence in the report cannot be controlled by a search argument.

When report processing is completed, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

Change and Activity Schedule Report

A change and activity schedule report provides you with a list of all unclosed changes and activities, along with their prerequisites and corequisites. Such a report can help you to schedule changes. To get this report from the Change Reports panel, type 6 and press Enter.

When the report is generated, the changes and activities are sorted into three categories:

Not scheduled

Changes and activities that are not closed and have no planned start date. They are sorted by date required and record ID.

Scheduled but not started

Changes and activities that are not closed, have a planned start date, but do not have an actual start date. They are sorted by planned start date and record ID.

Started but not completed

Changes and activities that are not closed, but have an actual start date. They are sorted by planned end date and record ID.
If no records meet the selection criteria for a particular section, that section of the report is simply bypassed. When report processing is completed, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

### Configuration Management Reports

To display this panel from the Report Entry panel, type 4 and press Enter.

```
+ BLG0W040 ------------ CONFIGURATION REPORTS ------------- 1 OF 1-+
| |
| USE...Identify the type of configuration report to be produced. |
| 1.LOCATION..............Summary of data by location. |
| 2.COMPONENT FEATURES....Components with related features. |
| 3.HARDWARE MAP.........Single line per entry map of hardware. |
| 4.SOFTWARE MAP..........Single line per entry map of software. |
| 5FEATURE REFERENCES....Components for a specified feature. |
| 6.EXTRACT DIAGRAM DATA..Create data set (input to DRAW command). |
| |
| +-------------------------- SELECT ITEM ---------------------------+ ===>
```

The following standard reports are available from the Configuration Reports panel:
- Inventory by Location (option 1, Location)
- Components with Related Features (option 2, Component Features)
- Hardware Configuration Map (option 3, Hardware Map)
- Software Configuration Map (option 4, Software Map)
- Components with Specified Features (option 5, Feature References)
- Configuration Subdiagram (option 6, Subdiagram).

In addition to the search criteria that you can specify as your search argument, all configuration reports have their own record selection criteria. These criteria are based on record type and, in some cases, on the contents of specific fields. As a result, the number of records found by the search argument, as indicated on the first page of the report, might not be the same as the number of records included in the report. The number of records included in the report and the number of records that satisfy the search criteria depend on the type of report and the specified search argument. The selection criteria for each type of report are defined in the detailed report descriptions that follow.

It is possible that none of the records returned by a search meet the selection criteria for a particular report. This can happen for the following reasons:
- A search argument is too restrictive.
- Your privilege class does not have display authority for the required records.
- There are no records in the database that meet the criteria for the report.

In these situations, a message stating that no records met the selection criteria for the report appears on the first and only page of the report. The same message is also displayed on your terminal, instead of a message stating that the search was successful.

A general description of each report type follows.
Inventory-by-Location Report

An inventory-by-location report provides a list of hardware and software components by location. To get this report from the Configuration Reports panel, type 1 and press Enter.

This report extracts all hardware and software components from the records that meet the search criteria, and groups them by location code. The location codes are sorted and each is presented at the top of a new page followed by a list of all components assigned that location code. For each location code, all hardware components are listed in one section of the report followed by all software components. Within locations, the components are sorted by component name (record ID). Components that are not assigned a location code are listed at the end of the report.

It is possible that no records meet the selection criteria for a particular hardware or software section. In this case, that section of the report is bypassed.

When report processing is completed, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

Components-with-Related-Features Report

The components-with-related-features report provides a summary list of hardware and software components and all their associated features. To get this report from the Configuration Reports panel, type 2 and press Enter.

Of the records that meet the search criteria, only those hardware and software components that have associated features are included in the report. The components and features are sorted by component name (record ID) and a single line of data is displayed for each component.

It is possible that no records meet the selection criteria for a particular hardware or software section of the report. In this case, those sections of the report are bypassed.

All of the features associated with a component are listed on the lines immediately following the component data. Because the features are obtained directly from the database rather than from the records that met the search criteria, you cannot use a search argument to control their presence in the report by the search argument.

The component and feature records have common headings, with a few exceptions. The Record ID, Location code, Type number, and Model number fields for the component records, and the Feature name, Record ID, and Feature number fields for the feature records have shared headings, respectively.

When report processing is completed, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

Hardware Configuration Map Report

The hardware configuration map report presents a layout of the hardware components in hierarchical order based on connectivity. To get this report from the Configuration Reports panel, type 3 and press Enter.

From the records that meet the search criteria, the report extracts all the hardware components that do not have an upward connection, and sorts them by component name.
These components are considered to be the root components, and a hierarchical map is generated for each. Hardware root components are usually CPUs, but they can be any device type.

Each map begins at the top of a new page. For each component that is listed, there is a single line of summary data. The level field (labeled LEVL) identifies the hierarchical level of each component in the map. The root component is assigned the number 1, and the number 2 is assigned to each component that is connected directly to the root component. Each component connected successively further away from the root component is assigned a successively higher level number. The components at level 1 of the map are sorted by component name. The components at each succeeding level are presented in the order that they appear in the database.

Because all of the components appearing in the map, except for the root component, are obtained directly from the database rather than from the records that meet the search criteria, you cannot control their presence in the report with the search argument.

If a component is connected to more than one component, it is listed in its proper place in the hierarchy in each path. For example, if a control unit with a two-channel switch is connected to two channels, that control unit is listed twice in the map report, once under each channel to which it is connected.

When report processing is complete, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

### Software Configuration Map Report

As with a hardware configuration map report, a software configuration map report provides a layout of the software components in hierarchical order based on connectivity. To get this report from the Configuration Reports panel, type 4 and press Enter.

The following are the differences between hardware and software configuration map reports:

- The Program type field (TYPE) is included in a software configuration map report.
- The Generic device, Device type, Device model, and the Device serial number fields of hardware configuration map reports are replaced in the software configuration map report by the Version, Release, Modification, and Fix level fields.

When report processing is complete, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

### Components-with-Specified-Features Report

A components-with-specified-features report provides a summary of model hardware, hardware, model software, and software features, and of the components that have those features. To get this report from the Configuration Reports panel, type 5 and press Enter.

From the records that meet the search criteria, the report extracts only feature records. The feature records are sorted by feature name, and a single line of data is listed for each feature followed by a single line for the component that has that feature. For model feature records, a single line of data for each component that refers to the model feature through a model link is also listed.
It is possible that no records meet the selection criteria for the model hardware, hardware, model software or software section of the report. In this case, the section of the report is bypassed.

The component, or model component and linked components, associated with a feature are listed on the lines immediately following the feature data. Because the components are obtained directly from the database rather than from the records that meet the search criteria, you cannot use the search argument to control their presence in the report by the search argument.

The model component, model feature, component record, and feature records have common headings, with a few exceptions. For model component and component records, the Record ID, Location code, Model type, and Model number fields have shared headings. For the model feature and feature records, the Record ID and Feature number fields have shared headings.

When report processing is complete, Tivoli Information Management for z/OS displays the panel on which you entered the REPORT command.

**Configuration Subdiagram Report**

See “Creating and Drawing Configuration Diagrams” on page 223 for a description and an example of a configuration subdiagram.
The figures on the following pages provide a cross-reference of reported fields and the reports that contain them. They present fields for the following record types:

- Privilege class
- Problem management
- Change management
- Hardware component
- Hardware feature
- Hardware connection
- Hardware subcomponent
- Software component
- Software feature
- Software connection
- Hardware financial
- Software financial
- Hardware model component
- Hardware model feature
- Software model component
- Hardware model subcomponent
- Software model feature
- Data center
- System
- Service

Reported fields are organized by record type; then they are grouped in the following categories:

- Description – directly describes the record
- Dates – dates and times events occurred and names of persons responsible for them occurring
- Authorities – all record authorities
- Other – additional related information

Reports are identified by numbers across the top of the figure that are explained below each figure. The numbers are used consistently throughout the appendix to allow you to see other record types included in a given report.

The figures show at a glance all possible reports that provide various fields. You can make a knowledgeable selection of a report type by choosing the combination of fields you are interested in seeing.
### Privilege Class Management

**Table 7. Privilege Class Report by Field**

<table>
<thead>
<tr>
<th>DESCRIPTION FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class name/ID</td>
<td>1</td>
</tr>
<tr>
<td>First user ID</td>
<td>1</td>
</tr>
<tr>
<td>Contact name</td>
<td>1</td>
</tr>
<tr>
<td><strong>AUTHORITY FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>entry, update, delete, and display</td>
<td>1</td>
</tr>
<tr>
<td>Privilege Class</td>
<td>1</td>
</tr>
<tr>
<td>entry, update, delete, and display</td>
<td>1</td>
</tr>
<tr>
<td>SRC</td>
<td>1</td>
</tr>
<tr>
<td>entry, update, and delete</td>
<td>1</td>
</tr>
<tr>
<td>DBADMIN</td>
<td>1</td>
</tr>
<tr>
<td>TSD Bridge Cleanup</td>
<td>1</td>
</tr>
<tr>
<td>Universal Partition Access</td>
<td>1</td>
</tr>
<tr>
<td>Problem</td>
<td>1</td>
</tr>
<tr>
<td>entry, update, delete, display</td>
<td>1</td>
</tr>
<tr>
<td>assignment, and close</td>
<td>1</td>
</tr>
<tr>
<td>Change</td>
<td>1</td>
</tr>
<tr>
<td>entry, update, delete, display</td>
<td>1</td>
</tr>
<tr>
<td>assignment, and close</td>
<td>1</td>
</tr>
<tr>
<td>Configuration</td>
<td>1</td>
</tr>
<tr>
<td>entry, update, delete, and display</td>
<td>1</td>
</tr>
<tr>
<td>Finance</td>
<td>1</td>
</tr>
<tr>
<td>entry, update, delete, and display</td>
<td>1</td>
</tr>
<tr>
<td>Rules</td>
<td>1</td>
</tr>
<tr>
<td>entry, update, delete, and display</td>
<td>1</td>
</tr>
<tr>
<td>People</td>
<td>1</td>
</tr>
<tr>
<td>PMF</td>
<td>1</td>
</tr>
<tr>
<td>panel update</td>
<td>1</td>
</tr>
<tr>
<td>dictionary display</td>
<td>1</td>
</tr>
<tr>
<td>dictionary update</td>
<td>1</td>
</tr>
<tr>
<td>panel copy</td>
<td>1</td>
</tr>
<tr>
<td>panel delete</td>
<td>1</td>
</tr>
<tr>
<td>panel list</td>
<td>1</td>
</tr>
<tr>
<td>PMF reports</td>
<td>1</td>
</tr>
</tbody>
</table>

**Report:** 1 = Line Summary Report

### Problem Management

**Table 8. Problem Management Reports by Field**

<table>
<thead>
<tr>
<th>DESCRIPTION FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class name/ID</td>
<td></td>
</tr>
<tr>
<td>First user ID</td>
<td></td>
</tr>
<tr>
<td>Contact name</td>
<td></td>
</tr>
<tr>
<td><strong>AUTHORITY FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>entry, update, delete, and display</td>
<td></td>
</tr>
<tr>
<td>Privilege Class</td>
<td></td>
</tr>
<tr>
<td>entry, update, delete, and display</td>
<td></td>
</tr>
<tr>
<td>SRC</td>
<td></td>
</tr>
<tr>
<td>entry, update, and delete</td>
<td></td>
</tr>
<tr>
<td>DBADMIN</td>
<td></td>
</tr>
<tr>
<td>TSD Bridge Cleanup</td>
<td></td>
</tr>
<tr>
<td>Universal Partition Access</td>
<td></td>
</tr>
<tr>
<td>Problem</td>
<td></td>
</tr>
<tr>
<td>entry, update, delete, display</td>
<td></td>
</tr>
<tr>
<td>assignment, and close</td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td></td>
</tr>
<tr>
<td>entry, update, delete, display</td>
<td></td>
</tr>
<tr>
<td>assignment, and close</td>
<td></td>
</tr>
<tr>
<td>Configuration</td>
<td></td>
</tr>
<tr>
<td>entry, update, delete, and display</td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td></td>
</tr>
<tr>
<td>entry, update, delete, and display</td>
<td></td>
</tr>
<tr>
<td>Rules</td>
<td></td>
</tr>
<tr>
<td>entry, update, delete, and display</td>
<td></td>
</tr>
<tr>
<td>People</td>
<td></td>
</tr>
<tr>
<td>PMF</td>
<td></td>
</tr>
<tr>
<td>panel update</td>
<td></td>
</tr>
<tr>
<td>dictionary display</td>
<td></td>
</tr>
<tr>
<td>dictionary update</td>
<td></td>
</tr>
<tr>
<td>panel copy</td>
<td></td>
</tr>
<tr>
<td>panel delete</td>
<td></td>
</tr>
<tr>
<td>panel list</td>
<td></td>
</tr>
<tr>
<td>PMF reports</td>
<td></td>
</tr>
</tbody>
</table>

Version 7.1
Table 8. Problem Management Reports by Field (continued)

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem number/ID</td>
<td>1,2,3,4,5,6,7,8</td>
</tr>
<tr>
<td>User form number</td>
<td>1</td>
</tr>
<tr>
<td>Type</td>
<td>1,8</td>
</tr>
<tr>
<td>Assignment number</td>
<td>6,7</td>
</tr>
<tr>
<td>Description</td>
<td>3,4,5,6,7,8</td>
</tr>
<tr>
<td>Key item affected</td>
<td>1,2,3,4,5,8</td>
</tr>
<tr>
<td>System impact</td>
<td>3,4,5</td>
</tr>
<tr>
<td>Current status</td>
<td>1,2,3,6,7,8</td>
</tr>
<tr>
<td>Current priority</td>
<td>1,2,3,4,5,6,7,8</td>
</tr>
<tr>
<td>Current phase</td>
<td>1,3,5,6,7,8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DATES FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date entered</td>
<td>1,2,3,4,5,6,7,8</td>
</tr>
<tr>
<td>Reported by</td>
<td>1,8</td>
</tr>
<tr>
<td>Date occurred</td>
<td>2</td>
</tr>
<tr>
<td>Date opened</td>
<td>2</td>
</tr>
<tr>
<td>Date assigned</td>
<td>1,2,3,5,6,7</td>
</tr>
<tr>
<td>Time assigned</td>
<td>6,7</td>
</tr>
<tr>
<td>Assignee name</td>
<td>1,3,5,6</td>
</tr>
<tr>
<td>Assigned department</td>
<td>7</td>
</tr>
<tr>
<td>Date started</td>
<td>2</td>
</tr>
<tr>
<td>Date finished</td>
<td>2,6,7</td>
</tr>
<tr>
<td>Time finished</td>
<td>6,7</td>
</tr>
<tr>
<td>Date fix required</td>
<td>2,8</td>
</tr>
<tr>
<td>Date closed</td>
<td>2,4</td>
</tr>
<tr>
<td>Resolved by</td>
<td>4</td>
</tr>
<tr>
<td>Date reporter notified</td>
<td>2</td>
</tr>
<tr>
<td>Date last altered</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OTHER FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause code</td>
<td>4</td>
</tr>
<tr>
<td>Duplicate count</td>
<td>4</td>
</tr>
<tr>
<td>Fix change number/ID</td>
<td>1</td>
</tr>
<tr>
<td>Bypass available</td>
<td>5,6,7</td>
</tr>
<tr>
<td>Total problems</td>
<td>6,7,8</td>
</tr>
<tr>
<td>Total by current status</td>
<td>6,7,8</td>
</tr>
<tr>
<td>Total by priority</td>
<td>5,6,7,8</td>
</tr>
<tr>
<td>Total entered this period</td>
<td>5</td>
</tr>
<tr>
<td>Total opened problems</td>
<td>5</td>
</tr>
<tr>
<td>Total closed this period</td>
<td>5</td>
</tr>
<tr>
<td>Total priority 1 holdover</td>
<td>5</td>
</tr>
</tbody>
</table>
Table 8. Problem Management Reports by Field (continued)

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report:</td>
<td></td>
</tr>
<tr>
<td>1 = Line Summary Report</td>
<td></td>
</tr>
<tr>
<td>2 = Problem Calendar Report</td>
<td></td>
</tr>
<tr>
<td>3 = Periodic Problem Status Report (entered)</td>
<td></td>
</tr>
<tr>
<td>4 = Periodic Problem Status Report (closed)</td>
<td></td>
</tr>
<tr>
<td>5 = Periodic Problem Status Report (priority 1 holdover)</td>
<td></td>
</tr>
<tr>
<td>6 = Problem Assignee Report (assignee)</td>
<td></td>
</tr>
<tr>
<td>7 = Problem Assignee Report (department)</td>
<td></td>
</tr>
<tr>
<td>8 = Problem Assignee Report (not assigned)</td>
<td></td>
</tr>
</tbody>
</table>

Change Management

Table 9. Change Management Reports by (Change) Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION FIELDS</td>
<td></td>
</tr>
<tr>
<td>Change number/ID</td>
<td>1,9,10,11,12,13</td>
</tr>
<tr>
<td>Type</td>
<td>1,9,10,11,12,13</td>
</tr>
<tr>
<td>Description</td>
<td>9,10,12,13</td>
</tr>
<tr>
<td>Key item affected</td>
<td>1,9,13</td>
</tr>
<tr>
<td>Number of activities</td>
<td>9,12</td>
</tr>
<tr>
<td>Current status</td>
<td>1,10,11,13</td>
</tr>
<tr>
<td>Approval status</td>
<td>1,10,13</td>
</tr>
<tr>
<td>Current priority</td>
<td>1,9,10,11,13</td>
</tr>
<tr>
<td>Current phase</td>
<td>1,9,10,13</td>
</tr>
<tr>
<td>DATE FIELDS</td>
<td></td>
</tr>
<tr>
<td>Date entered</td>
<td>11</td>
</tr>
<tr>
<td>Requested by</td>
<td>1,9</td>
</tr>
<tr>
<td>Date assigned</td>
<td>1,11,12</td>
</tr>
<tr>
<td>Assignee name</td>
<td>1,9,11,12</td>
</tr>
<tr>
<td>Date required</td>
<td>1,9,10,11,12,13</td>
</tr>
<tr>
<td>Planned start date</td>
<td>9,10,11</td>
</tr>
<tr>
<td>Planned end date</td>
<td>1,9,10,11</td>
</tr>
<tr>
<td>Actual start date</td>
<td>9,10,11</td>
</tr>
<tr>
<td>Actual end date</td>
<td>10,11</td>
</tr>
<tr>
<td>Date requester notified</td>
<td>11</td>
</tr>
<tr>
<td>Date last altered</td>
<td>11</td>
</tr>
<tr>
<td>OTHER FIELDS</td>
<td></td>
</tr>
<tr>
<td>Corequisites</td>
<td>9</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>9</td>
</tr>
</tbody>
</table>
Table 9. Change Management Reports by (Change) Field (continued)

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated effort</td>
<td>9,10,11</td>
</tr>
<tr>
<td>Actual effort</td>
<td>10</td>
</tr>
<tr>
<td>Estimated duration</td>
<td>12</td>
</tr>
<tr>
<td>Risk assessment</td>
<td>9,10,11,12</td>
</tr>
<tr>
<td>Actual impact</td>
<td>10,12</td>
</tr>
<tr>
<td>Pending classes</td>
<td>13</td>
</tr>
<tr>
<td>Rejected classes</td>
<td>12</td>
</tr>
<tr>
<td>Approver privilege class</td>
<td>12</td>
</tr>
<tr>
<td>Contact name</td>
<td>12</td>
</tr>
<tr>
<td>Contact department</td>
<td>12</td>
</tr>
<tr>
<td>Contact phone</td>
<td>12</td>
</tr>
<tr>
<td>Contact location code</td>
<td>12</td>
</tr>
<tr>
<td>Total changes</td>
<td>13</td>
</tr>
<tr>
<td>Total by change status</td>
<td>13</td>
</tr>
<tr>
<td>Total by approver status</td>
<td>13</td>
</tr>
</tbody>
</table>

Report:
1 = Line Summary Report
9 = Change and Activity Schedule Report
10 = Change With Related Activities Report
11 = Change Calendar Report
12 = Change Approver Summary Report
13 = Periodic Change Status Report

Activity

Table 10. Change Management Reports by (Activity) Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION FIELDS</td>
<td></td>
</tr>
<tr>
<td>Activity number/ID</td>
<td>1,9,10,11</td>
</tr>
<tr>
<td>Name</td>
<td>1,9</td>
</tr>
<tr>
<td>Type</td>
<td>1,9,10</td>
</tr>
<tr>
<td>Description</td>
<td>9,10</td>
</tr>
<tr>
<td>Key item affected</td>
<td>9</td>
</tr>
<tr>
<td>Parent change</td>
<td>1,9,11</td>
</tr>
<tr>
<td>Current status</td>
<td>1,10,11</td>
</tr>
<tr>
<td>Current priority</td>
<td>1,9,11</td>
</tr>
<tr>
<td>Current phase</td>
<td>1,9</td>
</tr>
</tbody>
</table>

DATE FIELDS

Date entered | 11 |
Date required | 1,9,10,11 |
### Configuration Hardware Component

#### Table 11. Configuration Management Reports: Hardware Component by Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMPONENT FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Name/Record ID</td>
<td>1,14,15,16,18</td>
</tr>
<tr>
<td>Generic device</td>
<td>1,14,15,16,18</td>
</tr>
<tr>
<td>Device type and model</td>
<td>1,14,15,16,18</td>
</tr>
<tr>
<td>Device serial number</td>
<td>1,14,15,16,18</td>
</tr>
<tr>
<td>Location code</td>
<td>1,14,15,16,18</td>
</tr>
<tr>
<td>Status</td>
<td>1,14,15,16,18</td>
</tr>
<tr>
<td>Date of status</td>
<td>1,14,16,18</td>
</tr>
<tr>
<td><strong>OTHER FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Model link ID</td>
<td>1</td>
</tr>
<tr>
<td>Date shipped</td>
<td>1</td>
</tr>
<tr>
<td>System record ID</td>
<td>1,15,4</td>
</tr>
<tr>
<td>Financial record ID</td>
<td>1,15,16,18</td>
</tr>
<tr>
<td>Owner</td>
<td>1,15,4</td>
</tr>
<tr>
<td>Description</td>
<td>14,6</td>
</tr>
</tbody>
</table>

---

*Table 10. Change Management Reports by (Activity) Field (continued)*

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requested by</td>
<td>1,9</td>
</tr>
<tr>
<td>Date assigned</td>
<td>1,11</td>
</tr>
<tr>
<td>Assignee name</td>
<td>1,9,10,11</td>
</tr>
<tr>
<td>Planned start date</td>
<td>9,10,11</td>
</tr>
<tr>
<td>Planned end date</td>
<td>1,9,10,11</td>
</tr>
<tr>
<td>Actual start date</td>
<td>10,11</td>
</tr>
<tr>
<td>Actual end date</td>
<td>9,10,11</td>
</tr>
<tr>
<td>Date requester notified</td>
<td>11</td>
</tr>
<tr>
<td>Date last altered</td>
<td>11</td>
</tr>
<tr>
<td><strong>OTHER FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Corequisites</td>
<td>9</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>9</td>
</tr>
<tr>
<td>Risk assessment</td>
<td>10</td>
</tr>
<tr>
<td>Actual impact</td>
<td>10</td>
</tr>
<tr>
<td>Estimated effort</td>
<td>10</td>
</tr>
<tr>
<td>Actual effort</td>
<td>10</td>
</tr>
<tr>
<td>Actual impact</td>
<td>10</td>
</tr>
</tbody>
</table>

*Report:*

- 1 = Line Summary Report
- 9 = Change and Activity Schedule Report
- 10 = Change With Related Activities Report
- 11 = Change Calendar Report
Table 11. Configuration Management Reports: Hardware Component by Field (continued)

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display class</td>
<td>15</td>
</tr>
<tr>
<td>Center record ID</td>
<td>15</td>
</tr>
<tr>
<td>Service record ID</td>
<td>15</td>
</tr>
<tr>
<td>Map Level</td>
<td>15</td>
</tr>
</tbody>
</table>

Report:

1 = Line Summary Report
14 = Components with Related Features Report
15 = Hardware Configuration Map Report
16 = Inventory by Location Report
18 = Components with Specified Features Report

Configuration Hardware Connection

Table 12. Configuration Management Reports: Hardware Connection by Field

<table>
<thead>
<tr>
<th>CONNECTION FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record ID</td>
<td>1</td>
</tr>
<tr>
<td>Component from</td>
<td>1</td>
</tr>
<tr>
<td>Component to</td>
<td>1</td>
</tr>
<tr>
<td>Generic device to</td>
<td>1</td>
</tr>
<tr>
<td>Date from</td>
<td>1</td>
</tr>
<tr>
<td>Date to</td>
<td>1</td>
</tr>
<tr>
<td>Type</td>
<td>1</td>
</tr>
<tr>
<td>Status</td>
<td>1</td>
</tr>
<tr>
<td>Device address</td>
<td>1</td>
</tr>
<tr>
<td>Shift number</td>
<td>1</td>
</tr>
<tr>
<td>Path ID</td>
<td>1</td>
</tr>
</tbody>
</table>

Report:

1 = Line Summary Report

Configuration Hardware Feature

Table 13. Configuration Management Reports: Hardware Feature by Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEATURE FIELDS</td>
<td></td>
</tr>
<tr>
<td>Record ID</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Name</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Number</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Type</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Serial number</td>
<td>1,14</td>
</tr>
<tr>
<td>Description</td>
<td>14,18</td>
</tr>
</tbody>
</table>
Table 13. Configuration Management Reports: Hardware Feature by Field (continued)

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Date of status</td>
<td>1,14,18</td>
</tr>
</tbody>
</table>

OTHER FIELDS

| Parent component ID         | 1         |
| Financial record ID         | 1,14,18   |

Report:

1 = Line Summary Report
14 = Components with Related Features Report
18 = Components with Specified Features Report

Configuration Hardware Subcomponent

Table 14. Configuration Management Reports: Hardware Subcomponent by Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBCOMPONENT FIELDS</td>
<td></td>
</tr>
<tr>
<td>Record ID</td>
<td>1,14</td>
</tr>
<tr>
<td>Type</td>
<td>1,14</td>
</tr>
<tr>
<td>Serial number</td>
<td>1,14</td>
</tr>
<tr>
<td>Location code</td>
<td>1,14</td>
</tr>
<tr>
<td>Status</td>
<td>1,14</td>
</tr>
<tr>
<td>Date of status</td>
<td>1,14</td>
</tr>
</tbody>
</table>

OTHER FIELDS

| Hardware link ID            | 1         |
| Financial record ID         | 1,14      |
| Owner                       | 1         |
| Description                 | 2         |

Report:

1 = Line Summary Report
14 = Components with Related Features Report

Configuration Model Model Hardware Component

Table 15. Configuration Management Reports: Model Hardware Component by Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPONENT FIELDS</td>
<td></td>
</tr>
</tbody>
</table>
### Table 15. Configuration Management Reports: Model Hardware Component by Field (continued)

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name/Record ID</td>
<td>1,18</td>
</tr>
<tr>
<td>Generic device</td>
<td>1,18</td>
</tr>
<tr>
<td>Device type and model</td>
<td>1,18</td>
</tr>
<tr>
<td>Status</td>
<td>1,18</td>
</tr>
<tr>
<td>Date of status</td>
<td>1,18</td>
</tr>
</tbody>
</table>

**OTHER FIELDS**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Name</td>
<td>1</td>
</tr>
<tr>
<td>System record ID</td>
<td>1</td>
</tr>
<tr>
<td>Financial record ID</td>
<td>1</td>
</tr>
<tr>
<td>Owner</td>
<td>1,18</td>
</tr>
<tr>
<td>Description</td>
<td>18</td>
</tr>
</tbody>
</table>

Report:

1 = Line Summary Report
18 = Components with Specified Features Report

---

**Configuration Model Hardware Feature**

### Table 16. Configuration Management Reports: Model Hardware Feature by Field

<table>
<thead>
<tr>
<th>FEATURES FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record ID</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Type</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Number</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Name</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Storage Class</td>
<td>1</td>
</tr>
<tr>
<td>Status</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Date of status</td>
<td>1,14,18</td>
</tr>
</tbody>
</table>

**OTHER FIELDS**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact name</td>
<td>1</td>
</tr>
<tr>
<td>Parent Component ID</td>
<td>1</td>
</tr>
<tr>
<td>Financial record ID</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Owner</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>14,18</td>
</tr>
</tbody>
</table>

Report:

1 = Line Summary Report
14 = Components with Related Features Report
18 = Components with Specified Features Report
### Configuration Model Hardware Subcomponent

Table 17. Model Hardware Subcomponent by Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUBCOMPONENT FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Record ID</td>
<td>1</td>
</tr>
<tr>
<td>Type</td>
<td>1</td>
</tr>
<tr>
<td>Status</td>
<td>1</td>
</tr>
<tr>
<td>Date of status</td>
<td>1</td>
</tr>
<tr>
<td><strong>OTHER FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Model component link</td>
<td>1</td>
</tr>
<tr>
<td>Contact name</td>
<td>1</td>
</tr>
<tr>
<td>System record ID</td>
<td>1</td>
</tr>
<tr>
<td>Financial record ID</td>
<td>1</td>
</tr>
<tr>
<td>Owner</td>
<td>1</td>
</tr>
</tbody>
</table>

Report: 1 = Line Summary Report

### Configuration Software Component

Table 18. Configuration Management Reports: Software Component by Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMPONENT FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Name/Record ID</td>
<td>1,14,16,17,18</td>
</tr>
<tr>
<td>Program type</td>
<td>1,14,16,17,18</td>
</tr>
<tr>
<td>Version</td>
<td>1,14,16,17,18</td>
</tr>
<tr>
<td>Release level</td>
<td>1,14,16,17,18</td>
</tr>
<tr>
<td>Modification level</td>
<td>1,14,16,17,18</td>
</tr>
<tr>
<td>Source language</td>
<td>1,4</td>
</tr>
<tr>
<td>Execution type</td>
<td>1</td>
</tr>
<tr>
<td>Fix level</td>
<td>1,14,16,17,18</td>
</tr>
<tr>
<td>Status</td>
<td>1,14,16,17,18</td>
</tr>
<tr>
<td>Date of status</td>
<td>1,14,16,18</td>
</tr>
<tr>
<td><strong>OTHER FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Financial record ID</td>
<td>1,14,16,17,18</td>
</tr>
<tr>
<td>Model link ID</td>
<td>1</td>
</tr>
<tr>
<td>Owner</td>
<td>1,16,17</td>
</tr>
<tr>
<td>Location code</td>
<td>1,14,16,17</td>
</tr>
<tr>
<td>Description</td>
<td>1,14,17</td>
</tr>
<tr>
<td>System record ID</td>
<td>16,17</td>
</tr>
<tr>
<td>Vendor component ID</td>
<td>4</td>
</tr>
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</table>
Table 18. Configuration Management Reports: Software Component by Field (continued)

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map level</td>
<td>4</td>
</tr>
<tr>
<td>Display class</td>
<td>4</td>
</tr>
<tr>
<td>Center record ID</td>
<td>4</td>
</tr>
<tr>
<td>Service record ID</td>
<td>4</td>
</tr>
</tbody>
</table>

Report:
1 = Line Summary Report
14 = Components with Related Features Report
16 = Inventory by Location Report
17 = Software Configuration Map Report
18 = Component with Specified Features Report

Configuration Software Connection

Table 19. Configuration Management Reports: Software Connection by Field

<table>
<thead>
<tr>
<th>CONNECTION FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record ID</td>
<td>1</td>
</tr>
<tr>
<td>Component from</td>
<td>1</td>
</tr>
<tr>
<td>Component to</td>
<td>1</td>
</tr>
<tr>
<td>Generic device to</td>
<td>1</td>
</tr>
<tr>
<td>Date from</td>
<td>1</td>
</tr>
<tr>
<td>Date to</td>
<td>1</td>
</tr>
<tr>
<td>Type</td>
<td>1</td>
</tr>
<tr>
<td>Status</td>
<td>1</td>
</tr>
<tr>
<td>Device address</td>
<td>1</td>
</tr>
<tr>
<td>Shift number</td>
<td>1</td>
</tr>
</tbody>
</table>

Report:
1 = Line Summary Report

Configuration Software Feature

Table 20. Configuration Management Reports: Software Feature by Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEATURE FIELDS</td>
<td></td>
</tr>
<tr>
<td>Record ID</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Name</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Type</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Version</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Release level</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Modification level</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Fix level</td>
<td>1,14,18</td>
</tr>
</tbody>
</table>
Table 20. Configuration Management Reports: Software Feature by Field (continued)

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>14,18</td>
</tr>
<tr>
<td>Status</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Date of status</td>
<td>1,14,18</td>
</tr>
</tbody>
</table>

**OTHER FIELDS**

<table>
<thead>
<tr>
<th>Field</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent component ID</td>
<td>1</td>
</tr>
<tr>
<td>Financial record ID</td>
<td>1,14,18</td>
</tr>
</tbody>
</table>

Report:
1 = Line Summary Report
14 = Components with Related Features Report
18 = Components with Specified Features Report

---

Configuration Model Software Component

Table 21. Configuration Management Reports: Model Software Component by Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPONENT FIELDS</td>
<td></td>
</tr>
<tr>
<td>Record ID name</td>
<td>1,18</td>
</tr>
<tr>
<td>Program type</td>
<td>1,18</td>
</tr>
<tr>
<td>Release level</td>
<td>1,18</td>
</tr>
<tr>
<td>Modification level</td>
<td>1,18</td>
</tr>
<tr>
<td>Fix level</td>
<td>1,18</td>
</tr>
<tr>
<td>Version</td>
<td>1,18</td>
</tr>
<tr>
<td>Source language</td>
<td>1</td>
</tr>
<tr>
<td>Execution type</td>
<td>1</td>
</tr>
<tr>
<td>Status</td>
<td>1,18</td>
</tr>
<tr>
<td>Date of status</td>
<td>1,18</td>
</tr>
</tbody>
</table>

**OTHER FIELDS**

<table>
<thead>
<tr>
<th>Field</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial record ID</td>
<td>1,18</td>
</tr>
<tr>
<td>Owner</td>
<td>1</td>
</tr>
<tr>
<td>Description</td>
<td>1</td>
</tr>
</tbody>
</table>

Report:
1 = Line Summary Report
18 = Components with Specified Features Report
### Configuration Model Software Feature

**Table 22. Configuration Management Reports: Model Software Feature by Field**

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FEATURE FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Record ID</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Type</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Version</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Release level</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Modification level</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Storage class</td>
<td>1</td>
</tr>
<tr>
<td>Name</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Status</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Date of status</td>
<td>1,14,18</td>
</tr>
<tr>
<td><strong>OTHER FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Vendor component number</td>
<td>1</td>
</tr>
<tr>
<td>Parent component ID</td>
<td>1</td>
</tr>
<tr>
<td>Financial record ID</td>
<td>1,14,18</td>
</tr>
<tr>
<td>Owner</td>
<td>1</td>
</tr>
<tr>
<td>Fix level</td>
<td>14,18</td>
</tr>
<tr>
<td>Description</td>
<td>14,18</td>
</tr>
</tbody>
</table>

**Report:**

1 = Line Summary Report  
14 = Components with Related Features Report  
18 = Components with Specified Features Report

### Hardware Financial

**Table 23. Configuration Management Report: Hardware Financial by Field**

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DESCRIPTION FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Record ID</td>
<td>1</td>
</tr>
<tr>
<td>Name</td>
<td>1</td>
</tr>
<tr>
<td>Generic device</td>
<td>1</td>
</tr>
<tr>
<td>Device type and model</td>
<td>1</td>
</tr>
<tr>
<td>Financial type</td>
<td>1</td>
</tr>
<tr>
<td>Component count</td>
<td>1</td>
</tr>
<tr>
<td>Specialist name</td>
<td>1</td>
</tr>
<tr>
<td><strong>PURCHASE FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Maintenance class</td>
<td>1</td>
</tr>
<tr>
<td>Purchase price</td>
<td>1</td>
</tr>
</tbody>
</table>
### Table 23. Configuration Management Report: Hardware Financial by Field (continued)

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RENTAL/LEASE FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Lease type</td>
<td>1</td>
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<tr>
<td>Monthly rental</td>
<td>1</td>
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<tr>
<td><strong>VPA FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>VPA name</td>
<td>1</td>
</tr>
</tbody>
</table>

**Report:**

1 = Line Summary Report

### Software Financial

### Table 24. Configuration Management Report: Software Financial by Field

<table>
<thead>
<tr>
<th>FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DESCRIPTION FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>Record ID</td>
<td>1</td>
</tr>
<tr>
<td>Name</td>
<td>1</td>
</tr>
<tr>
<td>Marketing rep.</td>
<td>1</td>
</tr>
<tr>
<td>System specialist</td>
<td>1</td>
</tr>
<tr>
<td><strong>LICENSE CHARGES FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>One time charge</td>
<td>1</td>
</tr>
<tr>
<td>Upgrade license charge</td>
<td>1</td>
</tr>
<tr>
<td>Periodic license charge</td>
<td>1</td>
</tr>
<tr>
<td>Initial license charge</td>
<td>1</td>
</tr>
<tr>
<td><strong>IBM DSLO FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>One time charge DSLO</td>
<td>1</td>
</tr>
<tr>
<td>Initial license charge DSLO</td>
<td>1</td>
</tr>
<tr>
<td><strong>VLA FIELDS</strong></td>
<td></td>
</tr>
<tr>
<td>VLA name</td>
<td>1</td>
</tr>
</tbody>
</table>

**Report:**

1 = Line Summary Report
### Data Center

**Table 25. Configuration Management Report: Data Center by Field**

<table>
<thead>
<tr>
<th>DATA CENTER FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record ID</td>
<td>1</td>
</tr>
<tr>
<td>Name</td>
<td>1</td>
</tr>
<tr>
<td>Location code</td>
<td>1</td>
</tr>
<tr>
<td>Help phone</td>
<td>1</td>
</tr>
<tr>
<td>Off-shift phone</td>
<td>1</td>
</tr>
<tr>
<td>First shift manager name</td>
<td>1</td>
</tr>
<tr>
<td>First shift manager phone</td>
<td>1</td>
</tr>
<tr>
<td>Operations manager name</td>
<td>1</td>
</tr>
<tr>
<td>Operations manager phone</td>
<td>1</td>
</tr>
</tbody>
</table>

**Report:**

1 = Line Summary Report

### System

**Table 26. Configuration Management Report: System by Field**

<table>
<thead>
<tr>
<th>SYSTEM FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record ID</td>
<td>1</td>
</tr>
<tr>
<td>Name</td>
<td>1</td>
</tr>
<tr>
<td>Location code</td>
<td>1</td>
</tr>
<tr>
<td>Data center ID</td>
<td>1</td>
</tr>
<tr>
<td>System operator phone</td>
<td>1</td>
</tr>
<tr>
<td>Emergency phone</td>
<td>1</td>
</tr>
<tr>
<td>System manager name</td>
<td>1</td>
</tr>
<tr>
<td>System manager phone</td>
<td>1</td>
</tr>
<tr>
<td>Contact phone</td>
<td>1</td>
</tr>
</tbody>
</table>

**Report:**

1 = Line Summary Report

### Service

**Table 27. Configuration Management Report: Service by Field**

<table>
<thead>
<tr>
<th>SERVICE FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record ID</td>
<td>1</td>
</tr>
<tr>
<td>Service name</td>
<td>1</td>
</tr>
<tr>
<td>Service organization name</td>
<td>1</td>
</tr>
<tr>
<td>Service org. phone</td>
<td>1</td>
</tr>
<tr>
<td>Off-shift service phone</td>
<td>1</td>
</tr>
<tr>
<td>Hardware rep. name</td>
<td>1</td>
</tr>
<tr>
<td>Hardware rep. phone</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 27. Configuration Management Report: Service by Field (continued)

<table>
<thead>
<tr>
<th>SERVICE FIELDS</th>
<th>REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software rep. name</td>
<td>1</td>
</tr>
<tr>
<td>Software rep. phone</td>
<td>1</td>
</tr>
</tbody>
</table>

Report:
1 = Line Summary Report
Relating Publications to Specific Tasks

Your data processing organization can have many different users performing many different tasks. The books in the Tivoli Information Management for z/OS library contain task-oriented scenarios to teach users how to perform the duties specific to their jobs.

The following table describes the typical tasks in a data processing organization and identifies the Tivoli Information Management for z/OS publication that supports those tasks. See “The Tivoli Information Management for z/OS Library” on page 347 for more information about each book.

Typical Tasks

<table>
<thead>
<tr>
<th>If You Are:</th>
<th>And You Do This:</th>
<th>Read This:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning to Use Tivoli Information Management for z/OS</td>
<td>Identify the hardware and software requirements of Tivoli Information Management for z/OS. Identify the prerequisite and corequisite products. Plan and implement a test system.</td>
<td>Tivoli Information Management for z/OS Planning and Installation Guide and Reference</td>
</tr>
<tr>
<td>Installing Tivoli Information Management for z/OS</td>
<td>Install Tivoli Information Management for z/OS. Define and initialize data sets. Create session-parameters members.</td>
<td>Tivoli Information Management for z/OS Planning and Installation Guide and Reference</td>
</tr>
<tr>
<td></td>
<td>Define and create multiple Tivoli Information Management for z/OS BLX-SPs.</td>
<td>Tivoli Information Management for z/OS Integration Facility Guide</td>
</tr>
<tr>
<td></td>
<td>Define and create APPC transaction programs for clients.</td>
<td>Tivoli Information Management for z/OS Planning and Installation Guide and Reference</td>
</tr>
<tr>
<td></td>
<td>Define coupling facility structures for sysplex data sharing.</td>
<td>Tivoli Information Management for z/OS Client Installation and User’s Guide</td>
</tr>
<tr>
<td>Diagnosing problems</td>
<td>Diagnose problems encountered while using Tivoli Information Management for z/OS</td>
<td>Tivoli Information Management for z/OS Diagnosis Guide</td>
</tr>
</tbody>
</table>
### Table 28. Relating Publications to Specific Tasks (continued)

<table>
<thead>
<tr>
<th>If You Are:</th>
<th>And You Do This:</th>
<th>Read This:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administering Tivoli Information Management for z/OS</td>
<td>Manage user profiles and passwords. Define and maintain privilege class records. Define and maintain rules records.</td>
<td>Tivoli Information Management for z/OS Program Administration Guide and Reference</td>
</tr>
<tr>
<td></td>
<td>Define and maintain USERS record. Define and maintain ALIAS record. Implement GUI interface. Define and maintain command aliases and authorizations.</td>
<td>Tivoli Information Management for z/OS Program Administration Guide and Reference</td>
</tr>
<tr>
<td></td>
<td>Implement and administer Notification Management. Create user-defined line commands. Define logical database partitioning.</td>
<td>Tivoli Information Management for z/OS Program Administration Guide and Reference</td>
</tr>
<tr>
<td></td>
<td>Create or modify GUI workstation applications that can interact with Tivoli Information Management for z/OS. Install the Tivoli Information Management for z/OS Desktop on user workstations.</td>
<td>Tivoli Information Management for z/OS Desktop User’s Guide</td>
</tr>
<tr>
<td>Maintaining Tivoli Information Management for z/OS</td>
<td>Set up access to the data sets. Maintain the databases. Define and maintain privilege class records.</td>
<td>Tivoli Information Management for z/OS Planning and Installation Guide and Reference</td>
</tr>
<tr>
<td></td>
<td>Define and maintain the BLX-SP. Run the utility programs.</td>
<td>Tivoli Information Management for z/OS Operation and Maintenance Reference</td>
</tr>
<tr>
<td>Programming applications</td>
<td>Use the application program interfaces.</td>
<td>Tivoli Information Management for z/OS Application Program Interface Guide</td>
</tr>
<tr>
<td></td>
<td>Use the application program interfaces for Tivoli Information Management for z/OS clients.</td>
<td>Tivoli Information Management for z/OS Client Installation and User’s Guide</td>
</tr>
<tr>
<td></td>
<td>Create Web applications using or accessing Tivoli Information Management for z/OS data.</td>
<td>Tivoli Information Management for z/OS World Wide Web Interface Guide</td>
</tr>
</tbody>
</table>
### Table 28. Relating Publications to Specific Tasks (continued)

<table>
<thead>
<tr>
<th>If You Are:</th>
<th>And You Do This:</th>
<th>Read This:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customizing Tivoli Information Management for z/OS</strong></td>
<td>Design and implement a Change Management system. Design and implement a Configuration Management system. Design and implement a Problem Management system.</td>
<td>Tivoli Information Management for z/OS Problem, Change, and Configuration Management.</td>
</tr>
<tr>
<td></td>
<td>Design, create, and test terminal simulator panels or terminal simulator EXECs. Customize panels and panel flow.</td>
<td>Tivoli Information Management for z/OS Terminal Simulator Guide and Reference.</td>
</tr>
<tr>
<td></td>
<td>Design, create, and test Tivoli Information Management for z/OS formatted reports.</td>
<td>Tivoli Information Management for z/OS Data Reporting User’s Guide.</td>
</tr>
<tr>
<td></td>
<td>Create a bridge between NetView and Tivoli Information Management for z/OS applications. Integrate Tivoli Information Management for z/OS with Tivoli distributed products.</td>
<td>Tivoli Information Management for z/OS Guide to Integrating with Tivoli Applications.</td>
</tr>
<tr>
<td><strong>Assisting Users</strong></td>
<td>Create, search, update, and close change, configuration, or problem records. Browse or print Change, Configuration, or Problem Management reports.</td>
<td>Tivoli Information Management for z/OS Problem, Change, and Configuration Management.</td>
</tr>
<tr>
<td></td>
<td>Use the Tivoli Information Management for z/OS Integration Facility.</td>
<td>Tivoli Information Management for z/OS Integration Facility Guide.</td>
</tr>
<tr>
<td><strong>Using Tivoli Information Management for z/OS</strong></td>
<td>Learn about the Tivoli Information Management for z/OS panel types, record types, and commands. Change a user profile.</td>
<td>Tivoli Information Management for z/OS User’s Guide.</td>
</tr>
<tr>
<td></td>
<td>Learn about Problem, Change, and Configuration Management records.</td>
<td>Tivoli Information Management for z/OS Problem, Change, and Configuration Management.</td>
</tr>
<tr>
<td></td>
<td>Receive and respond to Tivoli Information Management for z/OS messages.</td>
<td>Tivoli Information Management for z/OS Messages and Codes.</td>
</tr>
<tr>
<td></td>
<td>Design and create reports.</td>
<td>Tivoli Information Management for z/OS Data Reporting User’s Guide.</td>
</tr>
</tbody>
</table>
Tivoli Information Management for z/OS Courses

Education Offerings

Tivoli Information Management for z/OS classes are available in the United States and in the United Kingdom. For information about classes outside the U.S. and U.K., contact your local IBM representative or visit http://www.training.ibm.com on the World Wide Web.

United States

IBM Education classes can help your users and administrators learn how to get the most out of Tivoli Information Management for z/OS. IBM Education classes are offered in many locations in the United States and at your own company location.

For a current schedule of available classes or to enroll, call 1-800-IBM TEACH (1-800-426-8322). On the World Wide Web, visit:

http://www.training.ibm.com

to see the latest course offerings.

United Kingdom

In Europe, the following public courses are held in IBM’s central London education centre at the South Bank at regular intervals. On-site courses can also be arranged.

For course schedules and to enroll, call Enrollments Administration on 0345 581329, or send an e-mail note to:

contact_educ_uk@vnet.ibm.com

On the World Wide Web, visit:

http://www.europe.ibm.com/education-uk

to see the latest course offerings.
Where to Find More Information

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®, CICS, HP-UX, OS/2, 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 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, 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](http://www.redbooks.ibm.com) or [http://www.support.tivoli.com](http://www.support.tivoli.com)
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