Seventh Edition (June 2003)

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Contents

Figures .................................. v
Tables ...................................... vii

Preface ...................................... ix
Who should read this book ..................... ix
What this book contains ....................... x
Publications .................................. x
  Tivoli Decision Support for OS/390 library ... x
  Using LookAt to look up message explanations ... xii
  Accessing publications online .................. xii
  Ordering publications ........................ xii
  Accessibility .............................. xiii
  Contacting software support .................... xiii
  Conventions used in this book ................. xiii
  Typeface conventions ....................... xiii
  Changes in this edition ..................... xiv
  Programming interface information .......... xiv

Part 1. Guide ................................ 1

Chapter 1. Introducing the SP400 feature .... 3
Collecting performance data ..................... 3

Chapter 2. Implementing the SP400 feature ........ 5
Planning the implementation process ............. 5
Considering which components to install .......... 6
Installing SP400 feature on AS/400 ............. 7
  Step 1: Check AS/400 requirements .......... 7
  Disk space requirements ...................... 7
  Software requirements ........................ 7
  Step 2: Transfer SP400 feature code to AS/400 . 7
  Step 2a: Generate tape or transfer file for installation on AS/400 .......... 8
  Step 2b: Sign on to the AS/400 as QSECOFR . 8
  Step 2c: Restore DRLLIB library from tape .... 8
  Step 2d: Restore DRLLIB library from DRLINST savefile ..................... 8
  Step 2e: Add Library DRLLIB to your library list ......................... 9
  Step 2f: Restore DRLDTA database library from DRLDTA savefile ........... 10
Log files and data capture on the AS/400 .......... 11
OS/400 log files description ................... 11
Capturing data on the AS/400 .................. 12
  Transferring captured data files to OS/390 . 14
  Additional methods of transferring data to OS/390 ..................... 16
Installing SP400 feature components on the OS/390 system .................. 16
Updating the lookup tables .................... 18
  Updating OS400_JOB_ACCTCODE ............ 19
  Updating OS400_DASDTYPE .................. 20
  Updating OS400_DATE_FORMAT .............. 20
  Updating OS400_JOBGROUP .................. 20
Testing the installation ....................... 21
Putting the feature into production ............ 21

Part 2. Reference .......................... 23

Chapter 3. Data flow and Tivoli Decision Support for OS/390 objects .......... 25
SP400 feature general data flow .................. 25
  Description of record definitions and logs .......... 28
SP400 feature accounting component data flow .... 29
  Where to look for further information ............ 30
SP400 feature configuration component data flow .................. 31
  Where to look for further information ............ 32
SP400 feature job statistics component data flow .......... 33
  Where to look for further information ............ 34
SP400 feature messages component data flow .......... 35
  Where to look for further information ............ 36
SP400 feature performance component data flow .......... 37
  Where to look for further information ............ 38

Chapter 4. Data tables and lookup tables ........ 39
Naming standard for tables ................... 39
Table descriptions .......................... 39
Tables in the SP400 feature accounting component .......... 41
  OS400_ACCT_JOB_D_M ........... 41
  OS400_ACCT_PRINT_D_M .......... 41
Tables in the SP400 feature configuration component .......... 44
  OS400_CONFIG ...................... 44
Tables in the SP400 feature job statistics component .......... 46
  OS400_JOB_STAT_D_M .......... 46
Tables in the SP400 feature messages component .......... 47
  OS400_MSG_STAT_D_M .......... 47
  OS400_MSG_STAT_DV_M .......... 48
Tables in the SP400 feature performance component .......... 49
  OS400_PM_DISK_H_D .......... 49
  OS400_PM_POOL_H_D .......... 52
  OS400_PM_SYS_H_D .......... 53
  OS400_PM_SYS_JGR_H_D .......... 59
  OS400_PERF_SUM_H_D .......... 62
SP400 feature lookup tables .................. 63
  OS400_JOB_ACCTCODE .......... 63
  Example of table contents ............... 63
  OS400_DASDTYPE .......... 64
  Example of table contents ............... 64
  OS400_DATE_FORMAT ............. 65
  Example of table contents ............... 65
  OS400_JOBGROUP .......... 66
  Example of table contents ............... 66

Chapter 5. Reports .......................... 67
Figures

1. Organizing and presenting system performance data ............... 3
2. Implementation process for the SP400 feature 6
3. Restoring SP400 library from tape .................. 8
4. Restoring SP400 library from savefile ............ 9
5. Adding DRLLIB to the library list of a job .... 10
6. Restoring DRLDTA database library from DRLDTA savefile. ....... 10
7. SP400 Main Menu .................................. 12
8. Start SP400 Server (STRSPSRV) ..................... 12
9. IBM Performance Tools for AS/400 .................. 13
10. Collect Performance Data .............................. 13
11. Start Collecting Data ................................ 13
12. Start of data capture of History Log Data .......... 14
13. Set time period parameters for data capturing ... 14
14. Initialization of tape for data transfer to Tivoli Decision Support for OS/390. ... 15
15. Density values ........................................ 15
16. SAVSPDTA command window ......................... 16
17. Tivoli Decision Support for OS/390 Administration window .................. 17
18. Components window ................................... 17
19. Installation Options window ........................... 18
21. General SP400 feature data flow .................... 25
22. SP400 feature accounting component data flow .... 29
23. SP400 feature configuration component data flow .... 31
24. SP400 feature job statistics component data flow .......... 33
25. SP400 feature messages component data flow ........ 35
26. SP400 feature performance component data flow .......... 37
27. Example of OS/400 Acct Job Accounting, Monthly Overview .......... 70
28. Example of OS/400 Acct Print Accounting, Monthly Overview .......... 71
29. Example of OS/400 Config all Devices, Overview .............. 73
30. Example of OS/400 Config DASD Capacity, Overview .............. 74
31. Example of OS/400 Config Main Storage, Overview .............. 75
32. Example of OS/400 Config Device Count Type/Model, Overview .......... 76
33. Example of OS/400 Config Device for Specific Type, Overview .......... 77
34. Example of OS/400 Job Statistics by User, Monthly Overview .............. 79
35. Example of OS/400 Job CPU Usage by User, Monthly Overview .............. 80
36. Example of OS/400 Job Statistics all Systems, Daily Trend .............. 81
37. Example of OS/400 Job Statistics all Systems, Monthly Trend .......... 82
38. Example of OS/400 Jobs Statistics for a User, Monthly Overview .......... 83
39. Example of OS/400 Job Type Statistics, Monthly Overview .......... 84
40. Example of OS/400 Job Acct from History Log, Monthly Overview .......... 85
41. Example of OS/400 Messages All Systems, Monthly Overview .......... 87
42. Example of OS/400 Messages Most Frequent, Daily Overview .......... 88
43. Example of OS/400 Messages Most Frequent, Monthly Overview .......... 89
44. Example of OS/400 Messages by Sev. Codes, Monthly Overview .......... 90
45. Example of OS/400 Messages for a User, Monthly Overview .............. 91
46. Example of OS/400 Messages by Type, Monthly Overview .............. 92
47. Example of OS/400 Messages by User Name, Monthly Overview .......... 93
48. Example of OS/400 Perf CPU and RTM Statistics, Hourly Trend .......... 95
49. Example of OS/400 Perf Exception and Lock Stat, Hourly Trend .......... 97
50. Example of OS/400 Perf Disk I/O Statistics, Hourly Trend .......... 98
51. Example of OS/400 Perf Disk Capacity Statistics, Hourly Trend .......... 100
52. Example of OS/400 Perf Disk Arm Movements, Hourly Trend .......... 102
53. Example of OS/400 Perf CPU and Trans by Job Group, Hourly Trend .......... 104
54. Example of OS/400 Perf CPU by Job Group, Hourly Trend .......... 106
56. Example of OS/400 Perf Storage Pool & Act Level, Hourly Trend .......... 110
57. Example of OS/400 Perf Transition Statistics, Hourly Trend .......... 112
58. Example of OS/400 Perf Max & Avg CPU Usage, Hourly Trend .......... 114
59. Example of OS/400 Perf CPU Usage all Systems, Daily Overview .......... 115
60. Example of OS/400 Perf Summary all Systems, Daily Overview .......... 116
61. Example of OS/400 Perf Summary for a System, Daily Trend .......... 118
62. Example of OS/400 Perf Summary for a System, Hourly Trend .............. 120
Tables

1. Library members and OS versions . . . . . . . . 8
2. Number of restored objects. . . . . . . . . . . 9
3. Library members and OS versions . . . . . . . . 10
4. Record lengths and logtype entries for OS/400 logs . . . . . . . . . . . . . . . . . . . . . . . . 11
5. Record definitions and logs used by SP400 feature . . . . . . . . . . . . . . . . . . . . . . . . 28
Preface

The IBM® Tivoli® AS/400 System Performance Feature Guide and Reference describes how to use Tivoli Decision Support for OS/390® to collect and report performance data generated by AS/400® systems.

Tivoli Decision Support for OS/390® was previously known as Performance Reporter. This book:

- Describes performance issues and how they affect the level of services you can offer users.
- Guides you through the component-selection, installation, and implementation processes.
- Explores performance characteristics shown in Tivoli Decision Support for OS/390 reports so that you can analyze the characteristics of your system.

Note: The short form SP400 feature is used throughout this book instead of the full title AS/400 System Performance feature.

The terms MVS™, OS/390, and z/OS™ are used interchangeably throughout this book.

The terms OPC, and Tivoli Workload Scheduler for z/OS are used interchangeably throughout this book.

The terms IBM Tivoli Decision Support for OS/390 and Tivoli Decision Support for OS/390 are used interchangeably throughout this book.

Who should read this book

The AS/400 Feature Guide and Reference is for:

- Anyone who analyzes or monitors AS/400 performance.
- Anyone responsible for establishing or meeting service-level objectives for AS/400 user groups.
- Tivoli Decision Support for OS/390 administrators (primarily as a guide to feature installation and as a reference to table and report definitions).
- Users with various backgrounds who are interested in analyzing AS/400 performance data and improving AS/400 performance.

You can use the Tivoli Decision Support for OS/390 SP400 feature to monitor AS/400, even if you have little experience with AS/400. However, to make the best use of the SP400 feature to improve performance, you should be familiar with AS/400, the terms that are unique to AS/400, and the terminology associated with database design and performance.

If you are not familiar with AS/400, refer to the AS/400 System Introduction and AS/400 System Concepts. These books describe the basic concepts of AS/400 and introduce you to some AS/400 terminology.
Also, the better you understand the interaction of processor cycles, storage, and I/O, the easier it is to identify performance constraints. The AS/400 product library is the authoritative source for information about understanding and tuning AS/400 performance.

What this book contains

Use this book to help you collect AS/400-generated performance data and create the reports supplied with the SP400 feature. This book explains how to create and display Tivoli Decision Support for OS/390 reports to both monitor and understand AS/400 performance.

This book contains the following parts:

- Part I, “Guide” explains basic concepts of system management and offers suggestions on establishing performance objectives and service-level agreements. It also describes the SP400 feature role in the Tivoli Decision Support for OS/390 environment and contains a task-oriented description of how to plan for and set up the SP400 feature so that useful reports and decision-support information are available immediately.
- Part II, “Reference” describes the flow of data from OS/400 logs to reports, showing Tivoli Decision Support for OS/390 log and record definitions, tables, and reports. It also describes the supplied data tables and lookup tables, including their columns and expressions.
- Part III, “Appendixes” describes the use and the syntax of the following commands:
  In addition, the Appendixes contain a list of abbreviations and a Glossary.

Publications

This section lists publications in the Tivoli Decision Support for OS/390 library and any other related documents. It also describes how to access Tivoli publications online, how to order Tivoli publications, and how to submit comments on Tivoli publications.

Tivoli Decision Support for OS/390 library

The following documents are available in the Tivoli Decision Support for OS/390 library:

- Administration Guide, SH19-6816
  Provides information about initializing the Tivoli Decision Support for OS/390 database and customizing and administering Tivoli Decision Support for OS/390.
- Guide to the Reporting Dialog, SH19-6842
  Provides information for users who display existing reports, for users who create and modify reports, and for administrators who control reporting dialog default functions and capabilities.
- Language Guide and Reference, SH19-6817
  Provides information for administrators, performance analysts, and programmers who are responsible for maintaining system log data and reports.
- User’s Guide for the Viewer, SH19-4517
  Provides information about how to use the graphical interface for Tivoli Decision Support for OS/390.
- Messages and Problem Determination, SH19-6902
Provides information to help operators and system programmers understand, interpret, and respond to Tivoli Decision Support for OS/390 messages and codes.

- **Accounting Feature for the Host, SH19-4495**
  Provides information for users who want to use Tivoli Decision Support for OS/390 to collect and report performance data generated by the Accounting feature.

- **Accounting Feature for the Workstation, SH19-4516**
  Provides information for users who want to use the Accounting Workstation Option to manage, process, and analyze financial data on a workstation.

- **AS/400 System Performance Feature Guide and Reference, SH19-4019**
  Provides information for administrators and users about collecting and reporting performance data generated by AS/400 systems.

- **CICS Performance Feature Guide and Reference, SH19-6820**
  Provides information for administrators and users about collecting and reporting performance data generated by Customer Information and Control System (CICS®).

- **Distributed Systems Performance Feature Guide and Reference, SH19-4018**
  Provides information for administrators and users about collecting and reporting performance data generated by operating systems and applications running on a workstation.

- **IMS Performance Feature Guide and Reference, SH19-6825**
  Provides information for administrators and users about collecting and reporting performance data generated by Information Management System (IMS™).

- **Network Performance Feature Installation and Administration, SH19-6901**
  Provides information for network analysts or programmers who are responsible for setting up the network reporting environment.

- **Network Performance Feature Reference, SH19-6822**
  Provides information for network analysts or programmers who are responsible for setting up the network reporting environment.

- **Network Performance Feature Reports, SH19-6821**
  Provides information for network analysts or programmers who use the Network Performance feature reports.

- **System Performance Feature Guide, SH19-6818**
  Provides information for performance analysts and system programmers who are responsible for meeting the service-level objectives established in your organization.

- **System Performance Feature Reference Vol. I, SH19-6819**
  Provides information for administrators and users with a variety of backgrounds who want to use Tivoli Decision Support for OS/390 to analyze Multiple Virtual Storage (MVS), Virtual Machine (VM), or OS/2® performance data.

- **System Performance Feature Reference Vol.II, SH19-4494**
  Provides information for administrators and users with a variety of backgrounds who want to use Tivoli Decision Support for OS/390 to analyze Multiple Virtual Storage (MVS), Virtual Machine (VM), or OS/2 performance data.

- **IBM Online Library Omnibus Edition OS/390 Collection Kit, SK2T-6700**
  CD containing all OS/390 documentation.

- **IBM Online Library z/OS Software Products Collection Kit, SK3T-4270**
  CD containing all z/OS documentation.
The Tivoli Software Glossary includes definitions for many of the technical terms related to Tivoli software. The Tivoli Software Glossary is available, in English only, at the following Web site:

http://publib.boulder.ibm.com/tividd/glossary/termsmst04.htm

Using LookAt to look up message explanations

LookAt is an online facility that lets you look up explanations for most messages you encounter, as well as for some system abends and codes. Using LookAt to find information is faster than a conventional search because in most cases LookAt goes directly to the message explanation.

You can access LookAt from the Internet at: http://www.ibm.com/eserver/zseries/zos/bkserz/lookat/ or from anywhere in z/OS or z/OS.e where you can access a TSO/E command line (for example, TSO/E prompt, ISPF, z/OS UNIX System Services running OMVS).

The LookAt Web site also features a mobile edition of LookAt for devices such as Pocket PCs, Palm OS, or Linux-based handhelds. So, if you have a handheld device with wireless access and an Internet browser, you can now access LookAt message information from almost anywhere.

To use LookAt as a TSO/E command, you must have LookAt installed on your host system.

Accessing publications online

IBM posts publications for this and all other Tivoli products, as they become available and whenever they are updated, to the Tivoli Software Information Center Web site. The Tivoli Software Information Center is located at the following Web address:

http://publib.boulder.ibm.com/tividd/td/tdprodlist.html

Click the Tivoli Decision Support for OS/390 link to access the product library.

These publications are available in PDF or HTML format, or both. Translated documents are also available for some products.

Note: If you print PDF documents on other than letter-sized paper, select the Fit to page check box in the Adobe Acrobat Print dialog. This option is available when you click File → Print. Fit to page ensures that the full dimensions of a letter-sized page print on the paper that you are using.

Ordering publications

You can order many Tivoli publications online at the following Web site:


You can also order by telephone by calling one of these numbers:

- In the United States: 800-879-2755
- In Canada: 800-426-4968

In other countries, see the following Web site for a list of telephone numbers:
Accessibility

Accessibility features help users with a physical disability, such as restricted mobility or limited vision, to use software products successfully. With this product, you can use assistive technologies to hear and navigate the interface. You can also use the keyboard instead of the mouse to operate all features of the graphical user interface.

For additional information, see the Accessibility Appendix in Administration Guide.

Contacting software support

If you have a problem with any Tivoli product, refer to the following IBM Software Support Web site:


If you want to contact software support, see the IBM Software Support Guide at the following Web site:

http://techsupport.services.ibm.com/guides/handbook.html

The guide provides information about how to contact IBM Software Support, depending on the severity of your problem, and the following information:

- Registration and eligibility
- Telephone numbers and e-mail addresses, depending on the country in which you are located
- Information you must have before contacting IBM Software Support

Note: For Tivoli NetView for OS/390 customers only, additional support is available on the NETVIEW CFORUM (Customer Forum) through the IBMLink system. This forum is monitored by NetView developers who answer questions and provide guidance. When a problem with the code is found, you are asked to open an official problem management record (PMR) to obtain resolution.

Conventions used in this book

This guide uses several conventions for special terms and actions, operating system-dependent commands and paths, and margin graphics.

The term z/OS is used in this book to mean z/OS and OS/390 operating systems. Where the term OS/390 does appear, the related information applies only to OS/390 operating systems.

Typeface conventions

This guide uses the following typeface conventions:

**Bold**

- Lowercase commands and mixed case commands that are otherwise difficult to distinguish from surrounding text
- Interface controls (check boxes, push buttons, radio buttons, spin buttons, fields, folders, icons, list boxes, items inside list boxes,
Changes in this edition

This edition is an updated version that replaces the previous edition of the same book. The changes are:

- Chapter 2, “Implementing the SP400 feature” has been updated to include new information about SP400 feature, and how to generate tape and transfer file on AS/400.

Except for editorial changes, updates to this edition are marked with a vertical bar to the left of the change.

Programming interface information

This book is intended to help users monitor AS/400. This book documents information which is Diagnosis, Modification, or Tuning Information provided by Tivoli Decision Support for OS/390 for OS/390.

Attention: Do not use this Diagnosis, Modification, or Tuning Information as a programming interface.
# Part 1. Guide

## Chapter 1. Introducing the SP400 feature
- Collecting performance data

## Chapter 2. Implementing the SP400 feature
- Planning the implementation process
- Considering which components to install
- Installing SP400 feature on AS/400
  - Step 1: Check AS/400 requirements
  - Step 2: Transfer SP400 feature code to AS/400
    - Step 2a: Generate tape or transfer file for installation on AS/400
    - Step 2b: Sign on to the AS/400 as QSECOFR
    - Step 2c: Restore DRLLIB library from tape
    - Step 2d: Restore DRLLIB library from DRLINST savefile
    - Step 2e: Restore DRLDTA database library from DRLDTA savefile
    - Step 2f: Add Library DRLLIB to your library list
  - Step 2: Log files and data capture on the AS/400
  - Step 3: Capturing data on the AS/400
  - Step 4: Transferring captured data files to OS/390
  - Step 5: Additional methods of transferring data to OS/390
  - Step 6: Installing SP400 feature components on the OS/390 system
  - Step 7: Updating the lookup tables
    - Updating OS400_JOB_ACCTCODE
    - Updating OS400_DASDTYPE
    - Updating OS400_DATE_FORMAT
    - Updating OS400_JOBGROUP
  - Step 8: Testing the installation
  - Step 9: Putting the feature into production
Chapter 1. Introducing the SP400 feature

IBM Tivoli Decision Support for OS/390 is a reporting system that collects utilization and throughput data logged by computer systems, then summarizes the data and presents it in a variety of forms. Tivoli Decision Support for OS/390 consists of a base product and several optional features that are used in systems management.

Collecting performance data

All IBM systems and subsystems provide data on how well they perform. For the AS/400, this information is stored in OS/400 logs, which provide the basic information for SP400 feature. However, the information in the OS/400 logs must be captured and then transmitted to OS/390. To transmit the information to OS/390, two methods are supported by SP400 feature: using tape, and Network Job Entry (NJE). However, you can also use the NetView File Transfer Program or Remote Job Entry (RJE), but you must perform some programming work.

Before you can analyze the transmitted data to understand the AS/400 characteristics, the transmitted data must be collected from the OS/390 log data sets (where it is stored after being transmitted). Tivoli Decision Support for OS/390 and the SP400 feature can be customized to collect only the data required to meet your needs. The collected data is combined with more data (called environment data), and is finally presented in reports.

The process of entering and maintaining environment data is called administration. Tivoli Decision Support for OS/390 provides an administration dialog for maintaining resource information. Refer to the Administration Guide for information on how to use the administration dialog.

Figure 1 illustrates how data is organized for presentation in Tivoli Decision Support for OS/390 reports. For a more detailed description, see “SP400 feature general data flow” on page 25.
The reports produced by the SP400 feature are grouped in the following report groups:

- **OS400ACT**: Accounting reports
- **OS400CON**: Configuration reports
- **OS400JOB**: Job statistics reports
- **OS400MSG**: Message reports
- **OS400PRF**: Performance reports

The reports cover a wide range of needs in a data processing center, and reporting can be performed online or in batch. The reports are accessible from the reporting dialog.

Finally, the key to successful implementation of Tivoli Decision Support for OS/390 is knowing:

- The information and resources on which you want to report and how to perform customization to select them
- The way you want to organize, set objectives for, and process the data (used later to define the environment)
Chapter 2. Implementing the SP400 feature

This chapter supplements the procedure in the Administration Guide for installing a component with information specific to the SP400 feature.

This chapter describes how to:

- Plan the SP400 feature implementation process
- Decide which SP400 feature components to install
- Install the SP400 feature on the AS/400, including transferring SP400 feature code to the AS/400
- Use the collection services application on the AS/400 to change data collection parameters of the OS/400 log files
- Install the SP400 feature components on the Tivoli Decision Support for OS/390 system on the OS/390 system
- Update the Tivoli Decision Support for OS/390 lookup tables
- Collect data into Tivoli Decision Support for OS/390 tables, from OS/390 log files containing data that has been transmitted from the AS/400
- Test the SP400 feature installation
- Put the SP400 feature into production

Planning the implementation process

Before installing the SP400 feature, you should follow these steps to plan the implementation process:

1. Analyze user tasks to determine what data the SP400 feature must gather to help users accomplish those tasks.
2. Determine which SP400 feature components you must install to meet user needs.
3. Determine the administration tasks you must perform for the selected components and make any decisions required by these tasks. These tasks help you customize Tivoli Decision Support for OS/390 and the SP400 feature to work efficiently and effectively with your computer system.
4. For each selected component, determine the tasks you must perform to customize the supported products to work with Tivoli Decision Support for OS/390 and with the SP400 feature.

If this is your first exercise in implementation planning, follow all these steps to ensure that the SP400 feature implementation is consistent. If you are reading this chapter in preparation for modifying your system, you might not need to perform all of these tasks.

Use the planning process to prepare for these main customization tasks:

- Customizing your AS/400 systems to generate the data required by the components you install.
- Defining environment data, which is all the information (besides the input data) that the SP400 feature needs to create reports. Environment data controls the data-collection process and provides more information in the reports.
Figure 2 illustrates the process for implementing the SP400 feature:

**Considering which components to install**

Your most critical planning task is determining what information users need from the SP400 feature. For example, users might be interested only in error conditions or in processor capacity. Installing only those parts of the feature needed to meet user requirements ensures that the feature benefits users while it minimizes the performance impact caused by data collection and interpretation activities.
The SP400 feature is divided into five components:

- Accounting
- Configuration
- Job statistics
- Messages
- Performance

Consider carefully which components to install. Components are groups of Tivoli Decision Support for OS/390 objects, such as predefined update definitions, data tables, and reports. If you find that you need reports from a component that you have not installed, you must install that component, then wait several days or weeks until enough data has been collected to create reports. However, if you install more components than you need, Tivoli Decision Support for OS/390 collects needless data, which takes up disk space and uses processor time.

At this point, you might find it helpful to examine the predefined reports for each component. For more information, see Chapter 5, “Reports”, on page 67.

**Installing SP400 feature on AS/400**

This section gives you practical information on how to install SP400 feature on the AS/400.

**Step 1: Check AS/400 requirements**

**Disk space requirements**
The disk space required by SP400 feature depends upon the size of the databases created when data is captured.

To minimize the use of storage, you should perform data captures as frequently as possible. You can run time-set-batches to achieve this.

**Software requirements**
The SP400 feature requires the following programs, or subsequent upward-compatible levels, unless stated otherwise:

- Operating System/400® (OS/400) Version 5 Release 1 (5722-SS1). The AS/400 network should be connected to the OS/390 host either through an SNA, or a TCP/IP connection.
- NetView® FTP Version 2 Release 1 (5685-108) and NetView FTP/400 Version 3 Release 1 (5733-196) are recommended for transfer of files to OS/390.
- IBM Performance Tools for AS/400 (5722-PT1) is recommended to change collection services parameters.

**Step 2: Transfer SP400 feature code to AS/400**

To install the AS/400 code from tape, you should:

1. Generate the tape to be installed on AS/400, or use your network to transfer an SMP-installed target library member to your AS/400 installation.
2. Sign on to the AS/400 system as QSECOFR.
3. Restore the DRLLIB library from tape or from the DRLINST savefile.
4. Restore the DRLDTA database library from the DRLDTA savefile.
5. Add the DRLLIB and DRLDTA libraries to your library list.
These steps are explained in detail in Steps 2a through 2f.

**Step 2a: Generate tape or transfer file for installation on AS/400**

If you are installing from tape, you need to create a job that will enable you to transfer the SP400 feature code from the SMP-installed target library DRL160.SDRLA400 to tape. To do this, modify the sample JCL contained in the partitioned data set member DRL160.SDRLCNTL (DRLJA400) using the following table:

<table>
<thead>
<tr>
<th>Members</th>
<th>OS versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRL5A400</td>
<td>OS/400 V5R1 M0 and TAPE transfer</td>
</tr>
<tr>
<td>DRL5400V</td>
<td>OS/400 V5R1 M0 and network transfer</td>
</tr>
<tr>
<td>DRL52400</td>
<td>OS/400 V5R2 M0 and TAPE transfer</td>
</tr>
<tr>
<td>DRL5240V</td>
<td>OS/400 V5R2 M0 and network transfer</td>
</tr>
</tbody>
</table>

Members are stored in DRL160.SDRLA400 library.

Run the job you have created. This produces a tape that contains the savefile used to install the SP400 feature on the AS/400, (see Step 2c).

If you use your network to transfer the file to the AS/400, use NJE or NetView to perform the transfer. This produces the savefile used to install the SP400 feature on the AS/400, (see Step 2d).

**Step 2b: Sign on to the AS/400 as QSECOFR**

Set the QSECOFR message queue in breakmode.

**Step 2c: Restore DRLLIB library from tape**

1. Mount the installation tape.
2. Get the system name for the tape device and the data file label. The data file label is DRL.CODE.
3. Run RSTLIB and press F4. The following window is displayed:

   ![Figure 3. Restoring SP400 library from tape](image)

**Step 2d: Restore DRLLIB library from DRLINST savefile**

To restore the DRLLIB library:

1. Use the CRTSAVF command to create a temporary savefile called QGPL/DRLINST.
2. Receive the file sent from the OS/390 system into the QGPL/DRLINST savefile.
3. Run the RSTLIB command to restore the DRLLIB library.
4. Press F4 to see a choice of valid field options. See Figure 4.

5. Use the DSPLIB command to display the library. See Figure 4.
6. Check that all objects in the library have been restored. The following table reports the number of restored objects according to the OS version:

<table>
<thead>
<tr>
<th>Member</th>
<th>OS versions</th>
<th>Number of restored objects</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRL52400</td>
<td>OS/400 V5R2M0</td>
<td>18</td>
</tr>
<tr>
<td>DRL5A400</td>
<td>OS/400 V5R1M0</td>
<td>18</td>
</tr>
</tbody>
</table>

on page 0 shows an example with the first 18 objects restored. To see the remaining objects, press PageDown.

**Step 2f: Add Library DRLLIB to your library list**
To obtain the correct library list to use with SP400 feature, add DRLLIB to the initial library list of the job description to be used, as shown in Figure 5 on page 10. Do the same for the DRLDTA library. These library list entries could also be added to the user part of the system library list. All users of the system would then have access to the SP400 feature.
Step 2e: Restore DRLDTA database library from DRLDTA savefile

1. Run the RSTLIB command to restore the DRLDTA library, then press F4 to see a choice of valid field options.

2. Specify the DRLLIB/DRLDTA savefile as the SAVF parameter.

3. Use the DSPLIB command to display the library, see Figure 5.

4. Check that all the objects in the library have been restored. The following table reports the number of restored objects according to the OS/version:

   Table 3. Library members and OS versions

<table>
<thead>
<tr>
<th>Member</th>
<th>OS versions</th>
<th>Number of objects restored</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRL5240V</td>
<td>OS/400 V5R2M0</td>
<td>12</td>
</tr>
<tr>
<td>DRL5400V</td>
<td>OS/400 V5R1M0</td>
<td>16</td>
</tr>
</tbody>
</table>

   shows an example with the first 12 objects restored.
Log files and data capture on the AS/400

This section describes:

- The OS/400 log files, their format and record lengths
- Capturing data on the AS/400
- The transfer of captured performance data files to OS/390

**OS/400 log files description**

The log files to be transferred to OS/390 must have a format that is acceptable to Tivoli Decision Support for OS/390. To distinguish between data from different systems, the SP400 feature uses a column called SYSTEMID containing the name of the system. However, OS/400 logs do not usually contain this information. Therefore the first record in all log files transferred must be a SOURCE record, with the following layout:

```
1...+....10...+....20...+....30...+....40...+....50...+....60.
```

**SOURCE netname systemid logtypeversion timestamp**

The fields have the following format:

**SOURCE**
Must be coded in columns 1-6.

**netname**
Is the network name of the AS/400 and must be coded in columns 8-15.

**systemid**
Is the system identification of the AS/400 and must be coded in columns 16-23.

**logtype**
Is the OS/400 log type used and must be coded in columns 50-57. For each OS/400 log, a specific entry is required in this field, as shown in [Table 4].

**version**
Is the OS/400 system version and must be coded in columns 57-62 in the form VxRyNz.

**timestamp**
Is the time indication of when data is saved and must be coded in columns 62-67 in the form hhmmss.

All log files must have fixed length records. For each log file, the following table gives the record length, and the entry required in columns 50-57 of the log file’s first record.

**Table 4. Record lengths and logtype entries for OS/400 logs**

<table>
<thead>
<tr>
<th>OS/400 log</th>
<th>Record length</th>
<th>Logtype entry (pos. 50-57 of 1st record)</th>
<th>OS/400 version</th>
</tr>
</thead>
<tbody>
<tr>
<td>QACGJRN</td>
<td>539</td>
<td>JOURNAL</td>
<td>V5R1 and later</td>
</tr>
<tr>
<td>QRZALLF</td>
<td>330</td>
<td>CONFIG</td>
<td>V5R1 and later</td>
</tr>
<tr>
<td>QHST</td>
<td>142</td>
<td>HISTORY</td>
<td>V5R1 and later</td>
</tr>
<tr>
<td>QAPMSYS</td>
<td>3268</td>
<td>PMSYS</td>
<td>V5R1</td>
</tr>
<tr>
<td></td>
<td>3294</td>
<td></td>
<td>V5R2</td>
</tr>
<tr>
<td>QAPMDISK</td>
<td>356</td>
<td>PMDISK</td>
<td>V5R1</td>
</tr>
<tr>
<td></td>
<td>367</td>
<td></td>
<td>V5R2</td>
</tr>
<tr>
<td>QAPMOOL</td>
<td>95</td>
<td>PMPOOL</td>
<td>V5R1 and later</td>
</tr>
</tbody>
</table>
Capturing data on the AS/400

The SP400 feature uses default parameters for the data collection process. The default time interval for collection services is 15 minutes; to modify the collection interval, you need to install Performance Tools for AS/400 on your AS/400 system (to modify this value see 4).

To use the data capturing application, perform the following procedure:

1. To enable the SP400 Main Menu, run the GO SPMAIN command.

   The Main Menu window is displayed:

   ![SP400 Main Menu](image)

2. From the SP400 Main Menu window, select option 1, and press Enter.

   The following window is displayed:

   ![Start SP400 Server (STRSPSRV)](image)

3. Press Enter to start the SP400 monitor and collection services from the Performance Tool. The SP400 monitoring job runs by default in subsystem QCTL.

   When SP400 is active, the message DRL8003 is sent to the system history log as often as specified in the Time Interval parameter. Message DRL8003 contains average values of the performance data computed for the time interval, including CPU utilization, auxiliary storage available, I/O, and paging. When you capture and send the history log DRLQHST respectively with the command STRSP400 and SAVSPDTA, the information contained in message DRL8003 will be used by OS/390 to put data in the tables OS400_PERF_SUM_H and OS400_PERF_SUM_D.

4. If you have IBM Performance Tools installed, run the GO PERFORM command to alter the collection interval.

   The IBM Performance Tools for AS/400 window is displayed:  

   ![IBM Performance Tools](image)
PERFORM IBM Performance Tools for AS/400  
System: D1AS43

Select one of the following:

1. Select type of status  
2. Collect performance data  
3. Print performance report  
4. Capacity planning/modeling  
5. Performance utilities  
6. Configure and manage tools  
7. Display performance data  
8. System activity  
9. Performance graphics  
10. Advisor  
70. Related commands

Selection or command

Figure 9. IBM Performance Tools for AS/400

a. Select option 2 and press Enter to obtain access to the collect performance data monitor (the other options on the window are not relevant to the SP400).

The Collect Performance Data window is displayed:

Collect Performance Data  
Collection Services status:

Status ...............: Started
Collection object .......: Q267000107
Library ...............: QPERDATA
Started ...............: 09/24/02 00:01:
Default collection interval ...: 00:15:00
Retention period .......: 01 day 00 hours
Cycle time .............: 00:01:00
Cycle interval ........: 24
Collection profile ......: *STANDARDP

Select one of the following:

1. Start collecting data
2. Stop collecting data

Selection or command

Figure 10. Collect Performance Data

b. From the Collect Performance Data window, select option 1, and press Enter.

The Start Collecting Data window is displayed:

Start Collecting Data

Type choices, press Enter.

Library ...............: QPERDATA
Collection interval (minutes) ...: 15.00
Retention period .......: 0.25, 0.5, 1, 5, 15, 30
Hours .................: 0-23
Cycle time .............: 00:00:00
Frequency to cycle collections ...: 24-1
Create database files .......: *YES
Collection profile ......: *STANDARDP

Figure 11. Start Collecting Data

5. From the SP400 Main Menu window, select option 2, and press Enter.
The Start SP400 Data Capturing window is displayed:

Start SP400 Data Capturing (STRSP400)
Type choices, press Enter.
Outfile .................. DRLQHST, DRLQACG, DRLQHDW.
Library ................. DRLQDATA Name, *LIBL

Figure 12. Start of data capture of History Log Data

6. Enter the information about the data you want to capture in the Outfile field. Valid names are displayed by pressing F4, detailed information is displayed by pressing F13. The selections are DRLQHST, DRLQACG, DRLQHDW, and DRLQPFR.

The selected output file will be emptied up and filled with the newly captured output. For example, if you type DRLQHST and press Enter, the following window is displayed:

Start SP400 Data Capturing (STRSP400)
Type choices, press Enter.
Outfile .................. DRLQHST, DRLQACG, DRLQHDW.
Library ................. DRLQDATA Name, *LIBL
Time period for log output:
Start time and date:
Beginning time .......... *AVAIL Time, *AVAIL
Beginning date .......... *BEGIN Date, *BEGIN, *CURRENT
End time and date:
Ending time .......... *AVAIL Time, *AVAIL
Ending date .......... *CURRENT Date, *CURRENT

Figure 13. Set time period parameters for data capturing

The fields under the heading Time period for log output contain the start and end times for the data to be captured. Data will be captured from the system history log, based on the values specified in the Time period for log output fields. If the defaults are used, the command will go back to the last time the command was run and capture all the logged message data from that time up to the present. The first time that the command is executed using the defaults, data is captured from the beginning of all the history files on the system. The maximum number of history files that the SP400 feature can capture is 273. When this number is reached, message DRL000D prompts you to save and delete old history files until fewer than 274 remain. When you press Enter, the data is captured and placed in the DRLQHST outfile. You can then send the data to OS/390 by using the SAVSPDTA command.

Note: When you select DRLQHDW as Outfile to capture hardware data, there are no start and end time entries.

When you select DRLQPFR as Outfile to capture performance data, no DRLQPFR output file is produced but the output files DRLQSYS, DRLQDSK, and DRLQPOL.

Note: When you select DRLQPFR as Outfile to capture performance data, there are no start and end time entries.

Transferring captured data files to OS/390
There are several methods of transferring captured data to OS/390, the one you choose depends upon the facilities you have available in your environment.
An easy method of transferring captured data to OS/390 involves using the SP400 feature automatic saving tape. To copy the files on the save tape to a disk accessible by Tivoli Decision Support for OS/390:

1. Select option 3 from the main menu, and press Enter. The following window is displayed:

   ![Initialize Tape (INITAP)](image1)

   Figure 14. Initialization of tape for data transfer to Tivoli Decision Support for OS/390

   2. On TAP01, mount a tape with a density supported by OS/390. The tape must also be valid for this device and for the device you intend to use on OS/390. To display a list of tape densities in AS/400, press F4. Press Enter to initialize this tape.

   ![Specify Value for Parameter DENSITY](image2)

   Figure 15. Density values

   3. When you have initialized the tape, select Option 4 (save SP400 data) and press Enter. The following window is displayed:
4. Type the names of all the files you want to save or specify *ALL, then press Enter to start this function.

**Note:** If you select DLRQPFR or *ALL in the File field, you are prompted to complete two additional fields. In the Member field, specify either the name of the member you want to save from the AS/400 Performance files, or *SP400 if you want to save all available members.

In the Delete unused perf files field, specify *YES or *NO depending on whether or not you want to save the performance files that were captured but not used.

**Additional methods of transferring data to OS/390:** You can also use one of the following methods to transfer data to OS/390:

- **NJE connection:** If you have an NJE connection to OS/390, you can use NJE instead of tape. In this case, specify *NJE in the File transfer type field in Figure 16.

- **User exit program:** You can use a user exit program. In this case, specify *USER in the File transfer type field in Figure 16.

To use this method:

- You must first create a user exit program and a data area.
- The user program must reside in a library on the library list. It must define the Library and File parameters because it will be called from the SP400 feature with the library and file names of the files you want to transfer.
- The user data area must have the name DRLDTA/USERDTAARA, and the program name must reside in the first 10 characters of the user data area. The first time that the SAVSPDTA command is executed with *USER specified in the File transfer type, the command creates the DRLDTA/USERDTAARA data area. You must add the program name to this data area.

- **NetView FTP:** You can use the NetView File Transfer Program. This method requires some programming work.

- **Remote job entry:** You can use Remote Job Entry (RJE). This method requires some programming work.

**Installing SP400 feature components on the OS/390 system**

After the system programmer has successfully installed the Tivoli Decision Support for OS/390 base and features, choose the feature components you want to load. Tivoli Decision Support for OS/390 installs the necessary log and record definitions, log procedure, and update definitions to Tivoli Decision Support for
OS/390 system tables. Tivoli Decision Support for OS/390 also installs the predefined tables (described in Chapter 4, “Data tables and lookup tables”, on page 39) and reports (described in Chapter 5, “Reports”, on page 67).

Each component of the SP400 feature is optional. To avoid wasting system resources, install only the SP400 feature components that meet your requirements. Use the administration dialog to select which components of the SP400 feature to install.

To install SP400 feature components:

1. From the Tivoli Decision Support for OS/390 Administration window (see Figure 17), select 2, Components, and press Enter.

   The Components window is displayed, see Figure 18.

   2. From the Components window, select the components to install (here, the AS/400 accounting component), and press F6. The Installation Options window is displayed:
3. Using the component-installation procedure in the *Administration Guide*, decide if the components are to be installed in batch mode or online.

Batch mode installation results in less output than online installation. In addition, during online installation your terminal will be blocked. Therefore, it is recommended that you install components in batch.

**Note:** If, when you install the OS/400 Configuration component, the following messages appear, you can disregard them:

```
SQL DELETE FROM &PREFIX.OS400_DASDTYPE -- PQ06212
WHERE DEVICE_TYPE = '9332' AND
DEVICE_MODEL = '400' AND
MEGABYTE_COUNT = 200;
DSNT404I SQLCODE = 100, NOT FOUND: ROW NOT FOUND FOR FETCH, UPDATE, OR
DELETE, OR THE RESULT OF A QUERY IS AN EMPTY TABLE
SQL DELETE FROM &PREFIX.OS400_DASDTYPE -- PQ06212
WHERE DEVICE_TYPE = '9332' AND
DEVICE_MODEL = '600' AND
MEGABYTE_COUNT = 300;
DSNT404I SQLCODE = 100, NOT FOUND: ROW NOT FOUND FOR FETCH, UPDATE, OR
DELETE, OR THE RESULT OF A QUERY IS AN EMPTY TABLE
```

### Updating the lookup tables

All components of the SP400 feature include lookup tables that you can customize to specify the groupings you want reflected in your reports.

If you specify online installation, Tivoli Decision Support for OS/390 displays the Lookup Tables window. To edit a lookup table using ISPF edit, select a table and press Enter.

If you specify batch mode installation, you can edit the lookup tables using the ISPF editor after the component is installed. To do this:

1. Select 2, Tivoli Decision Support for OS/390 Administration from the Tivoli Decision Support for OS/390 Primary Menu.
2. Select 4, Tables.
3. Select the lookup table that you wish to edit, select the Edit pull-down, and press Enter.
4. Select 3, ISPF Editor from the Edit pull-down.
The lookup tables you can customize are:

- OS400_JOB_ACCTCODE
- OS400_DASDTYPE
- OS400_JOBGROUP
- OS400_DATE_FORMAT

These tables are described in the following sections.

**Updating OS400_JOB_ACCTCODE**

The OS400_JOB_ACCTCODE is created when you install the SP400 feature Job
Statistics component. Default information is provided in the table as a guide to
customizing the table for your own use.
Your must decide, for example:

- Which account codes are to be used?
- Are account codes to be different for batch and for online jobs types?
- Which account codes should users be allocated?
- Should certain job names carry specific account codes?

A sample of the lookup table contents is given in "OS400_JOB_ACCTCODE” on page 63.

**Updating OS400_DASDTYPE**

The SP400 feature uses the OS400_DASDTYPE table when Performance Component reports are produced.

The table contains information about OS/400 device types, model information, and their capacity (in megabytes). You must update this table whenever additional devices are installed.

A sample of the lookup table contents is given in “OS400_DASDTYPE” on page 64.

**Updating OS400_DATE_FORMAT**

The OS400_DATE_FORMAT table is created when you install the SP400 feature Job Statistics component or Accounting component.

You must complete the table if the system date format or the job date format in your AS/400 system is not MDY.

In that instance, you must specify:

- The AS/400 system ID
- The system date format (use the DSPSYSVAL QDAFTMT AS/400 command to find the format)
- The job date format (display your Job Definition attribute and use its Date Format)

**Updating OS400_JOBGROUP**

All jobs are grouped automatically by the SP400 feature when a job is started. Performance data is collected and categorized on the basis of the job group number.

When the reports “OS/400 Perf CPU & Trans by Job Group, Hourly Trend” and “OS/400 Perf CPU by Job Group, Hourly Trend” are being produced, the SP400 feature uses this lookup table to find a job group name from a job group number.

A sample of the lookup table contents is given in "OS400_JOBGROUP” on page 66.

A description of each of the job group types, together with an example of their use in a performance report, are given in “Explanation of job group types” on page 106.

After installation is complete, Tivoli Decision Support for OS/390 returns to the Components window, and the Status field indicates that the component is installed.
Testing the installation

Before starting the daily use of the SP400 feature, run a few tests to check that:
1. The installation is successful.
   • Tivoli Decision Support for OS/390 is collecting the correct data.
   • The data is being stored correctly.
   • The correct data is being used for the creation of reports.
2. The lookup tables contain appropriate values.

Refer to the Administration Guide for the steps involved in testing component installation.

Putting the feature into production

After you run the tests and verify that the installation is successful, you can put the SP400 feature and its components into production.

Figure 20 shows the daily steps involved in using Tivoli Decision Support for OS/390:

Check that the file transfer program has transferred data → Run COLLECT job → Perform database maintenance → Create reports

*Figure 20. Daily steps involved in using Tivoli Decision Support for OS/390*

You can run reports in batch, after setting batch parameters for each report using the administration dialog.

For detailed information about these steps, refer to the Administration Guide.
Part 2. Reference

Chapter 3. Data flow and Tivoli Decision Support for OS/390 objects ........................................... 25
SP400 feature general data flow ......................... 25
Description of record definitions and logs ............ 28
SP400 feature accounting component data flow ....... 29
Where to look for further information ................. 30
SP400 feature configuration component data flow .... 31
Where to look for further information ................ 32
SP400 feature job statistics component data flow ..... 33
Where to look for further information ................. 34
SP400 feature messages component data flow ....... 35
Where to look for further information ................. 36
SP400 feature performance component data flow .... 37
Where to look for further information ................. 38

Chapter 4. Data tables and lookup tables ............... 39
Naming standard for tables ............................... 39
Table descriptions ....................................... 39
Tables in the SP400 feature accounting component 41
OS400_ACCT_JOB_D_M .................................. 41
OS400_ACCT_PRINT_D_M ................................ 43
Tables in the SP400 feature configuration component 44
OS400_CONFIG ........................................... 44
Tables in the SP400 feature job statistics component 46
OS400JOB_STAT_D_M .................................... 46
Tables in the SP400 feature messages component 47
OS400_MSG_STAT_D_M ................................... 47
OS400_MSG_STAT_D_M ................................... 48
Tables in the SP400 feature performance component 49
OS400_PM_DISK_H_D .................................... 49
OS400_PM_POOL_H_D .................................... 52
OS400_PM_SYS_H_D ..................................... 53
OS400_PM_SYS_JGR_H_D ................................ 59
OS400_PERF_SUM_H_D ................................... 62
SP400 feature lookup tables ............................. 63
OS400_JOB_ACCTCODE .................................. 63
Example of table contents ............................... 63
OS400_DASDTYPE ....................................... 64
Example of table contents ............................... 64
OS400_DATE_FORMAT ................................... 65
Example of table contents ............................... 65
OS400_JOBGROUP ....................................... 66
Example of table contents ............................... 66

Chapter 5. Reports ........................................... 67
Report format and general description ................ 67
Report ID ................................................... 67
Report group ............................................. 68
Source Tables ............................................ 68
Attributes ............................................... 68
Variables .................................................. 68
Reports in the accounting component ................ 68
OS/400 Acct Job Accounting, Monthly Overview .... 70
OS/400 Acct Print Accounting, Monthly Overview .... 71
Reports in the configuration component ............... 71
OS/400 Config all Devices, Overview ................. 73
OS/400 Config DASD Capacity Overview ............. 74
OS/400 Config Main Storage Overview ............... 75
OS/400 Config Device Count Type/Model, Overview .... 76
OS/400 Config Device for Specific Type, Overview .... 77
Reports in the job statistics component ............... 78
OS/400 Job Statistics by User, Monthly Overview .... 79
OS/400 Job CPU Usage by User, Monthly Overview .... 80
OS/400 Job Statistics All Systems, Daily Trend ... 81
OS/400 Job Statistics All Systems, Monthly Trend ... 82
OS/400 Job Statistics for a User, Monthly Overview ... 83
OS/400 Job Type Statistics, Monthly Overview .... 84
OS/400 Job Acct from History Log, Monthly Overview ..................................................... 85
Reports in the messages component .................... 86
OS/400 Messages All Systems, Monthly Overview ..... 87
OS/400 Messages Most Frequent, Daily Overview .... 88
OS/400 Messages Most Frequent, Monthly Overview .... 89
OS/400 Messages by Sev. Codes, Monthly Overview .... 90
OS/400 Messages for a User, Monthly Overview .... 91
OS/400 Messages by Type, Monthly Overview .... 92
OS/400 Messages by User Name, Monthly Overview ..................................................... 93
Reports in the performance component ............... 94
OS/400 Perf CPU and RTM Statistics, Hourly Trend .... 95
OS/400 Perf Exception and Lock Stat, Hourly Trend .... 97
OS/400 Perf Disk I/O Statistics, Hourly Trend .... 98
OS/400 Perf Disk Capacity Statistics, Hourly Trend .... 100
OS/400 Perf Disk Arm Movements, Hourly Trend .... 102
OS/400 Perf CPU by Job Group, Hourly Trend .... 104
OS/400 Perf CPU by Job Group, Hourly Trend .... 106
Explanation of job group types ........................ 106
OS/400 Perf Paging Statistics, Hourly Trend .... 108
OS/400 Perf Storage Pool & Act Level, Hourly Trend .... 110
OS/400 Perf Transition Statistics, Hourly Trend .... 112
OS/400 Perf Max & Avg CPU Usage, Hourly Trend .... 114
OS/400 Perf CPU Usage all Systems, Daily Overview ..................................................... 115
OS/400 Perf Summary all Systems, Daily Overview ..................................................... 116

23
Chapter 3. Data flow and Tivoli Decision Support for OS/390 objects

This chapter describes:

- The general data flow, starting with the OS/400 logs and ending with the production of Tivoli Decision Support for OS/390 reports. Included is a description of the SP400 feature™ record definitions and OS/400 logs.
- The data flow for each SP400 feature component, including the names of OS/400 logs, Tivoli Decision Support for OS/390 records, tables, and reports. The SP400 feature components are:
  - Accounting component
  - Configuration component
  - Job statistics component
  - Messages component
  - Performance component

SP400 feature general data flow

Figure 21. General SP400 feature data flow

The processing steps shown in Figure 21 are:
Log AS/400 data.

Transmit AS/400 performance data to Tivoli Decision Support for OS/390.

Collect OS/400 log data into Tivoli Decision Support for OS/390 tables, using the information from log definitions, record definitions, control tables, and lookup tables.

Create reports, using lookup tables.
The following sections describe these steps in more detail.

1. **Log AS/400 data**, Step 1 (shown in Figure 21 on page 25)
   
   The AS/400 logs its performance data in six OS/400 logs at a time determined by the AS/400 base interval. The logs are:
   
   - QACGJRN
   - QRZALLF
   - QHST
   - QAPMSYS
   - QAPMDISK
   - QAPMPOOL

   These OS/400 logs are used by record definitions to create the information to be entered into Tivoli Decision Support for OS/390 tables. The logs and the record definitions that use the logs are described on page 28.

2. **Transmit AS/400 performance data to Tivoli Decision Support for OS/390**, Step 2
   
   You can transmit information to OS/390 using either tape or Network Job Entry (NJE). You can also use NetView File Transfer Program, or Remote Job Entry (RJE), but some programming work is needed to use these methods.

3. **Collect OS/400 log data into Tivoli Decision Support for OS/390 tables**, Step 3
   
   In processing each record contained in the OS/400 log, the collect procedure:
   
   a. Uses a *log procedure* to read the record from the OS/400 log and reformat according to the Tivoli Decision Support for OS/390 record definition.

   b. Uses a *log collector* to update the Tivoli Decision Support for OS/390 table with the reformatted record. To do this, the log collector:
      
      - Uses the log definition and record definitions to update the Tivoli Decision Support for OS/390 table with the reformatted record.

      - Uses an *update definition* to decide which reformatted record fields are to be included in which Tivoli Decision Support for OS/390 table, including further summarizing into other tables (for example, updating the monthly table OS400_ACCT_JOB_M from the information used for updating the daily table OS400_ACCT_JOB_D).

      - Takes information from *control tables* (for example, the SP400 feature may determine the period in which the measurements were made by looking up the day type information in the SPECIAL_DAY or DAY_OF_WEEK tables).

      - Uses *lookup tables* (which contain user-defined information that defines an organization’s operating environment) to add user-defined data to the Tivoli Decision Support for OS/390 table record.

4. For a description of the COLLECT procedure, see the *Language Guide and Reference*.

   For a description of the use of control tables, refer to the *Administration Guide*.

5. **Create reports**, Step 4
   
   A description of how to create new reports is provided in the *Guide to the Reporting Dialog*.

   The reports that are created after installing the SP400 feature are described in Chapter 5, “Reports”, on page 67.
Description of record definitions and logs

Table 5 shows the following:
- The OS/400 log file that the record definition uses
- The Tivoli Decision Support for OS/390 log to which the record belongs
- The Tivoli Decision Support for OS/390 record definition and record definition description
- The SP400 feature component to which the log and the record definitions belong

Table 5. Record definitions and logs used by SP400 feature

<table>
<thead>
<tr>
<th>OS/400 log (see Note 2)</th>
<th>Tivoli Decision Support for OS/390 log definition</th>
<th>Tivoli Decision Support for OS/390 record definition and description (see Note 1)</th>
<th>SP400 feature component</th>
</tr>
</thead>
<tbody>
<tr>
<td>QACGJRN (journal)</td>
<td>OS400_JOURNAL</td>
<td>OS400_ACCT_JOB (accounting job data)</td>
<td>Accounting</td>
</tr>
<tr>
<td>QACGJRN (journal)</td>
<td>OS400_JOURNAL</td>
<td>OS400_ACCT_PRINT (accounting print data)</td>
<td>Accounting</td>
</tr>
<tr>
<td>QARZALLF (config.)</td>
<td>OS400_CONFIG</td>
<td>OS400_CONFIG (configuration data)</td>
<td>Configuration</td>
</tr>
<tr>
<td>QHST (history)</td>
<td>OS400_HISTORY</td>
<td>OS400_HISTORY_MSG (job history data)</td>
<td>Job statistics, Message, Performance</td>
</tr>
<tr>
<td>QAPMSYS (system performance monitor)</td>
<td>OS400_PM_SYS</td>
<td>OS400_PM_SYS (system usage data)</td>
<td>Performance</td>
</tr>
<tr>
<td>QAPMDISK (disk performance monitor)</td>
<td>OS400_PM_DISK</td>
<td>OS400_PM_DISK_5 (disk data) V5R1 OS400_PM_DISK_52 (disk data) V5R2</td>
<td>Performance</td>
</tr>
</tbody>
</table>

Notes:
1. The fields contained in each record definition can easily be displayed when you do the following:
   a. Select 2, Tivoli Decision Support for OS/390 Administration from the Tivoli Decision Support for OS/390 Primary Menu.
   b. Select 3, Logs.
   c. Select the log definition using above table, which contains the record definition you require.
   d. Select the record definition you require, and the fields will be displayed.
2. The OS/400 history log is documented in the *AS/400 CL Programmer’s Guide* The other OS/400 logs are documented in the *AS/400 Work Management Guide*.

The data flow for each SP400 feature component is described in the following sections.
The processing steps shown in Figure 22 are:

1. Log AS/400 performance data.
2. Transmit AS/400 performance data to Tivoli Decision Support for OS/390.
3. Collect the OS/400 log data into Tivoli Decision Support for OS/390 tables, using information from the log definition, record definitions, control tables, and lookup table.
4. Create reports.
Where to look for further information

<table>
<thead>
<tr>
<th>For details of:</th>
<th>Turn to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A description of steps 1, 2, 3, and 4</td>
<td>Page 27</td>
</tr>
<tr>
<td>A description of the record definitions and OS/400 log</td>
<td>Page 28</td>
</tr>
<tr>
<td>OS400_ACCT_JOB_D and OS400_ACCT_JOB_M tables</td>
<td>Page 41</td>
</tr>
<tr>
<td>OS400_ACCT_PRINT_D and OS400_ACCT_PRINT_M tables</td>
<td>Page 43</td>
</tr>
<tr>
<td>Accounting component reports</td>
<td>Page 68</td>
</tr>
</tbody>
</table>

Note: Control tables are explained in the *Administration Guide*. 
The processing steps shown in Figure 23 are:

1. Log AS/400 performance data.
2. Transmit AS/400 performance data to Tivoli Decision Support for OS/390.
3. Collect the OS/400 log data into Tivoli Decision Support for OS/390 tables, using information from the log definition and record definition.
4. Create reports, using lookup table information.
## Where to look for further information

<table>
<thead>
<tr>
<th>For details of:</th>
<th>Turn to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A description of steps 1, 2, 3, and 4</td>
<td>Page 27</td>
</tr>
<tr>
<td>A description of the record definitions and OS/400 log</td>
<td>Page 28</td>
</tr>
<tr>
<td>OS400_CONFIG table</td>
<td>Page 44</td>
</tr>
<tr>
<td>OS400_DASDTYPE lookup table</td>
<td>Page 64</td>
</tr>
<tr>
<td>Configuration component reports</td>
<td>Page 71</td>
</tr>
</tbody>
</table>
The processing steps shown in Figure 24 are:

1. Log AS/400 performance data.
2. Transmit AS/400 performance data to Tivoli Decision Support for OS/390.
3. Collect the OS/400 log data into Tivoli Decision Support for OS/390 tables using information from the log definition, record definition, control tables, and lookup tables.
4. Create reports.
Where to look for further information

<table>
<thead>
<tr>
<th>For details of:</th>
<th>Turn to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A description of steps 1, 2, 3, and 4</td>
<td>Page 27</td>
</tr>
<tr>
<td>A description of the record definitions and OS/400 log</td>
<td>Page 28</td>
</tr>
<tr>
<td>OS400_JOB_STAT_D and OS400_JOB_STAT_M tables</td>
<td>Page 46</td>
</tr>
<tr>
<td>OS400_JOB_ACCTCODE lookup table</td>
<td>Page 63</td>
</tr>
<tr>
<td>OS400_DATE_FORMAT lookup table</td>
<td>Page 65</td>
</tr>
<tr>
<td>Job statistics component reports</td>
<td>Page 78</td>
</tr>
</tbody>
</table>

Note: Control tables are explained in the Administration Guide.
The processing steps shown in Figure 25 are:

1. Log AS/400 performance data.
2. Transmit AS/400 performance data to Tivoli Decision Support for OS/390.
3. Collect the OS/400 log data into Tivoli Decision Support for OS/390 tables, using information from the log definition, record definition, and control tables.
4. Create reports.
### Where to look for further information

<table>
<thead>
<tr>
<th>For details of:</th>
<th>Turn to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A description of steps 1, 2, 3, and 4</td>
<td>Page 27</td>
</tr>
<tr>
<td>A description of the record definitions and OS/400 log</td>
<td>Page 28</td>
</tr>
<tr>
<td>OS400_MSG_STAT_D and OS400_MSG_STAT_M tables</td>
<td>Page 47</td>
</tr>
<tr>
<td>Messages component reports</td>
<td>Page 86</td>
</tr>
</tbody>
</table>

**Note:** Control tables are explained in the *Administration Guide*.  

The processing steps shown in Figure 26 are:

1. Log AS/400 performance data.
2. Transmit AS/400 performance data to Tivoli Decision Support for OS/390.
3. Collect the OS/400 log data into Tivoli Decision Support for OS/390 tables, using information from the log definitions, record definitions, and control tables.
4. Create reports, using lookup table information.
Where to look for further information

<table>
<thead>
<tr>
<th>For details of:</th>
<th>Turn to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A description of steps 1, 2, 3, and 4</td>
<td>Page 27</td>
</tr>
<tr>
<td>A description of the record definitions and OS/400 log</td>
<td>Page 28</td>
</tr>
<tr>
<td>OS400_PM_SYS_JGR_H and OS400_PM_SYS_JGR_D tables</td>
<td>Page 59</td>
</tr>
<tr>
<td>OS400_PM_SYS_H and OS400_PM_SYS_D tables</td>
<td>Page 53</td>
</tr>
<tr>
<td>OS400_PM_DISK_H and OS400_PM_DISK_D tables</td>
<td>Page 49</td>
</tr>
<tr>
<td>OS400_PM_POOL_H and OS400_PM_POOL_D tables</td>
<td>Page 52</td>
</tr>
<tr>
<td>OS400_PERF_SUM_H and OS400_PERF_SUM_D tables</td>
<td>Page 62</td>
</tr>
<tr>
<td>OS400_JOBGROUP lookup table</td>
<td>Page 66</td>
</tr>
<tr>
<td>Performance component reports</td>
<td>Page 94</td>
</tr>
</tbody>
</table>

**Note:** Control tables are explained in the *Administration Guide*. 
Chapter 4. Data tables and lookup tables

The Tivoli Decision Support for OS/390 database is a collection of DB2® tables, where each table contains a fixed number of columns. The number of rows in each table varies with time, because of rows added by the collect function and because of database maintenance.

This chapter describes:

- The naming standard used for defining SP400 feature table names
- How each table is described in this chapter
- The tables used by the accounting component
- The tables used by the configuration component
- The tables used by the job statistics component
- The tables used by the messages component
- The tables used by the performance component
- The lookup tables used by some of the components

Note: For descriptions of common data tables used by the SP400 feature and other Tivoli Decision Support for OS/390 features, refer to the Administration Guide.

Naming standard for tables

The names of SP400 feature tables use this format:

```
OS400_prefix_content_suffix
```

where:

- `prefix` identifies the component (for example, `PERF` for the performance component).
- `content` is a description (for example, `DISK` for the performance component disk statistics).
- `suffix` indicates the summarization level of the data in the table (for example, `PM_DISK_D` for disk performance statistics summarized by day). Table names for the configuration component do not contain suffixes.

A table name can have these summarization-level suffixes:

- `_H` The table holds data summarized by `hour` (hourly data).
- `_D` The table holds data summarized by `day` (daily data).
- `_M` The table holds data summarized by `month` (monthly data).

Note: The configuration, lookup, and control tables do not have a prefix or suffix.

Table descriptions

Each description of a table includes information about the table, a description of each of the key columns, and a description of each of the data columns:

- Key columns are marked like this: `k`. They are sorted in the sequence they appear in the table.
• Data columns follow the last key column and are sorted in alphabetical order with the underscore ignored.

The descriptions of most key columns and data columns contain references to the fields from which they are derived in the record (for example, “From AC_UID”). For an explanation of such fields, refer to the applicable product documentation.

For each component, the tables appear in *alphabetical order*, with underscores and suffixes ignored.

Tables with similar contents (that is, tables with the same name but with different suffixes) are described under one heading. For example, the heading “OS400_PM_DISK_H, _D” covers two similar tables: OS400_PM_DISK_H and OS400_PM_DISK_D. Except for the DATE column, the contents of these tables are identical. Differences that exist in the contents of similar tables are explained in the column descriptions.
Tables in the SP400 feature accounting component

This section describes the following accounting component tables:

- "OS400_ACCT_JOB_D, _M"
- "OS400_ACCT_PRINT_D, _M" on page 43

**OS400_ACCT_JOB_D, _M**

*These tables contain daily and monthly OS/400 job accounting statistics. They contain data from OS400_ACCT_JOB records.*

The default retention periods are:

- 30 days for OS400_ACCT_JOB_D
- 765 days for OS400_ACCT_JOB_M

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>DATE</td>
<td>Date when the record was written. For OS400_ACCT_JOB_M, this is the first day of the month.</td>
</tr>
<tr>
<td>PERIOD_NAME</td>
<td>CHAR(8)</td>
<td>Name of the period. This is derived using fields SYSTEMID, LOGDATE and LOGTIME as parameters in the PERIOD function.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>CHAR(8)</td>
<td>System identification. From SYSTEMID.</td>
</tr>
<tr>
<td>USER_NAME</td>
<td>CHAR(10)</td>
<td>User name. From USERID.</td>
</tr>
<tr>
<td>JOB_NAME</td>
<td>CHAR(10)</td>
<td>Job name. From JOBNAME.</td>
</tr>
<tr>
<td>JOB_TYPE</td>
<td>CHAR(3)</td>
<td>Job type. From JATYPE.</td>
</tr>
<tr>
<td>ACCOUNT_CODE</td>
<td>CHAR(15)</td>
<td>Accounting code. From ACCTCODE.</td>
</tr>
<tr>
<td>COMPLETION_CODE</td>
<td>INTEGER</td>
<td>Job completion code. From JCCDE.</td>
</tr>
<tr>
<td>ACTIVE_SECONDS</td>
<td>FLOAT</td>
<td>Total job active time, in seconds. This is the sum of JAACT.</td>
</tr>
<tr>
<td>COMM_READ_COUNT</td>
<td>INTEGER</td>
<td>Number of communications read operations. This is the sum of JACMGT.</td>
</tr>
<tr>
<td>COMM_WRITE_COUNT</td>
<td>INTEGER</td>
<td>Number of communications write operations. This is the sum of JACMPT.</td>
</tr>
<tr>
<td>CPU_SECONDS</td>
<td>FLOAT</td>
<td>Total processor time, in seconds. This is the sum of JACPU.</td>
</tr>
<tr>
<td>DB_READ_COUNT</td>
<td>INTEGER</td>
<td>Number of database read operations. This is the sum of JADBGT.</td>
</tr>
<tr>
<td>DB_UPDATE_COUNT</td>
<td>INTEGER</td>
<td>Number of database update operations. This is the sum of JADBUP.</td>
</tr>
<tr>
<td>DB_WRITE_COUNT</td>
<td>INTEGER</td>
<td>Number of database write operations. This is the sum of JADBPT.</td>
</tr>
<tr>
<td>ELAPSED_SECONDS</td>
<td>INTEGER</td>
<td>Total elapsed time, in seconds. This is the sum of the interval from JASDTE, JASTME to LOGDATE, LOGTIME.</td>
</tr>
<tr>
<td>IO_ASYNC_COUNT</td>
<td>INTEGER</td>
<td>Number of synchronous auxiliary I/O operations and database operations. This is the sum of JAAUX.</td>
</tr>
<tr>
<td>IO_COUNT</td>
<td>INTEGER</td>
<td>Number of auxiliary I/O. This is the sum of JAAUX.</td>
</tr>
<tr>
<td>JOBS</td>
<td>INTEGER</td>
<td>Number of jobs. This is the count of JOBNAME.</td>
</tr>
<tr>
<td>PRINT_FILE_COUNT</td>
<td>INTEGER</td>
<td>Number of print files. This is the sum of JAPRTF.</td>
</tr>
<tr>
<td>PRINT_LINE_COUNT</td>
<td>INTEGER</td>
<td>Number of print lines. This is the sum of JALINE.</td>
</tr>
<tr>
<td>PRINT_PAGE_COUNT</td>
<td>INTEGER</td>
<td>Number of print pages. This is the sum of JAPAGE.</td>
</tr>
<tr>
<td>ROUTING_STEPS</td>
<td>INTEGER</td>
<td>Number of routing steps. This is the sum of JARTGS.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SUSPEND_SECONDS</td>
<td>FLOAT</td>
<td>Total job suspend time, in seconds. This is the sum of JASP.</td>
</tr>
<tr>
<td>TRANSACTIONS</td>
<td>INTEGER</td>
<td>Number of transactions. This is the sum of JATRNS.</td>
</tr>
<tr>
<td>TRANSACTION_SEC</td>
<td>INTEGER</td>
<td>Total transaction time, in seconds. This is the sum of JATRNT.</td>
</tr>
</tbody>
</table>
These tables contain daily and monthly OS/400 print accounting statistics. They contain data from OS400_ACCT_PRINT records.

The default retention periods are:
30 days for OS400_ACCT_PRINT_D
365 days for OS400_ACCT_PRINT_M

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>DATE</td>
<td>Date when the record was written. From LOGDATE. For OS400_ACCT_PRINT_M, this is the first day of the month.</td>
</tr>
<tr>
<td>PERIOD_NAME</td>
<td>CHAR(8)</td>
<td>Name of the period. This is derived using fields SYSTEMID, LOGDATE, and LOGTIME as parameters in the PERIOD function.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>CHAR(8)</td>
<td>System identification. From SYSTEMID.</td>
</tr>
<tr>
<td>USER_NAME</td>
<td>CHAR(10)</td>
<td>User name. From USERID.</td>
</tr>
<tr>
<td>JOB_NAME</td>
<td>CHAR(10)</td>
<td>Job name. From JOBNAME.</td>
</tr>
<tr>
<td>FORM_TYPE</td>
<td>CHAR(10)</td>
<td>Print form type. From JAFMTP.</td>
</tr>
<tr>
<td>ACCOUNT_CODE</td>
<td>CHAR(15)</td>
<td>Accounting code. From ACCTCODE.</td>
</tr>
<tr>
<td>JOBS</td>
<td>INTEGER</td>
<td>Number of jobs. This is the count of JOBNAME.</td>
</tr>
<tr>
<td>PRINT_BYTE_COUNT</td>
<td>INTEGER</td>
<td>Number of print bytes. This is the sum of JABYTE.</td>
</tr>
<tr>
<td>PRINT_LINE_COUNT</td>
<td>INTEGER</td>
<td>Number of print lines. This is the sum of JATLIN.</td>
</tr>
<tr>
<td>PRINT_PAGE_COUNT</td>
<td>INTEGER</td>
<td>Number of print pages. This is the sum of JATPAG.</td>
</tr>
</tbody>
</table>
**Tables in the SP400 feature configuration component**

This section describes the OS400.CONFIG configuration component table:

**OS400_CONFIG**

This table provides information about the hardware resources of AS/400 systems. It contains data from the OS400_CONFIG record.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>DATE</td>
<td>Date when the record was written. From DORDAT.</td>
</tr>
<tr>
<td>TIME</td>
<td>TIME</td>
<td>Time when the record was written. From DORTIM.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>CHAR(8)</td>
<td>OS/400 system ID. From SYSTEMID.</td>
</tr>
<tr>
<td>RESOURCE_NAME</td>
<td>CHAR(10)</td>
<td>System defined resource name. From DORNAM.</td>
</tr>
<tr>
<td>RESOURCE_SERIAL_NO</td>
<td>CHAR(10)</td>
<td>System defined resource name. From DORNAM.</td>
</tr>
<tr>
<td>CARD_POSITION</td>
<td>CHAR(5)</td>
<td>Alternate card position. From DORACP.</td>
</tr>
<tr>
<td>COLOR_DISPLAY</td>
<td>CHAR(1)</td>
<td>Color-capable display: 0=No, 1=Yes. From DORCOL.</td>
</tr>
<tr>
<td>COMMUN_FUNCTION</td>
<td>CHAR(1)</td>
<td>Communications function: 0=No, 1=Yes. From DOCMNF.</td>
</tr>
<tr>
<td>CONFIG_OBJ_NAME</td>
<td>CHAR(10)</td>
<td>Configuration object name. From DOCFGO.</td>
</tr>
<tr>
<td>COUPLED_SYS_MODEL</td>
<td>CHAR(3)</td>
<td>Coupled system model. From DOSMDL.</td>
</tr>
<tr>
<td>COUPLED_SYS_NAME</td>
<td>CHAR(8)</td>
<td>Coupled system name. From DOSYTM.</td>
</tr>
<tr>
<td>COUPLED_SYS_SRL_NO</td>
<td>CHAR(10)</td>
<td>Coupled system serial number. From DOSSRN.</td>
</tr>
<tr>
<td>COUPLED_SYS_TYPE</td>
<td>CHAR(4)</td>
<td>Coupled system type. From DOSMTP.</td>
</tr>
<tr>
<td>CSA_FUNCTION</td>
<td>CHAR(1)</td>
<td>Coupled System Adapter function: 0=No, 1=Yes. From DOCSAF.</td>
</tr>
<tr>
<td>FRAME_ID</td>
<td>CHAR(4)</td>
<td>Alternate frame identification. From DORAFI.</td>
</tr>
<tr>
<td>KEYBOARD_CODE</td>
<td>CHAR(3)</td>
<td>Keyboard country code. From DORKBD.</td>
</tr>
<tr>
<td>LWS_FUNCTION</td>
<td>CHAR(1)</td>
<td>Local Work Station function: 0=No, 1=Yes. From DOLWSF.</td>
</tr>
<tr>
<td>MAIN_STRG_CAPACITY</td>
<td>INTEGER</td>
<td>Main storage card capacity in MB. From DORMSZ.</td>
</tr>
<tr>
<td>PORT_NUMBER</td>
<td>CHAR(2)</td>
<td>Port number: 00–06. From DORPOR.</td>
</tr>
<tr>
<td>PREV_LEVEL_CONFIG</td>
<td>CHAR(10)</td>
<td>Previous level configuration object name. From DOCFGP.</td>
</tr>
<tr>
<td>PREV_LEVEL_RESOURCE</td>
<td>CHAR(10)</td>
<td>System-defined previous level resource name. From DOCPAR.</td>
</tr>
<tr>
<td>PROCESSOR_FUNCTION</td>
<td>CHAR(1)</td>
<td>Processor function: 0=No, 1=Yes. From DOPRCF.</td>
</tr>
<tr>
<td>PROGRAMMABLE_WS</td>
<td>CHAR(1)</td>
<td>Programmable workstation: 0=No, 1=Yes. From DORIWS.</td>
</tr>
<tr>
<td>RECORD_FORMAT_ID</td>
<td>CHAR(1)</td>
<td>Record format identifier. From DORECF.</td>
</tr>
<tr>
<td>RESOURCE_DESCR</td>
<td>CHAR(2)</td>
<td>Resource description. From DORDSC.</td>
</tr>
<tr>
<td>RESOURCE_FRAME_ID</td>
<td>CHAR(2)</td>
<td>Resource frame identification. From DORRID.</td>
</tr>
<tr>
<td>RESOURCE_LEVEL</td>
<td>CHAR(1)</td>
<td>Resource level. From DORLVL.</td>
</tr>
<tr>
<td>RESOURCE_MODEL</td>
<td>CHAR(3)</td>
<td>Resource model number. From DORMOD.</td>
</tr>
<tr>
<td>RESOURCE_PART_NO</td>
<td>CHAR(12)</td>
<td>Resource part number. From DORPRT.</td>
</tr>
<tr>
<td>RESOURCE_STATUS</td>
<td>CHAR(1)</td>
<td>Resource status. From DORSTS.</td>
</tr>
<tr>
<td>RESOURCE_TYPE</td>
<td>CHAR(4)</td>
<td>Resource type. From DORTYP.</td>
</tr>
<tr>
<td>RES_CARD_POSITION</td>
<td>CHAR(3)</td>
<td>Resource card position. From DORCSL.</td>
</tr>
<tr>
<td>RES_DEV_POSITION</td>
<td>CHAR(4)</td>
<td>Resource device position. From DORDSL.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>RES_DIRECT_ADDRESS</td>
<td>CHAR(4)</td>
<td>Resource direct select address. From DORDSA.</td>
</tr>
<tr>
<td>RES_EIA_LOCATION</td>
<td>CHAR(2)</td>
<td>Resource EIA location. From DOREIA.</td>
</tr>
<tr>
<td>RES_EXTENDED_DESCR</td>
<td>CHAR(2)</td>
<td>Resource extended description. From DOREDS.</td>
</tr>
<tr>
<td>RES_UNIT_ADDRESS</td>
<td>CHAR(8)</td>
<td>Resource unit address. From DORUAA.</td>
</tr>
<tr>
<td>SCREEN_WIDTH</td>
<td>CHAR(1)</td>
<td>Screen width: 0=Standard, 1=Wide. From DORSWD.</td>
</tr>
<tr>
<td>STORAGE_FUNCTION</td>
<td>CHAR(1)</td>
<td>Storage function: 0=Standard, 1=Wide. From DOSTGF.</td>
</tr>
<tr>
<td>SWITCH_SETTING</td>
<td>CHAR(2)</td>
<td>Switch setting: 00–06 From DORSWT.</td>
</tr>
<tr>
<td>SYSTEM_HW_TYPE</td>
<td>CHAR(4)</td>
<td>System hardware type. From DOSTYP.</td>
</tr>
<tr>
<td>SYSTEM_MODEL_NO</td>
<td>CHAR(3)</td>
<td>System model number. From DOSMOD.</td>
</tr>
<tr>
<td>SYSTEM_SERIAL_NO</td>
<td>CHAR(10)</td>
<td>System serial number. From DOSSER.</td>
</tr>
<tr>
<td>TRANSPORT_TYPE_DEF</td>
<td>CHAR(2)</td>
<td>Transport type definition. From DORTTY.</td>
</tr>
<tr>
<td>TRANSP_LOC_FIELD1</td>
<td>CHAR(4)</td>
<td>Transport location field1. From DORTF1.</td>
</tr>
<tr>
<td>TRANSP_LOC_FIELD2</td>
<td>CHAR(4)</td>
<td>Transport location field2. From DORTF2.</td>
</tr>
<tr>
<td>TRANSP_LOC_FIELD3</td>
<td>CHAR(4)</td>
<td>Transport location field3. From DORTF3.</td>
</tr>
<tr>
<td>UNIT_ADDRESS_TYPE</td>
<td>CHAR(2)</td>
<td>Unit Address type. From DORUAT.</td>
</tr>
<tr>
<td>UNIT_ADDR_FIELD1</td>
<td>CHAR(4)</td>
<td>Unit Address field1. From DORUAT1.</td>
</tr>
<tr>
<td>UNIT_ADDR_FIELD2</td>
<td>CHAR(4)</td>
<td>Unit Address field2. From DORUAT2.</td>
</tr>
<tr>
<td>UNIT_ADDR_FIELD3</td>
<td>CHAR(4)</td>
<td>Unit Address field3. From DORUAT3.</td>
</tr>
<tr>
<td>UNIT_ADDR_FIELD4</td>
<td>CHAR(4)</td>
<td>Unit Address field4. From DORUAT4.</td>
</tr>
<tr>
<td>UNIT_ADDR_FIELD5</td>
<td>CHAR(4)</td>
<td>Unit Address field5. From DORUAT5.</td>
</tr>
<tr>
<td>UNIT_POSITION</td>
<td>CHAR(5)</td>
<td>Alternate unit position. From DORADP.</td>
</tr>
<tr>
<td>VERS_RELEASE_MOD</td>
<td>CHAR(6)</td>
<td>Operating system level. From DOSVRM.</td>
</tr>
</tbody>
</table>
Tables in the SP400 feature job statistics component

This section describes the following job statistics component tables:

| OS400_JOB_STAT_D, _M |

These tables provides daily and monthly statistics on OS400 jobs. They contain data from CPF1164 messages in the history file.

The default retention periods are:
- 30 days for OS400_JOB_STAT_D
- 365 days for OS400_JOB_STAT_M

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>DATE</td>
<td>Date when the job ended. From JDEND and JTEND. For OS400_JOB_STAT_M, this is the first day of the month.</td>
</tr>
<tr>
<td>PERIOD_NAME</td>
<td>CHAR(8)</td>
<td>Name of the period. This is derived using fields SYSTEMID, JDEND, and JTEND from the record as parameters in the PERIOD function.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>CHAR(8)</td>
<td>System identification. From SYSTEMID.</td>
</tr>
<tr>
<td>USER_NAME</td>
<td>CHAR(10)</td>
<td>User name. From USERID.</td>
</tr>
<tr>
<td>JOB_NAME</td>
<td>CHAR(10)</td>
<td>Job name. From JOBNAME.</td>
</tr>
<tr>
<td>JOB_TYPE</td>
<td>CHAR(3)</td>
<td>Job type. From JOBTYPE.</td>
</tr>
<tr>
<td>ACCOUNT_CODE</td>
<td>CHAR(15)</td>
<td>Accounting code. From ACCOUNT_CODE in the OS400_JOB_ACCTCODE lookup table. This is derived using fields SYSTEMID, USERID, JOBNAME and JOBTYPE from the record as keys. If no match is found, this column is set to?.</td>
</tr>
<tr>
<td>COMPLETION_CODE</td>
<td>INTEGER</td>
<td>Job completion code. From JOBCC.</td>
</tr>
<tr>
<td>CPU_SECONDS</td>
<td>INTEGER</td>
<td>Total processor time, in seconds. This is the sum of CPUTIME.</td>
</tr>
<tr>
<td>ELAPSED_SECONDS</td>
<td>INTEGER</td>
<td>Total elapsed time, in seconds. This is the sum of the interval from JDSTR, JTSTR to JDEND, JTEND.</td>
</tr>
<tr>
<td>IO_COUNT</td>
<td>INTEGER</td>
<td>Total number of auxiliary I/O. This is the sum of JOBIO.</td>
</tr>
<tr>
<td>JOBS</td>
<td>INTEGER</td>
<td>Total number of jobs. This is the count of MSGID.</td>
</tr>
<tr>
<td>RESPONSE_SECONDS</td>
<td>INTEGER</td>
<td>Total response time, in seconds. This is the sum of JOBRT.</td>
</tr>
<tr>
<td>ROUTING_STEPS</td>
<td>INTEGER</td>
<td>Total number of routing steps. This is the sum of JOBRSTP.</td>
</tr>
<tr>
<td>TRANSACTIONS</td>
<td>INTEGER</td>
<td>Total number of transactions. This is the sum of JOBTR.</td>
</tr>
</tbody>
</table>
Tables in the SP400 feature messages component

This section describes the following message component tables:

- "OS400_MSG_STAT_D, _M"
- "OS400_MSG_STAT_DV, _MV" on page 48

**OS400_MSG_STAT_D, _M**

These tables contain daily and monthly message statistics from the history file. They contain data from messages in the history file.

The default retention periods are:
- 30 days for OS400_MSG_STAT_D
- 365 days for OS400_MSG_STAT_M

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>DATE</td>
<td>Date when the record was written. From LOGCENTURY and LOGDATE. For OS400_MSG_STAT_M, this is the first day of the month.</td>
</tr>
<tr>
<td>PERIOD_NAME</td>
<td>CHAR(8)</td>
<td>Name of the period. This is derived using fields SYSTEMID, LOGCENTURY, LOGDATE and LOGTIME from the record as parameters in the PERIOD function.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>CHAR(8)</td>
<td>System identification. From SYSTEMID.</td>
</tr>
<tr>
<td>USER_NAME</td>
<td>CHAR(10)</td>
<td>User name. From USERID.</td>
</tr>
<tr>
<td>JOB_NAME</td>
<td>CHAR(10)</td>
<td>Job name. From JOBNAME.</td>
</tr>
<tr>
<td>MESSAGE_ID</td>
<td>CHAR(7)</td>
<td>Message identification. From MSGID.</td>
</tr>
<tr>
<td>MESSAGE_TYPE</td>
<td>CHAR(2)</td>
<td>Message type. From MSGTYPE.</td>
</tr>
<tr>
<td>MESSAGE_SEVERITY</td>
<td>CHAR(2)</td>
<td>Severity code. From SEVERITY.</td>
</tr>
<tr>
<td>MESSAGE_FILE</td>
<td>CHAR(10)</td>
<td>Name of message file. From MSGFILE.</td>
</tr>
<tr>
<td>DATA_BYTE_COUNT</td>
<td>INTEGER</td>
<td>Total number of bytes for data. This is the sum of MSGDATA.</td>
</tr>
<tr>
<td>LINE_COUNT</td>
<td>INTEGER</td>
<td>Total number of message lines. Calculated as the sum of (MSGTEXT+MSGDATA+132+132)/132.</td>
</tr>
<tr>
<td>MESSAGE_COUNT</td>
<td>INTEGER</td>
<td>Total number of messages. This is the count of MSGID.</td>
</tr>
<tr>
<td>TEXT_BYTE_COUNT</td>
<td>INTEGER</td>
<td>Total number of bytes for text. This is the sum of MSGTEXT.</td>
</tr>
</tbody>
</table>
**OS400_MSG_STAT_DV, _MV**

These views provide daily and monthly message statistics from the history file. They are based upon the OS400_MSG_STAT_D, _M tables.

The default retention periods are:
- 30 days for OS400_MSG_STAT_DV
- 365 days for OS400_MSG_STAT_MV

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>DATE</td>
<td>Date when the record was written. From LOGCENTURY and LOGDATE. For OS400_MSG_STAT_MV, this is the first day of the month.</td>
</tr>
<tr>
<td>PERIOD_NAME</td>
<td>CHAR(8)</td>
<td>Name of the period. This is derived using fields SYSTEMID, LOGCENTURY, LOGDATE and LOGTIME from the record as parameters in the PERIOD function.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>CHAR(8)</td>
<td>System identification. From SYSTEMID.</td>
</tr>
<tr>
<td>DATA_BYTE_COUNT</td>
<td>INTEGER</td>
<td>Total number of bytes for data. This is the sum of MSGDATA.</td>
</tr>
<tr>
<td>LINE_COUNT</td>
<td>INTEGER</td>
<td>Total number of message lines. Calculated as the sum of (MSGTEXT+MSGDATA+132+132)/132.</td>
</tr>
<tr>
<td>MESSAGE_COUNT</td>
<td>INTEGER</td>
<td>Total number of messages. This is the count of MSGID.</td>
</tr>
<tr>
<td>TEXT_BYTE_COUNT</td>
<td>INTEGER</td>
<td>Total number of bytes for text. This is the sum of MSGTEXT.</td>
</tr>
</tbody>
</table>
Tables in the SP400 feature performance component

This section describes the following performance component tables:

- “OS400_PM_DISK_H, _D” on page 52
- “OS400_PM_POOL_H, _D” on page 52
- “OS400_PM_SYS_H, _D” on page 53
- “OS400_PM_SYS_JGR_H, _D” on page 59
- “OS400_PERF_SUM_H, _D” on page 62

OS400_PM_DISK_H, _D

These tables contain hourly and daily disk performance statistics. They contain data from the performance data file QAPMDISK.

The default retention periods are:
- 30 days for OS400_PM_DISK_H
- 365 days for OS400_PM_DISK_D

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>DATE</td>
<td>Date when the record was written. From LDATE.</td>
</tr>
<tr>
<td>TIME</td>
<td>TIME</td>
<td>Time when the record was written (OS400_PM_DISK_H only). From LTIME.</td>
</tr>
<tr>
<td>PERIOD_NAME</td>
<td>CHAR(8)</td>
<td>Name of the period. This is derived using fields SYSTEMID, LDATE, and LTIME from the record as parameters in the PERIOD function.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>CHAR(8)</td>
<td>System identification. From SYSTEMID.</td>
</tr>
<tr>
<td>IOP_ADDRESS</td>
<td>CHAR(2)</td>
<td>IOP address. From DIOPID.</td>
</tr>
<tr>
<td>DISKARM_NUMBER</td>
<td>CHAR(4)</td>
<td>Disk arm number. From DSARM.</td>
</tr>
<tr>
<td>ACCESS_RATE_AVG</td>
<td>FLOAT</td>
<td>Average arm access rate in I/O per second. Calculated as the average of (DSRDS+DSWRTS)/INTSEC.</td>
</tr>
<tr>
<td>ACCESS_RATE_MAX</td>
<td>FLOAT</td>
<td>Maximum arm access rate in I/O per second. Calculated as the maximum of (DSRDS+DSWRTS)/INTSEC.</td>
</tr>
<tr>
<td>ARM_NOTBUSY_CNT</td>
<td>INTEGER</td>
<td>Sum of times that arm was not busy. This is the sum of DSNBSY.</td>
</tr>
<tr>
<td>ARM_UTIL_AVG</td>
<td>FLOAT</td>
<td>Average arm utilization%. Calculated as the average of 100*(DSSMPL-DSNBSY)/DSSMPL.</td>
</tr>
<tr>
<td>ARM_UTIL_MAX</td>
<td>FLOAT</td>
<td>Maximum arm utilization%. Calculated as the maximum of 100*(DSSMPL-DSNBSY)/DSSMPL.</td>
</tr>
<tr>
<td>AVAILABLE_SPACE_MB</td>
<td>FLOAT</td>
<td>Average of drive available space in megabytes. Calculated as the average of DSAVL/1048576.</td>
</tr>
<tr>
<td>BACK_DIR_READ_CNT</td>
<td>INTEGER</td>
<td>Total number of device read operations on compression directory structures not immediately required to complete host commands. It is 0 for non-compressed units. Calculated as the sum of DSBGDR.</td>
</tr>
<tr>
<td>BACK_DIR_WRT_CNT</td>
<td>INTEGER</td>
<td>Total number of device write operations on compression directory structures not immediately required to complete host commands. It is 0 for non-compressed units. Calculated as the sum of DSBGDW.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>BACK_SWEEPS_CNT</td>
<td>INTEGER</td>
<td>Total number of times a 1 MB compression group was required to be swept not immediately required to complete host system commands. It is 0 for non-compressed units. Calculated as the sum of DSBGS.</td>
</tr>
<tr>
<td>BFR_OVERRUN_CNT</td>
<td>INTEGER</td>
<td>Sum of buffer overruns. This is the sum of DSBUFO.</td>
</tr>
<tr>
<td>BFR_UNDERRUN_CNT</td>
<td>INTEGER</td>
<td>Sum of buffer underruns. This is the sum of DSBUFU.</td>
</tr>
<tr>
<td>BLOCK_READ_COUNT</td>
<td>INTEGER</td>
<td>Number of blocks read. This is the sum of DSBLKR.</td>
</tr>
<tr>
<td>BLOCK_WRITE_COUNT</td>
<td>INTEGER</td>
<td>Number of blocks written. This is the sum of DSBLKW.</td>
</tr>
<tr>
<td>COMP_UNIT_IND</td>
<td>CHAR(1)</td>
<td>Compressed unit indicator. It is 1 if the disk data is compressed, 0 if the disk data is not compressed. From DSCOMP.</td>
</tr>
<tr>
<td>CNTRL_RD_CACHE</td>
<td>INTEGER</td>
<td>Total number of times that the data requested by the read operation could have been obtained from a controller read cache. It is 0 when the extended cache simulator is not enabled. Calculated as the sum of DSCERC.</td>
</tr>
<tr>
<td>DISK_TYPE</td>
<td>CHAR(4)</td>
<td>Disk drive type. From DSTYPE.</td>
</tr>
<tr>
<td>DRIVE_CAPACITY_MB</td>
<td>FLOAT</td>
<td>Average of drive capacity in megabytes. Calculated as the average of DSCAP/1048576.</td>
</tr>
<tr>
<td>FOR_DIR_READ_CNT</td>
<td>INTEGER</td>
<td>Total number of device read operations on compression directory structures needed to complete host system commands. It is 0 for non-compressed units. Calculated as the sum of DSFGDR.</td>
</tr>
<tr>
<td>FOR_DIR_WRT_CNT</td>
<td>INTEGER</td>
<td>Total number of device write operations on compression directory structures needed to complete host system commands. It is 0 for non-compressed units. Calculated as the sum of DSFGDW.</td>
</tr>
<tr>
<td>FOR_EXC_READ_CNT</td>
<td>INTEGER</td>
<td>Total number of additional read operations on compression exception area needed to complete host system commands. It is 0 for non-compressed units. Calculated as the sum of DSFGRE.</td>
</tr>
<tr>
<td>FOR_EXC_WRT_CNT</td>
<td>INTEGER</td>
<td>Total number of additional write operations on compression exception area needed to complete host system commands. It is 0 for non-compressed units. Calculated as the sum of DSFGWE.</td>
</tr>
<tr>
<td>FOR_SWEEPS_CNT</td>
<td>INTEGER</td>
<td>Total number of times a 1 MB compression group was required to be swept to complete host system commands. It is 0 for non-compressed units. Calculated as the sum of DSFGS.</td>
</tr>
<tr>
<td>IOP_UTIL_AVG</td>
<td>FLOAT</td>
<td>Average IOP utilization%. Calculated as the average of 100 * (INTSEC-DSIDLC*DSIDLT / 100000000) / INTSEC.</td>
</tr>
<tr>
<td>IOP_UTIL_MAX</td>
<td>FLOAT</td>
<td>Maximum IOP utilization%. Calculated as the maximum of 100 * (INTSEC-DSIDLC*DSIDLT / 100000000) / INTSEC.</td>
</tr>
<tr>
<td>LOG_BLOCK_ALL_CNT</td>
<td>INTEGER</td>
<td>Total number of logical blocks contained in allocated compression groups. It is 0 for non-compressed units. Calculated as the sum of DLSBA.</td>
</tr>
<tr>
<td>LOG_BLOCK_WRT_CNT</td>
<td>INTEGER</td>
<td>Total number of logical blocks written in the device user data area. It is 0 for non-compressed units. Calculated as the sum of DLSBW.</td>
</tr>
<tr>
<td>MEASURED_SEC</td>
<td>INTEGER</td>
<td>Interval time, in seconds. This is the sum of INTSEC.</td>
</tr>
<tr>
<td>PERM_STOR_AVAIL_MB</td>
<td>FLOAT</td>
<td>Average of permanent storage available in megabytes. Calculated as the average of DSPAVL/1048576.</td>
</tr>
<tr>
<td>PERM_STOR_CAP_MB</td>
<td>FLOAT</td>
<td>Average of permanent storage capacity in megabytes. Calculated as the average of DSPCAP/1048576.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PHYS_BLOCK_ALL_CNT</td>
<td>INTEGER</td>
<td>Total number of physical blocks reserved in the device data area for DASD extents. It is 0 for non-compressed units. Calculated as the sum of DLPBA.</td>
</tr>
<tr>
<td>PHYS_BLOCK_CPR_CNT</td>
<td>INTEGER</td>
<td>Total number of physical blocks used for compression overhead, that is, compression directory structures and other reserved areas. It is 0 for non-compressed units. Calculated as the sum of DSPBCO.</td>
</tr>
<tr>
<td>PHYS_BLOCK_USE_CNT</td>
<td>INTEGER</td>
<td>Total number of physical blocks reserved in the device user data area. It is 0 for non-compressed units. Calculated as the sum of DSPBU.</td>
</tr>
<tr>
<td>QUEUE_ELEMENT_CNT</td>
<td>INTEGER</td>
<td>Total queue elements. This is the sum of DSQUEL.</td>
</tr>
<tr>
<td>QUEUE_LENGTH_AVG</td>
<td>FLOAT</td>
<td>Average queue length. Calculated as the average of DSQUEL/DSSMPL.</td>
</tr>
<tr>
<td>QUEUE_LENGTH_MAX</td>
<td>FLOAT</td>
<td>Maximum queue length. Calculated as the maximum of DSQUEL/DSSMPL.</td>
</tr>
<tr>
<td>READ_DATA_CMD_CNT</td>
<td>INTEGER</td>
<td>Sum of read data commands. This is the sum of DSRDS.</td>
</tr>
<tr>
<td>SAMPLES</td>
<td>INTEGER</td>
<td>Number of intervals. This is the count of INTNUM.</td>
</tr>
<tr>
<td>SAMPLES_2PERSEC</td>
<td>INTEGER</td>
<td>Sum of samples taken at 2 per second. This is the sum of DSSMPL.</td>
</tr>
<tr>
<td>SEARCH_STRCMD_CNT</td>
<td>INTEGER</td>
<td>Number of search string commands. This is the sum of DSSCAN.</td>
</tr>
<tr>
<td>SEEK_EQ_0_CNT</td>
<td>INTEGER</td>
<td>Total number of zero seeks. This is the sum of DSSK6.</td>
</tr>
<tr>
<td>SEEK_GT_1_12_CNT</td>
<td>INTEGER</td>
<td>Total number of seeks arm traveled &gt; 1/12 and &lt; 1/6 on disk. This is the sum of DSSK4.</td>
</tr>
<tr>
<td>SEEK_GT_1_3_CNT</td>
<td>INTEGER</td>
<td>Total number of seeks arm traveled &gt; 1/3 and &lt; 2/3 on disk. This is the sum of DSSK2.</td>
</tr>
<tr>
<td>SEEK_GT_1_6_CNT</td>
<td>INTEGER</td>
<td>Total number of seeks arm traveled &gt; 1/6 and &lt; 1/3 on disk. This is the sum of DSSK3.</td>
</tr>
<tr>
<td>SEEK_GT_2_3_CNT</td>
<td>INTEGER</td>
<td>Total number of seeks arm traveled &gt; 2/3 on disk. This is the sum of DSSK1.</td>
</tr>
<tr>
<td>SEEK_LT_1_12_CNT</td>
<td>INTEGER</td>
<td>Total number of seeks arm traveled &lt; 1/12 on disk. This is the sum of DSSK5.</td>
</tr>
<tr>
<td>SERVICE_TIME_AVG</td>
<td>FLOAT</td>
<td>Average arm service time in seconds. Calculated as the average of ((DSSMPL-DSNBSY)/DSSMPL) / ((DSRDS+DSWRTS)/INTSEC).</td>
</tr>
<tr>
<td>SERVICE_TIME_MAX</td>
<td>FLOAT</td>
<td>Maximum arm service time in seconds. Calculated as the maximum of ((DSSMPL-DSNBSY)/DSSMPL) / ((DSRDS+DSWRTS)/INTSEC).</td>
</tr>
<tr>
<td>WRITE_DATA_CMD_CNT</td>
<td>INTEGER</td>
<td>Sum of write data commands. This is the sum of DSWRTS.</td>
</tr>
</tbody>
</table>
These tables provide hourly and daily storage pool performance statistics. They contain data from the performance data file QAPMPOOL.

The default retention periods are:
- 30 days for **OS400_PM_POOL_H**
- 365 days for **OS400_PM_POOL_D**

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>DATE</td>
<td>Date when the record was written. From LDATE.</td>
</tr>
<tr>
<td>TIME</td>
<td>TIME</td>
<td>Time when the record was written (for <strong>OS400_PM_POOL_H</strong> only). From LTIME.</td>
</tr>
<tr>
<td>PERIOD_NAME</td>
<td>CHAR(8)</td>
<td>Name of the period. This is derived using fields SYSTEMID, LDATE and LTIME from the record as parameters in the PERIOD function.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>CHAR(8)</td>
<td>System identification. From SYSTEMID.</td>
</tr>
<tr>
<td>POOL_NUMBER</td>
<td>CHAR(2)</td>
<td>Pool number. From PONBR.</td>
</tr>
<tr>
<td>ACT_INEL_RTE_MAX</td>
<td>FLOAT</td>
<td>Maximum active to ineligible transitions rate. Calculated as the maximum of POAI/INTSEC.</td>
</tr>
<tr>
<td>ACT_INEL_SUM</td>
<td>INTEGER</td>
<td>Sum of active to ineligible transitions. From POAI.</td>
</tr>
<tr>
<td>ACT_LVL_SET_AVG</td>
<td>FLOAT</td>
<td>Average activity level setting. This is the average of POACTL.</td>
</tr>
<tr>
<td>ACT_LVL_SET_MAX</td>
<td>INTEGER</td>
<td>Maximum activity level setting. This is the maximum of POACTL.</td>
</tr>
<tr>
<td>ACT_LVL_SET_MIN</td>
<td>INTEGER</td>
<td>Minimum activity level setting. This is the minimum of POACTL.</td>
</tr>
<tr>
<td>ACT_WAIT_RTE_MAX</td>
<td>FLOAT</td>
<td>Maximum active to wait transitions rate. Calculated as the maximum of POAW/INTSEC.</td>
</tr>
<tr>
<td>ACT_WAIT_SUM</td>
<td>INTEGER</td>
<td>Sum of active to wait transitions. This is the sum of POAW.</td>
</tr>
<tr>
<td>DB_FAULTRTE_MAX</td>
<td>FLOAT</td>
<td>Maximum database fault rate. Calculated as the maximum of PODBF/INTSEC.</td>
</tr>
<tr>
<td>DB_FAULT_SUM</td>
<td>INTEGER</td>
<td>Sum of database faults. This is the sum of PODBF.</td>
</tr>
<tr>
<td>DBPG_READRTE_MAX</td>
<td>FLOAT</td>
<td>Maximum database page read rate. Calculated as the maximum of PODBPBPG/INTSEC.</td>
</tr>
<tr>
<td>DBPG_READ_SUM</td>
<td>INTEGER</td>
<td>Sum of database pages read. This is the sum of PODBPBPG.</td>
</tr>
<tr>
<td>MEASURED_SEC</td>
<td>INTEGER</td>
<td>Total interval seconds. This is the sum of INTSEC.</td>
</tr>
<tr>
<td>NDB_FAULTRTE_MAX</td>
<td>FLOAT</td>
<td>Maximum non-database fault rate. Calculated as the maximum of PONDBF/INTSEC.</td>
</tr>
<tr>
<td>NDB_FAULT_SUM</td>
<td>INTEGER</td>
<td>Sum of non-database faults. This is the sum of PONDBF.</td>
</tr>
<tr>
<td>NDBPG_READRTE_MAX</td>
<td>FLOAT</td>
<td>Maximum non-database page read rate. Calculated as the maximum of PONDGP/INTSEC.</td>
</tr>
<tr>
<td>NDBPG_READ_SUM</td>
<td>INTEGER</td>
<td>Sum of non-database pages read. This is the sum of PONDGP.</td>
</tr>
<tr>
<td>POOL_SIZE_AVG</td>
<td>FLOAT</td>
<td>Average pool size, in kilobytes. This is the average of POSIZ.</td>
</tr>
<tr>
<td>POOL_SIZE_MAX</td>
<td>INTEGER</td>
<td>Maximum pool size, in kilobytes. This is the maximum of POSIZ.</td>
</tr>
<tr>
<td>POOL_SIZE_MIN</td>
<td>INTEGER</td>
<td>Minimum pool size, in kilobytes. This is the minimum of POSIZ.</td>
</tr>
<tr>
<td>POOL_SIZE_RSV_AVG</td>
<td>FLOAT</td>
<td>Average reserved pool size, in kilobytes. This is the average of PORES.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>POOL_SIZE_RSV_MAX</td>
<td>INTEGER</td>
<td>Maximum reserved pool size, in kilobytes. This is the maximum of PORES.</td>
</tr>
<tr>
<td>POOL_SIZE_RSV_MIN</td>
<td>INTEGER</td>
<td>Minimum reserved pool size, in kilobytes. This is the minimum of PORES.</td>
</tr>
<tr>
<td>SAMPLES</td>
<td>INTEGER</td>
<td>Total number of intervals. This is the count of INTNUM.</td>
</tr>
<tr>
<td>WAIT_INEL_RTE_MAX</td>
<td>FLOAT</td>
<td>Maximum wait to ineligible transitions rate. Calculated as the maximum of POWI/INTSEC.</td>
</tr>
<tr>
<td>WAIT_INEL_SUM</td>
<td>INTEGER</td>
<td>Sum of wait to ineligible transitions. This is the sum of POWI.</td>
</tr>
</tbody>
</table>

**OS400_PM_SYS_H, _D**

These tables contain hourly and daily OS/400 system performance statistics. They contain data from OS400_PM_SYS records in the OS/400 system performance monitor.

The default retention periods are:
- 30 days for OS400_PM_SYS_H
- 365 days for OS400_PM_SYS_D

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>k</td>
<td>DATE Date when the record was written. From LDATE</td>
</tr>
<tr>
<td>TIME</td>
<td>k</td>
<td>TIME Time when the record was written (for OS400_PM_SYS_H only). From LTIME.</td>
</tr>
<tr>
<td>PERIOD_NAME</td>
<td>k</td>
<td>CHAR(8) Name of the period. This is derived using fields SYSTEMID, LDATE, and LTIME as parameters in the PERIOD function.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>k</td>
<td>CHAR(8) OS/400 system ID. From SYSTEMID</td>
</tr>
<tr>
<td>AGMPGFAULT_CNT</td>
<td>INTEGER</td>
<td>Number of access group member page faults. This is the sum of SYAPGF.</td>
</tr>
<tr>
<td>ASYNCH_LOCK_CNT</td>
<td>INTEGER</td>
<td>Number of asynchronous lock conflicts. This is the sum of SYASYL.</td>
</tr>
<tr>
<td>AUTH_LOOKUP_CNT</td>
<td>INTEGER</td>
<td>Number of authority lookups. This is the sum of SYAUTH.</td>
</tr>
<tr>
<td>BNDWRT_INTSYS</td>
<td>INTEGER</td>
<td>Bundle writes to internal system journals. This is the sum of SYJOBD.</td>
</tr>
<tr>
<td>BNDWRT_USRJRN</td>
<td>INTEGER</td>
<td>Bundle writes to user-created journals. This is the sum of SYJOB.</td>
</tr>
<tr>
<td>BUSY_EXC_CNT</td>
<td>INTEGER</td>
<td>Number of busy exceptions. This is the sum of SYBSYC.</td>
</tr>
<tr>
<td>CHANNEL_BUSY_CNT</td>
<td>INTEGER</td>
<td>Number of channel busy occurrences. This is the sum of SYCHNB.</td>
</tr>
<tr>
<td>CPUH_MILLISEC</td>
<td>INTEGER</td>
<td>Number of microseconds of processor time used by microcode or system jobs, or both. This is the sum of SHCPU.</td>
</tr>
<tr>
<td>CPUH_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SHCPU utilization, in percent. Calculated as the maximum of SHCPU/INTSEC/10.</td>
</tr>
<tr>
<td>CPU1_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU1, in milliseconds. This is the sum of SYSCPU.</td>
</tr>
<tr>
<td>CPU1_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU utilization, in percent. Calculated as the maximum of SYSCPU/INTSEC/10.</td>
</tr>
<tr>
<td>CPU2_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU2, in milliseconds. This is the sum of SYSCPU2.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
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<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CPU2_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU2 utilization, in percent. Calculated as the maximum of SYSCPU2/INTSEC/10.</td>
</tr>
<tr>
<td>CPU3_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU3, in milliseconds. This is the sum of SYSCPU3.</td>
</tr>
<tr>
<td>CPU3_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU3 utilization, in percent. Calculated as the maximum of SYSCPU3/INTSEC/10.</td>
</tr>
<tr>
<td>CPU4_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU4, in milliseconds. This is the sum of SYSCPU4.</td>
</tr>
<tr>
<td>CPU4_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU4 utilization, in percent. Calculated as the maximum of SYSCPU4/INTSEC/10.</td>
</tr>
<tr>
<td>CPU5_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU5, in milliseconds. This is the sum of SYSCPU5.</td>
</tr>
<tr>
<td>CPU5_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU5 utilization, in percent. Calculated as the maximum of SYSCPU5/INTSEC/10.</td>
</tr>
<tr>
<td>CPU6_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU6, in milliseconds. This is the sum of SYSCPU6.</td>
</tr>
<tr>
<td>CPU6_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU6 utilization, in percent. Calculated as the maximum of SYSCPU6/INTSEC/10.</td>
</tr>
<tr>
<td>CPU7_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU7, in milliseconds. This is the sum of SYSCPU7.</td>
</tr>
<tr>
<td>CPU7_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU7 utilization, in percent. Calculated as the maximum of SYSCPU7/INTSEC/10.</td>
</tr>
<tr>
<td>CPU8_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU8, in milliseconds. This is the sum of SYSCPU8.</td>
</tr>
<tr>
<td>CPU8_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU8 utilization, in percent. Calculated as the maximum of SYSCPU8/INTSEC/10.</td>
</tr>
<tr>
<td>CPU9_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU9, in milliseconds. This is the sum of SYSCPU9.</td>
</tr>
<tr>
<td>CPU9_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU9 utilization, in percent. Calculated as the maximum of SYSCPU9/INTSEC/10.</td>
</tr>
<tr>
<td>CPU10_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU10, in milliseconds. This is the sum of SYSCPU10.</td>
</tr>
<tr>
<td>CPU10_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU10 utilization, in percent. Calculated as the maximum of SYSCPU10/INTSEC/10.</td>
</tr>
<tr>
<td>CPU11_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU11, in milliseconds. This is the sum of SYSCPU11.</td>
</tr>
<tr>
<td>CPU12_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU12, in milliseconds. This is the sum of SYSCPU12.</td>
</tr>
<tr>
<td>CPU12_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU12 utilization, in percent. Calculated as the maximum of SYSCPU12/INTSEC/10.</td>
</tr>
<tr>
<td>CPU13_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU13, in milliseconds. This is the sum of SYSCPU13.</td>
</tr>
<tr>
<td>CPU13_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU13 utilization, in percent. Calculated as the maximum of SYSCPU13/INTSEC/10.</td>
</tr>
<tr>
<td>CPU14_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU14, in milliseconds. This is the sum of SYSCPU14.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
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<td>-----------------------</td>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CPU14_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU14 utilization, in percent. Calculated as the maximum of SYSCPU14/INTSEC/10.</td>
</tr>
<tr>
<td>CPU15_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU15, in milliseconds. This is the sum of SYSCPU15.</td>
</tr>
<tr>
<td>CPU15_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU15 utilization, in percent. Calculated as the maximum of SYSCPU15/INTSEC/10.</td>
</tr>
<tr>
<td>CPU16_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU16, in milliseconds. This is the sum of SYSCPU16.</td>
</tr>
<tr>
<td>CPU16_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU16 utilization, in percent. Calculated as the maximum of SYSCPU16/INTSEC/10.</td>
</tr>
<tr>
<td>CPU17_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU17, in milliseconds. This is the sum of SYSCPU17.</td>
</tr>
<tr>
<td>CPU17_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU17 utilization, in percent. Calculated as the maximum of SYSCPU17/INTSEC/10.</td>
</tr>
<tr>
<td>CPU18_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU18, in milliseconds. This is the sum of SYSCPU18.</td>
</tr>
<tr>
<td>CPU18_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU18 utilization, in percent. Calculated as the maximum of SYSCPU18/INTSEC/10.</td>
</tr>
<tr>
<td>CPU19_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU19, in milliseconds. This is the sum of SYSCPU19.</td>
</tr>
<tr>
<td>CPU19_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU19 utilization, in percent. Calculated as the maximum of SYSCPU19/INTSEC/10.</td>
</tr>
<tr>
<td>CPU20_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU20, in milliseconds. This is the sum of SYSCPU20.</td>
</tr>
<tr>
<td>CPU20_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU20 utilization, in percent. Calculated as the maximum of SYSCPU20/INTSEC/10.</td>
</tr>
<tr>
<td>CPU21_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU21, in milliseconds. This is the sum of SYSCPU21.</td>
</tr>
<tr>
<td>CPU21_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU21 utilization, in percent. Calculated as the maximum of SYSCPU21/INTSEC/10.</td>
</tr>
<tr>
<td>CPU22_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU22, in milliseconds. This is the sum of SYSCPU22.</td>
</tr>
<tr>
<td>CPU22_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU22 utilization, in percent. Calculated as the maximum of SYSCPU22/INTSEC/10.</td>
</tr>
<tr>
<td>CPU23_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU23, in milliseconds. This is the sum of SYSCPU23.</td>
</tr>
<tr>
<td>CPU23_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU23 utilization, in percent. Calculated as the maximum of SYSCPU23/INTSEC/10.</td>
</tr>
<tr>
<td>CPU24_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU24, in milliseconds. This is the sum of SYSCPU24.</td>
</tr>
<tr>
<td>CPU24_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU24 utilization, in percent. Calculated as the maximum of SYSCPU24/INTSEC/10.</td>
</tr>
<tr>
<td>CPU25_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU25, in milliseconds. This is the sum of SYSCPU25.</td>
</tr>
<tr>
<td>CPU26_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU26, in milliseconds. This is the sum of SYSCPU26.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CPU26_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU26 utilization, in percent. Calculated as the maximum of SYSCPU26/INTSEC/10.</td>
</tr>
<tr>
<td>CPU27_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU27, in milliseconds. This is the sum of SYSCPU27.</td>
</tr>
<tr>
<td>CPU27_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU27 utilization, in percent. Calculated as the maximum of SYSCPU27/INTSEC/10.</td>
</tr>
<tr>
<td>CPU28_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU28, in milliseconds. This is the sum of SYSCPU28.</td>
</tr>
<tr>
<td>CPU28_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU28 utilization, in percent. Calculated as the maximum of SYSCPU28/INTSEC/10.</td>
</tr>
<tr>
<td>CPU29_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU29, in milliseconds. This is the sum of SYSCPU29.</td>
</tr>
<tr>
<td>CPU29_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU29 utilization, in percent. Calculated as the maximum of SYSCPU29/INTSEC/10.</td>
</tr>
<tr>
<td>CPU30_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU30, in milliseconds. This is the sum of SYSCPU30.</td>
</tr>
<tr>
<td>CPU30_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU30 utilization, in percent. Calculated as the maximum of SYSCPU30/INTSEC/10.</td>
</tr>
<tr>
<td>CPU31_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU31, in milliseconds. This is the sum of SYSCPU31.</td>
</tr>
<tr>
<td>CPU31_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU31 utilization, in percent. Calculated as the maximum of SYSCPU31/INTSEC/10.</td>
</tr>
<tr>
<td>CPU32_MILLISEC</td>
<td>INTEGER</td>
<td>Processor time used by CPU32, in milliseconds. This is the sum of SYSCPU32.</td>
</tr>
<tr>
<td>CPU32_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum SYSCPU32 utilization, in percent. Calculated as the maximum of SYSCPU32/INTSEC/10.</td>
</tr>
<tr>
<td>DB_CPU_MSEC</td>
<td>FLOAT</td>
<td>Database CPU time in milliseconds. New with DSD/EWL support. Calculated as the sum of SYSDBC.</td>
</tr>
<tr>
<td>DECDATA_EXC_CNT</td>
<td>INTEGER</td>
<td>Number of decimal data exceptions. This is the sum of SYDECD.</td>
</tr>
<tr>
<td>DISK_UTIL_MAX_CNT</td>
<td>INTEGER</td>
<td>Number of directory page faults. This is the sum of SYDPGF.</td>
</tr>
<tr>
<td>EADDR_LOFL_EXC_CNT</td>
<td>INTEGER</td>
<td>Number of effective address length overflow exceptions. This is the sum of SYEAOL.</td>
</tr>
<tr>
<td>EADDR_OFL_EXC_CNT</td>
<td>INTEGER</td>
<td>Number of effective address overflow exceptions. This is the sum of SYEAOT.</td>
</tr>
<tr>
<td>EXCEPTION_CNT</td>
<td>INTEGER</td>
<td>Number of exceptions. This is the sum of SYEXPN.</td>
</tr>
<tr>
<td>EXP_ACC_PATH_JRN</td>
<td>INTEGER</td>
<td>Exposed access paths currently being journalized by the system. This is the sum of STJOJY.</td>
</tr>
<tr>
<td>EXP_ACC_PATH_NOJRN</td>
<td>INTEGER</td>
<td>Exposed access paths currently not being journalized. This is the sum of STJOJN.</td>
</tr>
<tr>
<td>FALSE_TRAP_CNT</td>
<td>INTEGER</td>
<td>False traps, that is, the number of space address computations that required extra processing. It is the sum of SYHFTS.</td>
</tr>
<tr>
<td>IND_REBLD_CNT</td>
<td>INTEGER</td>
<td>Number of index rebuilds system wide. This is the sum of SYIXRB.</td>
</tr>
<tr>
<td>INTER_FEAT_MSEC</td>
<td>FLOAT</td>
<td>Time used on interactive feature. New with the support of interactive counters. Calculated as the sum of SYIFUS.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
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<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>INT_THRS_EXCD_MSEC</td>
<td>FLOAT</td>
<td>Time used on exceeding the interactive threshold. New with the support of interactive counters. Calculated as the sum of SYIFTE.</td>
</tr>
<tr>
<td>JRNDEP_SYSJRN_TOT</td>
<td>INTEGER</td>
<td>Journal deposits resulting from system-journaled objects–total. This is the sum of SYJOID.</td>
</tr>
<tr>
<td>JRNDEP_SYS_TO_USR</td>
<td>INTEGER</td>
<td>Journal deposits resulting from system-journaled objects to user-created journals. This is the sum of SYJOJP.</td>
</tr>
<tr>
<td>JRNDEP_USRJRN</td>
<td>INTEGER</td>
<td>Journal deposits resulting from user-journaled objects. This is the sum of SYJOXD.</td>
</tr>
<tr>
<td>MCPG_FAULT_CNT</td>
<td>INTEGER</td>
<td>Number of microcode page faults. This is the sum of SYMPGF.</td>
</tr>
<tr>
<td>MEASURED_SEC</td>
<td>INTEGER</td>
<td>Total measurement time, in seconds. This is the sum of INTSEC.</td>
</tr>
<tr>
<td>MPOOL_PG_CNT</td>
<td>INTEGER</td>
<td>Number of machine pool paging operations. This is the sum of SMPLP.</td>
</tr>
<tr>
<td>MPOOL_PG_MAX_CNT</td>
<td>INTEGER</td>
<td>Number of user pool paging operations for pool with highest paging. This is the sum of SMUPL.</td>
</tr>
<tr>
<td>MRT_MAX_SEC</td>
<td>INTEGER</td>
<td>Number of seconds spent at MRTMAX by all multi-requesting terminals. This is the sum of SMMMT.</td>
</tr>
<tr>
<td>MRT_REQ_CNT</td>
<td>INTEGER</td>
<td>Number of requests routed to a multi-requesting terminal. This is the sum of SMMME.</td>
</tr>
<tr>
<td>MTASK_READ_CNT</td>
<td>INTEGER</td>
<td>Number of microtask read operations. This is the sum of SYMCTR.</td>
</tr>
<tr>
<td>MTASK_WRITE_CNT</td>
<td>INTEGER</td>
<td>Number of microtask write operations. This is the sum of SYMCTW.</td>
</tr>
<tr>
<td>OPEN_SYST_CNT</td>
<td>INTEGER</td>
<td>Number of full opens system wide. This is the sum of SYFOPN.</td>
</tr>
<tr>
<td>PERM_TRANS_BLOCK</td>
<td>INTEGER</td>
<td>Number of 512-byte blocks of permanent data transferred from main storage. This is the sum of SYPRMW.</td>
</tr>
<tr>
<td>REDUND_TRANS_BLOCK</td>
<td>INTEGER</td>
<td>Number of 512-byte blocks of redundancy data transferred from main storage. This is the sum of SYXSRW.</td>
</tr>
<tr>
<td>SAMPLES</td>
<td>INTEGER</td>
<td>Total number of measurement intervals. This is the count of INTNUM.</td>
</tr>
<tr>
<td>SEC_WRKLD_CPU_MSEC</td>
<td>FLOAT</td>
<td>Secondary workload CPU in milliseconds. New with DSD/EWL support. Calculated as the sum of SYSSWC.</td>
</tr>
<tr>
<td>SEIZE_WAIT_EXC_CNT</td>
<td>INTEGER</td>
<td>Number of seize wait exceptions. This is the sum of SYSEZC.</td>
</tr>
<tr>
<td>SEIZE_WAIT_TIME</td>
<td>INTEGER</td>
<td>Seize/Wait time in milliseconds. This is the sum of SYSZWT.</td>
</tr>
<tr>
<td>SIZE_EXC_CNT</td>
<td>INTEGER</td>
<td>Number of size exceptions. This is the sum of SYSIZC.</td>
</tr>
<tr>
<td>STPJRN_OP_USR</td>
<td>INTEGER</td>
<td>Stop journal operations initiated by user. This is the sum of SYJOXP.</td>
</tr>
<tr>
<td>STRJRN_OP_USR</td>
<td>INTEGER</td>
<td>Start journal operations initiated by user. This is the sum of SYJOXR.</td>
</tr>
<tr>
<td>STPJRN_OP_SYS</td>
<td>INTEGER</td>
<td>Stop journal operations initiated by system. This is the sum of SYJOIP.</td>
</tr>
<tr>
<td>STRJRN_OP_SYS</td>
<td>INTEGER</td>
<td>Start journal operations initiated by system. This is the sum of SYJOIR.</td>
</tr>
<tr>
<td>SYNCH_LOCK_CNT</td>
<td>INTEGER</td>
<td>Number of synchronous lock conflicts. This is the sum of SYSYNL.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SYSAUX_AVAIL_MB</td>
<td>FLOAT</td>
<td>Number of megabytes of available system auxiliary storage pools space available. Calculated as the average of SYASP/1048576.</td>
</tr>
<tr>
<td>SYS_EST_AP_REC_JRN</td>
<td>INTEGER</td>
<td>System-estimated access path recovery time exposure in milliseconds if no access paths were being journaled by the system. This is the sum of SYJOND.</td>
</tr>
<tr>
<td>SYS_EST_AP_RECOV</td>
<td>INTEGER</td>
<td>System-estimated access path recovery time exposure in milliseconds. This is the sum of SYJOSE.</td>
</tr>
<tr>
<td>SYS_MAN_AP_TADJ</td>
<td>INTEGER</td>
<td>System-managed access path tuning adjustments. This is the sum of SYJORT.</td>
</tr>
<tr>
<td>TRAN_RTM1_CNT</td>
<td>INTEGER</td>
<td>Number of transactions in the 1st RTM bracket. This is the sum of SYLRT1.</td>
</tr>
<tr>
<td>TRAN_RTM2_CNT</td>
<td>INTEGER</td>
<td>Number of transactions in the 2nd RTM bracket. This is the sum of SYLRT2.</td>
</tr>
<tr>
<td>TRAN_RTM3_CNT</td>
<td>INTEGER</td>
<td>Number of transactions in the 3rd RTM bracket. This is the sum of SYLRT3.</td>
</tr>
<tr>
<td>TRAN_RTM4_CNT</td>
<td>INTEGER</td>
<td>Number of transactions in the 4th RTM bracket. This is the sum of SYLRT4.</td>
</tr>
<tr>
<td>TRAN_RTM5_CNT</td>
<td>INTEGER</td>
<td>Number of transactions in the 5th RTM bracket. This is the sum of SYLRT5.</td>
</tr>
<tr>
<td>TR_EAO_EXCEPT_CNT</td>
<td>INTEGER</td>
<td>Teraspace EAO exceptions, that is, the number of tolerated crossings of a 16 MB boundary within any teraspace. It is the sum of SYHEAO.</td>
</tr>
<tr>
<td>TR_FALSE_TRAP_CNT</td>
<td>INTEGER</td>
<td>False traps addressing teraspace, that is, the number of teraspace address computations that required extra processing. It is the sum of SYHFTH.</td>
</tr>
<tr>
<td>VERIFY_COUNT</td>
<td>INTEGER</td>
<td>Number of verifies. This is the sum of SYVFYC.</td>
</tr>
</tbody>
</table>
OS400_PM_SYS_JGR_H, _D

These tables provide hourly and daily OS/400 system performance statistics for job groups. They contain data from OS400_PM_SYS records in the OS/400 system performance monitor.

The default retention periods are:
- 30 days for OS400_PM_SYS_JGR_H
- 365 days for OS400_PM_SYS_JGR_D

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>k DATE</td>
<td>Date when the record was written. From LDATE.</td>
</tr>
<tr>
<td>TIME</td>
<td>k TIME</td>
<td>Time when the record was written (for OS400_PM_SYS_JGR_H only). From LTIME.</td>
</tr>
<tr>
<td>PERIOD_NAME</td>
<td>k CHAR(8)</td>
<td>Name of the period. This is derived using fields SYSTEMID, LDATE, and LTIME as parameters in the PERIOD function.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>k CHAR(8)</td>
<td>OS/400 system ID. From SYSTEMID.</td>
</tr>
<tr>
<td>JOB_GROUP_NUMBER</td>
<td>k INTEGER</td>
<td>Job group number. From SECTNUM(GRP).</td>
</tr>
<tr>
<td>BIN_OFL_CNT</td>
<td>INTEGER</td>
<td>Number of binary overflows. This is the sum of OBIN.</td>
</tr>
<tr>
<td>COMM_READ_COUNT</td>
<td>INTEGER</td>
<td>Number of communications reads. This is the sum of CMGT.</td>
</tr>
<tr>
<td>COMM_WRITE_COUNT</td>
<td>INTEGER</td>
<td>Number of communications writes. This is the sum of CMPT.</td>
</tr>
<tr>
<td>CPU_MILLISEC</td>
<td>INTEGER</td>
<td>Total processing unit time in milliseconds. This is the sum of CPU.</td>
</tr>
<tr>
<td>CPU_UTIL_MAX_PCT</td>
<td>FLOAT</td>
<td>Maximum processor utilization in percent. Calculated as the maximum of CPU/INTSEC/10.</td>
</tr>
<tr>
<td>DB_ASREAD_CNT</td>
<td>INTEGER</td>
<td>Number of asynchronous database reads. This is the sum of ADBR.</td>
</tr>
<tr>
<td>DB_ASWRITE_CNT</td>
<td>INTEGER</td>
<td>Number of asynchronous database writes. This is the sum of ADBW.</td>
</tr>
<tr>
<td>DB_LOG_READ_COUNT</td>
<td>INTEGER</td>
<td>Number of logical database reads. This is the sum of LDBR.</td>
</tr>
<tr>
<td>DB_LOG_WRITE_COUNT</td>
<td>INTEGER</td>
<td>Number of logical database writes. This is the sum of LDBW.</td>
</tr>
<tr>
<td>DB_MISC_OPER_COUNT</td>
<td>INTEGER</td>
<td>Number of miscellaneous database operations. This is the sum of LDBU.</td>
</tr>
<tr>
<td>DBNDB_PS_WRITE_CNT</td>
<td>INTEGER</td>
<td>Number of physical synchronous database and non-database writes. This is the sum of PWRT.</td>
</tr>
<tr>
<td>DB_PS_READ_COUNT</td>
<td>INTEGER</td>
<td>Number of physical synchronous database reads. This is the sum of PDBR.</td>
</tr>
<tr>
<td>DB_SWRITE_CNT</td>
<td>INTEGER</td>
<td>Number of synchronous database writes. This is the sum of DBW.</td>
</tr>
<tr>
<td>DECIMAL_OFL_CNT</td>
<td>INTEGER</td>
<td>Number of decimal overflows. This is the sum of ODEC.</td>
</tr>
<tr>
<td>EADDR_OFL_EXC_CNT</td>
<td>INTEGER</td>
<td>Number of effective address overflow exceptions. This is the sum of EAO.</td>
</tr>
<tr>
<td>EFS_REG_FILE_READS</td>
<td>INTEGER</td>
<td>Enhanced file system regular file reads. This is the sum of XFRFR.</td>
</tr>
<tr>
<td>EFS_REG_FILE_WRITES</td>
<td>INTEGER</td>
<td>Enhanced file system regular file writes. This is the sum of XRFW.</td>
</tr>
<tr>
<td>EFS_SYM_DIR_READS</td>
<td>INTEGER</td>
<td>Enhanced file system directory reads. This is the sum of XDYR.</td>
</tr>
<tr>
<td>EFS_SYM_DR_LC_HITS</td>
<td>INTEGER</td>
<td>Enhanced file system directory lookup cache hits. This is the sum of DLCH.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>EFS_SYM_DR_LC_MISS</td>
<td>INTEGER</td>
<td>Enhanced file system directory lookup cache misses. This is the sum of DLCM.</td>
</tr>
<tr>
<td>EFS_SYM_LINK_READS</td>
<td>INTEGER</td>
<td>Enhanced file system symbolic link reads. This is the sum of XSLR.</td>
</tr>
<tr>
<td>FLIP_OFL_CNT</td>
<td>INTEGER</td>
<td>Number of floating point overflows. This is the sum of OFLP.</td>
</tr>
<tr>
<td>IO_CHECKSUM_CNT</td>
<td>INTEGER</td>
<td>Number of checksum I/Os. This is the sum of CS.</td>
</tr>
<tr>
<td>IO_WAIT_COUNT</td>
<td>INTEGER</td>
<td>Number of waits for asynchronous I/O operations. This is the sum of WIO.</td>
</tr>
<tr>
<td>JOB_END_COUNT</td>
<td>INTEGER</td>
<td>Number of ended jobs. This is the sum of JBTERM.</td>
</tr>
<tr>
<td>JOBS</td>
<td>INTEGER</td>
<td>Total number of jobs. This is the sum of JBCT.</td>
</tr>
<tr>
<td>JOB_START_COUNT</td>
<td>INTEGER</td>
<td>Number of started jobs. This is the sum of JBNWEW.</td>
</tr>
<tr>
<td>MEASURED_SEC</td>
<td>INTEGER</td>
<td>Total measurement time in seconds. This is the sum of INTSEC.</td>
</tr>
<tr>
<td>NBD_PS_READ_COUNT</td>
<td>INTEGER</td>
<td>Number of physical synchronous non-database reads. This is the sum of PNDB.</td>
</tr>
<tr>
<td>NDB_ASRREAD_CNT</td>
<td>INTEGER</td>
<td>Number of asynchronous non-database reads. This is the sum of ANDR.</td>
</tr>
<tr>
<td>NDB_ASRWRITE_CNT</td>
<td>INTEGER</td>
<td>Number of asynchronous non-database writes. This is the sum of ANDW.</td>
</tr>
<tr>
<td>NDB_ASWRITE_CNT</td>
<td>INTEGER</td>
<td>Number of asynchronous non-database writes. This is the sum of ANDW.</td>
</tr>
<tr>
<td>PAGE_FAULT_AUX_CNT</td>
<td>INTEGER</td>
<td>Number of page faults on an address currently part of an auxiliary I/O operation. This is the sum of IPF.</td>
</tr>
<tr>
<td>PAGE_FAULT_CNT</td>
<td>INTEGER</td>
<td>Number of program access group (PAG) faults. This is the sum of PAGF.</td>
</tr>
<tr>
<td>PRINT_LINE_COUNT</td>
<td>INTEGER</td>
<td>Number of print lines. This is the sum of PRTL.</td>
</tr>
<tr>
<td>PRINT_PAGE_COUNT</td>
<td>INTEGER</td>
<td>Number of print pages. This is the sum of PRTP.</td>
</tr>
<tr>
<td>REROUTE_WAIT_MS</td>
<td>INTEGER</td>
<td>Total time a job waited during rerouting in milliseconds. This is the sum of RRTT.</td>
</tr>
<tr>
<td>SAMPLES</td>
<td>INTEGER</td>
<td>Total number of measurement intervals. This is the sum of INTNUM.</td>
</tr>
<tr>
<td>SEIZE_WAIT_TIME</td>
<td>INTEGER</td>
<td>Seize/wait time in milliseconds. This is the sum of SZWT.</td>
</tr>
<tr>
<td>SOCKET_BS_REC_CNT</td>
<td>INTEGER</td>
<td>Number of socket bytes received. This is the sum of SKBR.</td>
</tr>
<tr>
<td>SOCKET_BS_SENT_CNT</td>
<td>INTEGER</td>
<td>Number of socket bytes sent. This is the sum of SKBS.</td>
</tr>
<tr>
<td>SOCKET_RECS_CNT</td>
<td>INTEGER</td>
<td>Number of socket receives. This is the sum of SKRC.</td>
</tr>
<tr>
<td>SOCKET_SEND_CNT</td>
<td>INTEGER</td>
<td>Number of socket sends. This is the sum of SKSC.</td>
</tr>
<tr>
<td>SUSPEND_MILLISEC</td>
<td>INTEGER</td>
<td>Total job suspend time in milliseconds. This is the sum of SPDT.</td>
</tr>
<tr>
<td>TRAN_MILLISEC</td>
<td>INTEGER</td>
<td>Total transaction time in milliseconds. This is the sum of TRNT.</td>
</tr>
<tr>
<td>TRAN_PNO_COUNT</td>
<td>INTEGER</td>
<td>Number of DYNAMIC PURGE(*NO) transactions. This is the sum of PRG.</td>
</tr>
<tr>
<td>TRAN_PYES_COUNT</td>
<td>INTEGER</td>
<td>Number of PURGE(*YES) transactions. This is the sum of BRG.</td>
</tr>
<tr>
<td>TRAN_RATE_MAX</td>
<td>FLOAT</td>
<td>Maximum number of transactions per second. Calculated as the maximum of TRNT/INTSEC.</td>
</tr>
<tr>
<td>TRAN_RESP_MAX_SEC</td>
<td>FLOAT</td>
<td>Maximum transaction response time in seconds. Calculated as the maximum of TRNT/TRNS.</td>
</tr>
<tr>
<td>TRANSACTIONS</td>
<td>INTEGER</td>
<td>Number of transactions. This is the sum of TRNS.</td>
</tr>
<tr>
<td>Column name</td>
<td>Data type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>WRITE_PERM_CNT</td>
<td>INTEGER</td>
<td>Number of permanent writes. This is the sum of PW.</td>
</tr>
</tbody>
</table>
**OS400_PERF_SUM_H, _D**

These tables provide hourly and daily summary performance statistics. They contain data from DRL8003 messages in the history file.

The default retention periods are:
- 30 days for OS400_PERF_SUM_H
- 365 days for OS400_PERF_SUM_D

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>DATE</td>
<td>Date when the record was written. From LOGDATE.</td>
</tr>
<tr>
<td>TIME</td>
<td>TIME</td>
<td>Time when the record was written (for OS400_PERF_SUM_H only). Calculated from LOGTIME and MINT.</td>
</tr>
<tr>
<td>PERIOD_NAME</td>
<td>CHAR(8)</td>
<td>Name of the period. This is derived using the field SYSTEMID and calculations from the fields LOGDATE, LOGTIME and MINT as parameters in the PERIOD function.</td>
</tr>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>CHAR(8)</td>
<td>System identification. From SYSTEMID.</td>
</tr>
<tr>
<td>AUX_STOR_AVAIL_MB</td>
<td>FLOAT</td>
<td>Average of available auxiliary storage, in megabytes. This is the average of AAUX.</td>
</tr>
<tr>
<td>AUX_STOR_MB</td>
<td>FLOAT</td>
<td>Average of total auxiliary storage, in megabytes. This is the average of TAUX.</td>
</tr>
<tr>
<td>CPU_PCT_MAX</td>
<td>FLOAT</td>
<td>Maximum processor time used, in percent. Calculated as the maximum of 100*CPUU/MINT.</td>
</tr>
<tr>
<td>CPU_SECONDS</td>
<td>INTEGER</td>
<td>Total processor time used, in seconds. This is the sum of CPUU.</td>
</tr>
<tr>
<td>IO_COUNT</td>
<td>INTEGER</td>
<td>Sum of I/Os. This is the sum of IOS.</td>
</tr>
<tr>
<td>IO_MAX_RATE</td>
<td>FLOAT</td>
<td>Maximum I/O rate. Calculated as the maximum of IOS/MINT.</td>
</tr>
<tr>
<td>JOB_COUNT</td>
<td>INTEGER</td>
<td>Sum of jobs. This is the sum of TJOBS.</td>
</tr>
<tr>
<td>MEASURED_SEC</td>
<td>INTEGER</td>
<td>Total measurement time, in seconds. This is the sum of MSINT</td>
</tr>
<tr>
<td>PAGE_COUNT</td>
<td>INTEGER</td>
<td>Sum of pages. This is the sum of PAGES.</td>
</tr>
<tr>
<td>PAGE_MAX_RATE</td>
<td>FLOAT</td>
<td>Maximum page rate. Calculated as the maximum of PAGES/MINT.</td>
</tr>
<tr>
<td>SAMPLES</td>
<td>INTEGER</td>
<td>Total number of measurement intervals. This is the count of MSGID.</td>
</tr>
</tbody>
</table>
SP400 feature lookup tables

This section describes the following lookup tables specific to the SP400 feature:

- "OS400_JOB_ACCTCODE"
- "OS400_DASDTYPE" on page 64
- "OS400_JOBGROUP" on page 66

For descriptions of common lookup tables used by the SP400 feature and other Tivoli Decision Support for OS/390 features, refer to the Administration Guide.

OS400_JOB_ACCTCODE

This lookup table is used in the SP400 feature job statistics component and contains account code information. It converts system identification, user name, job name and job type to an accounting code.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS400_SYSTEM_ID</td>
<td>k CHAR(8)</td>
<td>System identification. This field can contain global search characters.</td>
</tr>
<tr>
<td>USER_NAME</td>
<td>k CHAR(10)</td>
<td>User name. This field can contain global search characters.</td>
</tr>
<tr>
<td>JOB_NAME</td>
<td>k CHAR(10)</td>
<td>Job name. This field can contain global search characters.</td>
</tr>
<tr>
<td>JOB_TYPE</td>
<td>k CHAR(3)</td>
<td>Job type. This field can contain global search characters.</td>
</tr>
<tr>
<td>ACCOUNT_CODE</td>
<td>CHAR(15)</td>
<td>Accounting code to be assigned to job</td>
</tr>
</tbody>
</table>

Example of table contents

<table>
<thead>
<tr>
<th>OS400_SYSTEM_ID</th>
<th>USER_NAME</th>
<th>JOB_NAME</th>
<th>JOB_TYPE</th>
<th>ACCOUNT_CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>S44A0061</td>
<td>LENNART</td>
<td>%</td>
<td>%</td>
<td>100000000000000</td>
</tr>
<tr>
<td>S44A0061</td>
<td>ALMOS</td>
<td>%</td>
<td>%</td>
<td>100000000000000</td>
</tr>
<tr>
<td>S44A0061</td>
<td>RAYNER</td>
<td>%</td>
<td>%</td>
<td>400000000000000</td>
</tr>
<tr>
<td>S44A0061</td>
<td>DAVIS</td>
<td>%</td>
<td>B</td>
<td>400000000000000</td>
</tr>
<tr>
<td>S44A0061</td>
<td>DAVIS</td>
<td>%</td>
<td>I</td>
<td>406600000000000</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>999999999999999</td>
</tr>
</tbody>
</table>

The above six table entries are explained as follows:

1. The user LENNART is given the account code 100000000000000 for all job names and all job types in the system S44A0061.
2. The user ALMOS is also given the account code 100000000000000 for all job names and all job types in the system S44A0061.
3. The user RAYNER is given the account code 400000000000000 for all job names and all job types in the system S44A0061.
4. The user DAVIS is given the account code 400000000000000 for all job names with job type B in the system S44A0061.
5. The user DAVIS is given the account code 406600000000000 for all job names with job type I in the system S44A0061.
6. The default account code 999999999999999 is given for all other jobs in all other systems.
**OS400_DASDTYPE**

This lookup table is used in the SP400 feature configuration component to calculate DASD capacity for a device type and model.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVICE_TYPE</td>
<td>k</td>
<td>CHAR(4) Device type</td>
</tr>
<tr>
<td>DEVICE_MODEL</td>
<td>k</td>
<td>CHAR(3) Device model</td>
</tr>
<tr>
<td>MEGABYTE_COUNT</td>
<td>INTEGER</td>
<td>Number of megabytes per actuator</td>
</tr>
</tbody>
</table>

**Example of table contents**

<table>
<thead>
<tr>
<th>DEVICE_TYPE</th>
<th>DEVICE_MODEL</th>
<th>MEGABYTE_COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2800</td>
<td>001</td>
<td>320</td>
</tr>
<tr>
<td>2801</td>
<td></td>
<td>988</td>
</tr>
<tr>
<td>2802</td>
<td></td>
<td>1031</td>
</tr>
<tr>
<td>6100</td>
<td></td>
<td>315</td>
</tr>
<tr>
<td>6102</td>
<td></td>
<td>320</td>
</tr>
<tr>
<td>6103</td>
<td></td>
<td>400</td>
</tr>
<tr>
<td>6104</td>
<td></td>
<td>988</td>
</tr>
<tr>
<td>6105</td>
<td></td>
<td>320</td>
</tr>
<tr>
<td>6107</td>
<td></td>
<td>400</td>
</tr>
<tr>
<td>6109</td>
<td></td>
<td>988</td>
</tr>
<tr>
<td>6601</td>
<td></td>
<td>1031</td>
</tr>
<tr>
<td>6602</td>
<td></td>
<td>1031</td>
</tr>
<tr>
<td>6602</td>
<td>050</td>
<td>1031</td>
</tr>
<tr>
<td>6602</td>
<td>070</td>
<td>1031</td>
</tr>
<tr>
<td>6603</td>
<td>050</td>
<td>1967</td>
</tr>
<tr>
<td>6603</td>
<td>070</td>
<td>1967</td>
</tr>
<tr>
<td>6605</td>
<td>050</td>
<td>1031</td>
</tr>
<tr>
<td>6605</td>
<td>070</td>
<td>1031</td>
</tr>
<tr>
<td>6606</td>
<td></td>
<td>1967</td>
</tr>
<tr>
<td>6606</td>
<td>030</td>
<td>1967</td>
</tr>
<tr>
<td>6606</td>
<td>050</td>
<td>1967</td>
</tr>
<tr>
<td>6606</td>
<td>070</td>
<td>1967</td>
</tr>
<tr>
<td>6607</td>
<td></td>
<td>4194</td>
</tr>
<tr>
<td>6607</td>
<td>050</td>
<td>4194</td>
</tr>
<tr>
<td>6607</td>
<td>070</td>
<td>4194</td>
</tr>
<tr>
<td>6713</td>
<td></td>
<td>8589</td>
</tr>
<tr>
<td>6713</td>
<td>050</td>
<td>8589</td>
</tr>
<tr>
<td>6713</td>
<td>070</td>
<td>8589</td>
</tr>
<tr>
<td>6906</td>
<td>050</td>
<td>8589</td>
</tr>
<tr>
<td>6906</td>
<td>070</td>
<td>8589</td>
</tr>
<tr>
<td>6907</td>
<td></td>
<td>8589</td>
</tr>
<tr>
<td>6907</td>
<td>050</td>
<td>8589</td>
</tr>
<tr>
<td>6907</td>
<td>070</td>
<td>8589</td>
</tr>
<tr>
<td>9332</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>9332</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>9335</td>
<td></td>
<td>855</td>
</tr>
<tr>
<td>9335</td>
<td>801</td>
<td>427</td>
</tr>
<tr>
<td>9336</td>
<td>010</td>
<td>471</td>
</tr>
<tr>
<td>9336</td>
<td>020</td>
<td>857</td>
</tr>
<tr>
<td>9336</td>
<td>025</td>
<td>857</td>
</tr>
<tr>
<td>9337</td>
<td>010</td>
<td>542</td>
</tr>
<tr>
<td>9337</td>
<td>015</td>
<td>542</td>
</tr>
<tr>
<td>9337</td>
<td>020</td>
<td>970</td>
</tr>
<tr>
<td>9337</td>
<td>021</td>
<td>970</td>
</tr>
<tr>
<td>9337</td>
<td>025</td>
<td>970</td>
</tr>
<tr>
<td>9337</td>
<td>040</td>
<td>1967</td>
</tr>
<tr>
<td>9337</td>
<td>041</td>
<td>1967</td>
</tr>
<tr>
<td>9337</td>
<td>110</td>
<td>542</td>
</tr>
</tbody>
</table>
This lookup table is used in the SP400 feature job statistics component and accounting component. It defines the format of the job start and job completion message dates in the QHST file (QDATFMT column) and the format of the date for the journal entry that is generated in the QACGJRN file (DATFMT column).

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTEMID</td>
<td>CHAR(8)</td>
<td>AS/400 system ID</td>
</tr>
<tr>
<td>QDATFMT</td>
<td>CHAR(3)</td>
<td>System date format</td>
</tr>
<tr>
<td>DATFMT</td>
<td>CHAR(3)</td>
<td>Job date format</td>
</tr>
</tbody>
</table>

Example of table contents

<table>
<thead>
<tr>
<th>SYSTEMID</th>
<th>QDATFMT</th>
<th>DATFMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>S44A0061</td>
<td>YMD</td>
<td>DMY</td>
</tr>
<tr>
<td>S4415996</td>
<td>DMY</td>
<td>MDY</td>
</tr>
<tr>
<td>S4440400</td>
<td>JUL</td>
<td>JUL</td>
</tr>
</tbody>
</table>
OS400_JOBGROUP

This lookup table is used in the SP400 feature performance component, and converts job group number to job group name.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOB_GROUP_NUMBER</td>
<td>INTEGER</td>
<td>Job group number</td>
</tr>
<tr>
<td>JOB_GROUP_NAME</td>
<td>CHAR(6)</td>
<td>Job group name</td>
</tr>
</tbody>
</table>

Example of table contents

<table>
<thead>
<tr>
<th>JOB_GROUP_NUMBER</th>
<th>JOB_GROUP_NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A-DDM</td>
</tr>
<tr>
<td>2</td>
<td>A-PCS</td>
</tr>
<tr>
<td>3</td>
<td>A-PTT</td>
</tr>
<tr>
<td>4</td>
<td>B-MRT</td>
</tr>
<tr>
<td>5</td>
<td>B-S/36</td>
</tr>
<tr>
<td>6</td>
<td>B-COMM</td>
</tr>
<tr>
<td>7</td>
<td>B-AUTO</td>
</tr>
<tr>
<td>8</td>
<td>B-BTCH</td>
</tr>
<tr>
<td>9</td>
<td>A-INT</td>
</tr>
<tr>
<td>10</td>
<td>B-CPF</td>
</tr>
</tbody>
</table>

You can find an explanation of the job groups, and see how these job groups are used in the performance component, by referring to the report "OS/400 Perf CPU by Job Group, Hourly Trend" on page 106.
Chapter 5. Reports

The reporting function produces reports based on the data in the Tivoli Decision Support for OS/390 database. Reports can show data from tables or from views. You can request reports online or by submitting batch jobs. Typically, you use online reporting for reports that you use once, and batch reporting for regularly required reports.

This chapter describes:

- The format of the names used to define each report, and how source tables, attributes, and variables are used
- The reports in the accounting component
- The reports in the configuration component
- The reports in the job statistics component
- The reports in the messages component
- The reports in the performance component

Report format and general description

Tivoli Decision Support for OS/390 presents reports in tables or graphs. All reports have the same basic report layout. This section describes the elements that are common among Tivoli Decision Support for OS/390 feature reports:

- Report ID
- Report group
- Source
- Attributes
- Variables

Report ID

Tivoli Decision Support for OS/390 assigns each report a unique identifier. The SP400 feature uses the following format for report IDs:

\[ \text{OS400}y\text{xx} \]

where:

- \( y \) can be:
  - A The accounting component
  - C The configuration component
  - J The job statistics component
  - M The messages component
  - P The performance component
- \( xx \) is a sequential number identifying the report.

Examples:

- OS400A01
- OS400P11
Report group

Tivoli Decision Support for OS/390 uses several predefined report groups. For SP400 feature, each component has one group. The five SP400 feature report groups are given on page 4.

Source Tables

Each report contains information from one or more source tables. The report descriptions in this chapter list source tables. Refer to these tables to learn where certain data originates.

Attributes

Each report has certain attributes associated with it. Use these attributes as keywords to search for specific reports in the dialogs.

You can specify any number of attributes for a report, but these attributes are always present for predefined reports:

- The area to which the report belongs (for example, AS400)
- The task that the report supports:
  - Performance
  - Service
  - Capacity
  - Security
  - Configuration
  - Operation
  - Change
  - Problem
- Resource types, such as storage or processor time
- Performance issues, such as availability or response
- Presentation forms, such as detail, overview, or trend
- Time resolutions, such as hourly, daily, or monthly

Variables

Each report has variables associated with it. You specify the values for these variables when you generate the report using the reporting dialog.

When you specify a date for a monthly report, specify the first day of the month. Otherwise, there is no match in the data table.

If a character variable has only numeric characters, enclose it in single quotation marks, otherwise it will not match the data. For example, if you have a system ID of 1234, specify it as ‘1234’ in the Variables window.

Reports in the accounting component

This section describes the following accounting component reports:

- “OS/400 Acct Job Accounting, Monthly Overview” on page 70
- “OS/400 Acct Print Accounting, Monthly Overview” on page 71

The data flow for the accounting component (including the names of OS/400 logs, Tivoli Decision Support for OS/390 records and tables) is given in “SP400 feature
For a specific OS/400 system in the network, this report (see Figure 27) provides monthly overview information about how much of the resources each user and department has used, summarized by account code. The report can be used as a guide for charging users and departments for the system resources they have used, and is produced by period name (for example, PRIME or NIGHT).

This information identifies the report:

- **Report ID**: OS400A01
- **Report group**: OS/400 Accounting Component Reports
- **Source**: OS400_ACCT_JOB_M (described on page 41)
- **Attributes**: OS400, Acct, Accounting, Job, Monthly, Overview,
- **Variables**: Month, Period name, OS400 system ID

The report contains this information:

- **Account code**: The accounting code.
- **User name**: The user name.
- **Jobs (count)**: The number of jobs.
- **CPU time (hours)**: The total processor time, in hours. This is calculated as \( \text{SUM}(\text{CPU\_SECONDS})/3600 \).
- **I/O (1000s)**: The total number of auxiliary I/Os, in thousands. This is calculated as \( \text{SUM}(\text{IO\_COUNT})/1000 \).
OS/400 Acct Print Accounting, Monthly Overview

For a specific OS/400 system in the network, this report (see Figure 28) provides monthly overview information about how much of the printing resources each user and department has used. The report is produced by period name (for example, PRIME or NIGHT), and can be used as a guide for charging users and departments for the printing resources they have used.

This information identifies the report:

- **Report ID**: OS400A02
- **Report group**: OS/400 Accounting Component Reports
- **Source**: OS400_ACCT_PRINT_M (described on page 43)
- **Attributes**: OS400, Acct, Accounting, Print, Monthly, Overview
- **Variables**: Month, Period name, OS400 system ID

The report contains this information:

<table>
<thead>
<tr>
<th>Account code</th>
<th>User name</th>
<th>Form type</th>
<th>Jobs (count)</th>
<th>Print lines (count)</th>
<th>Print pages (count)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-------------</td>
<td>-----------</td>
<td>-----------</td>
<td>--------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>CHRISTIN</td>
<td>*STD</td>
<td>47</td>
<td>4520</td>
<td>248</td>
<td></td>
</tr>
<tr>
<td>FAXADMIN</td>
<td>*STD</td>
<td>2</td>
<td>157</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>JIVE</td>
<td>*STD</td>
<td>1</td>
<td>17</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>-----------</td>
<td>-----------</td>
<td>--------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>50</td>
<td>4694</td>
<td>254</td>
</tr>
<tr>
<td>NI3</td>
<td>CPOPGMR</td>
<td>*STD</td>
<td>1</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------</td>
<td>-----------</td>
<td>--------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>1</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>51</td>
<td>4706</td>
<td>255</td>
</tr>
</tbody>
</table>

**Figure 28. Example of OS/400 Acct Print Accounting, Monthly Overview**

Reports in the configuration component

This section describes the following configuration component reports:

- “OS/400 Config all Devices, Overview” on page 73
- “OS/400 Config DASD Capacity Overview” on page 74
- “OS/400 Config Main Storage Overview” on page 75
- “OS/400 Config Device Count Type/Model, Overview” on page 76
- “OS/400 Config Device for Specific Type, Overview” on page 77
The data flow for the configuration component (including the names of OS/400 logs, Tivoli Decision Support for OS/390 records, and tables) is given in "SP400 feature configuration component data flow" on page 31.
For a specific OS/400 system in the network, this report (see Figure 29) provides overview information about the hardware resources the system uses.

The following information identifies the report:

**Report ID**  OS436C01  
**Report group**  OS/400 Configuration Component Reports  
**Source**  OS400_CONFIG (described on page 44)  
**Attributes**  OS400, Configuration, HW, Hardware, Device Overview  
**Variables**  Date, OS/400 system ID

The report contains the following information:

<table>
<thead>
<tr>
<th>Resource name</th>
<th>Resource type</th>
<th>Resource serial no</th>
<th>Resource model</th>
<th>Resource part no</th>
<th>Resource status</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCC01</td>
<td>00-000000</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CC01</td>
<td>2617</td>
<td>00-0000000</td>
<td>001</td>
<td>00000085F9107</td>
<td>3</td>
</tr>
<tr>
<td>CC02</td>
<td>2619</td>
<td>00-0000000</td>
<td>001</td>
<td>00000085F9089</td>
<td>3</td>
</tr>
<tr>
<td>CC03</td>
<td>2619</td>
<td>00-0000000</td>
<td>001</td>
<td>00000085F9089</td>
<td>3</td>
</tr>
<tr>
<td>CEC01</td>
<td>9402</td>
<td>44-46067</td>
<td>40S</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CMB01</td>
<td>9128</td>
<td>53-6868135</td>
<td>001</td>
<td>00000085F9107</td>
<td>3</td>
</tr>
<tr>
<td>CMB02</td>
<td>9128</td>
<td>53-6868135</td>
<td>001</td>
<td>00000085F9089</td>
<td>3</td>
</tr>
<tr>
<td>CMN01</td>
<td>2609</td>
<td>53-6885626</td>
<td>001</td>
<td>00000021F4867</td>
<td>3</td>
</tr>
<tr>
<td>CMN02</td>
<td>2609</td>
<td>53-6885626</td>
<td>001</td>
<td>00000021F4867</td>
<td>3</td>
</tr>
<tr>
<td>CMN03</td>
<td>2617</td>
<td>53-6872000</td>
<td>001</td>
<td>00000085F9107</td>
<td>3</td>
</tr>
<tr>
<td>CMN04</td>
<td>2619</td>
<td>53-6859000</td>
<td>001</td>
<td>00000085F9089</td>
<td>3</td>
</tr>
<tr>
<td>CTL01</td>
<td>2661</td>
<td>53-6868135</td>
<td>001</td>
<td>0000085G9701</td>
<td>3</td>
</tr>
<tr>
<td>CTL02</td>
<td>6055</td>
<td>53-6859000</td>
<td>001</td>
<td>0000085F9089</td>
<td>3</td>
</tr>
<tr>
<td>DC01</td>
<td>6606</td>
<td>00-0C18815</td>
<td>030</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DC02</td>
<td>6606</td>
<td>00-0014721</td>
<td>030</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DC03</td>
<td>6606</td>
<td>00-0025034</td>
<td>030</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DC04</td>
<td>6300</td>
<td>00-0231503</td>
<td>030</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DC05</td>
<td>6320</td>
<td>00-000000</td>
<td>002</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>D0001</td>
<td>6606</td>
<td>00-0025034</td>
<td>030</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>D0002</td>
<td>6606</td>
<td>00-0014721</td>
<td>030</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>D0003</td>
<td>6606</td>
<td>00-0C18815</td>
<td>030</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>D0004</td>
<td>5292</td>
<td>00-000000</td>
<td>030</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LIN01</td>
<td>2609</td>
<td>53-6815563</td>
<td>001</td>
<td>00000021F4867</td>
<td>3</td>
</tr>
<tr>
<td>LIN02</td>
<td>2617</td>
<td>53-6872000</td>
<td>001</td>
<td>00000085F9107</td>
<td>3</td>
</tr>
<tr>
<td>LIN03</td>
<td>2619</td>
<td>53-6868135</td>
<td>001</td>
<td>00000085F9089</td>
<td>3</td>
</tr>
<tr>
<td>LIN04</td>
<td>6054</td>
<td>53-6868135</td>
<td>001</td>
<td>00000085F9089</td>
<td>3</td>
</tr>
<tr>
<td>MP01</td>
<td>2110</td>
<td>53-6872010</td>
<td>000</td>
<td>00000085F984</td>
<td>3</td>
</tr>
<tr>
<td>MS01</td>
<td>00-000000</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MS02</td>
<td>00-000000</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>OPT01</td>
<td>6320</td>
<td>00-000000</td>
<td>002</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PN01</td>
<td>2661</td>
<td>00-000000</td>
<td>001</td>
<td>00000021F5772</td>
<td>3</td>
</tr>
<tr>
<td>SP01</td>
<td>9128</td>
<td>53-6868135</td>
<td>001</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>TAP01</td>
<td>6300</td>
<td>00-4231503</td>
<td>001</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WS01</td>
<td>2661</td>
<td>53-6868135</td>
<td>001</td>
<td>0000076G9701</td>
<td>3</td>
</tr>
</tbody>
</table>

**Figure 29. Example of OS/400 Config all Devices, Overview**

The report contains the following information:

- **Resource Name**  The resource name.  
- **Resource Type**  The resource type.  
- **Resource Serial number**  The resource serial number.  
- **Resource Model**  The resource model.  
- **Resource Part number**  The resource part number.  
- **Resource Status**  The resource status.
For each OS/400 system in the network, this report (see Figure 30) provides overview information about the disk devices the system contains. You might use this report when considering disk device changes (replacing, removing, or adding capacity).

The following information identifies the report:

**Report ID**  
OS436C02

**Report group**  
OS/400 Configuration Component Reports

**Source**  
OS400_CONFIG (described on page 44) and OS400_DASDTYPE (described on page 64)

**Attributes**  
OS400, Configuration, HW, Hardware, Disk, DASD, Overview

**Variables**  
Date

The report contains the following information:

<table>
<thead>
<tr>
<th>OS/400 system ID</th>
<th>Resource Type</th>
<th>Resource Model</th>
<th>Device (count)</th>
<th>Capacity (MB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S446R6067</td>
<td>6606</td>
<td>030</td>
<td>6</td>
<td>11802</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>6 11802</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>6</td>
<td>11802</td>
</tr>
</tbody>
</table>

**Figure 30. Example of OS/400 Config DASD Capacity, Overview**

The report contains the following information:

- **OS/400 system ID**: The system identification.
- **Resource Type**: The resource type.
- **Resource Model**: The resource model.
- **Device (count)**: The number of devices.
- **Capacity (MB)**: The sum of drive capacity, in MB.
OS/400 Config Main Storage Overview

For each OS/400 system in the network, this report (see Figure 31) provides overview information about the main storage the system contains. The report also contains the total main storage of all OS/400 systems. You might use this report to control the currently available main storage and, therefore, the number of concurrently active jobs that can run on each OS/400 system.

The following information identifies the report:

**Report ID** OS436C03

**Report group** OS/400 Configuration Component Reports

**Source** OS400_CONFIG (described on page 44)

**Attributes** OS400, Configuration, HW, Hardware, Storage, Overview

**Variables** Date

<table>
<thead>
<tr>
<th>OS/400 system ID</th>
<th>Resource Name</th>
<th>Resource Type</th>
<th>Storage (MB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S4R6067</td>
<td>MS01</td>
<td></td>
<td>815</td>
</tr>
<tr>
<td></td>
<td>MS02</td>
<td></td>
<td>815</td>
</tr>
<tr>
<td></td>
<td>*</td>
<td></td>
<td>1630</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>1630</td>
</tr>
</tbody>
</table>

Figure 31. Example of OS/400 Config Main Storage, Overview

The report contains the following information:

**OS/400 system ID** The system identification.

**Resource Name** The resource name.

**Resource Type** The resource type.

**Storage (MB)** The number of megabytes of main storage.
OS/400 Config Device Count Type/Model, Overview

For each OS/400 system in the network, this report (see Figure 32) provides overview information about their resource types (resource models and number of hardware devices). Detailed information about each resource type is provided in the report OS/400 Config Device for Specific Type, Overview, which contains an example of resource type 2619).

The following information identifies the report:

- **Report ID**: OS436C04
- **Report group**: OS/400 Configuration Component Reports
- **Source**: OS400_CONFIG (described on page 44)
- **Attributes**: OS400, Configuration, HW, Hardware, Device, Overview
- **Variables**: Date

<table>
<thead>
<tr>
<th>OS/400 system ID</th>
<th>Resource Type</th>
<th>Resource Model</th>
<th>Device (count)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S44R6067</td>
<td>2110</td>
<td>000</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2468</td>
<td>001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2609</td>
<td>001</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2617</td>
<td>001</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2619</td>
<td>001</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>2661</td>
<td>001</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>5292</td>
<td>001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>605A</td>
<td>001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6055</td>
<td>001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6320</td>
<td>002</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>6380</td>
<td>001</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>6606</td>
<td>030</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>918B</td>
<td>001</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>9402</td>
<td>405</td>
<td>1</td>
</tr>
</tbody>
</table>

**Figure 32. Example of OS/400 Config Device Count Type/Model, Overview**

The report contains the following information:

- **OS/400 system ID**: The system identification.
- **Resource Type**: The resource type.
- **Resource Model**: The resource model.
- **Device (count)**: The number of devices.
OS/400 Config Device for Specific Type, Overview

For a specific OS/400 system in the network, this report (see Figure 33) provides overview information about the hardware resources that are contained within a resource type.

The following information identifies the report:

Report ID: OS436C05
Report group: OS/400 Configuration Component Reports
Source: OS400_CONFIG (described on page 44)
Attributes: OS400, Configuration, HW, Hardware, Device, Overview
Variables: Date, OS400 system ID, Resource type

The report contains the following information:

**Resource Name**
The resource name.

**Version Release Modification**
The version, release, and modification of the OS/400 system.

**Resource Level**
The resource level.

**Previous Resource Level**
The system-defined previous level resource name.

**System Serial Number**
The serial number of the system.

**Configuration Object Name**
The configuration object name.

**Previous Level Configuration**
The previous level configuration object name.

Figure 33. Example of OS/400 Config Device for Specific Type, Overview
Reports in the job statistics component

This section describes the following job statistics component reports:

- “OS/400 Job Statistics by User, Monthly Overview” on page 79
- “OS/400 Job CPU Usage by User, Monthly Overview” on page 80
- “OS/400 Job Statistics All Systems, Daily Trend” on page 81
- “OS/400 Job Statistics all Systems, Monthly Trend” on page 82
- “OS/400 Job Statistics for a User, Monthly Overview” on page 83
- “OS/400 Job Type Statistics, Monthly Overview” on page 84
- “OS/400 Job Acct from History Log, Monthly Overview” on page 85

The data flow for the job statistics component (including the names of OS/400 logs, Tivoli Decision Support for OS/390 records and tables) is given in “SP400 feature job statistics component data flow” on page 33.

If the SP400 feature accounting component is not installed, these reports could also guide you in deciding how much to charge users for the resources they have used.
OS/400 Job Statistics by User, Monthly Overview

For a specific OS/400 system in the network, this report (see Figure 34) provides monthly overview information about how much of the resources each user has used. The report is summarized by user name and produced by period name (for example, PRIME or NIGHT). A graphical representation of this report’s “user name” and “CPU time” information is provided in “OS/400 Job CPU Usage by User, Monthly Overview” on page 80.

This information identifies the report:

<table>
<thead>
<tr>
<th>Report ID</th>
<th>OS400J01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report group</td>
<td>OS/400 Job Statistics Reports</td>
</tr>
<tr>
<td>Source</td>
<td>OS400_JOB_STAT_M (described on page 46)</td>
</tr>
<tr>
<td>Attributes</td>
<td>OS400, Job, User, Monthly, Overview</td>
</tr>
<tr>
<td>Variables</td>
<td>Month, Period name, OS400 system id,</td>
</tr>
</tbody>
</table>

The report contains this information:

<table>
<thead>
<tr>
<th>User name</th>
<th>Jobs (count)</th>
<th>Elapsed time (hour)</th>
<th>CPU time (hours)</th>
<th>I/O (1000s)</th>
<th>Trans (count)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AURELL</td>
<td>9</td>
<td>77.3</td>
<td>0.33</td>
<td>99</td>
<td>2836</td>
</tr>
<tr>
<td>LENNART</td>
<td>2</td>
<td>1.9</td>
<td>0.09</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>QPGMR</td>
<td>6</td>
<td>8.2</td>
<td>0.03</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>QSECOFR</td>
<td>1</td>
<td>8.5</td>
<td>0.11</td>
<td>39</td>
<td>723</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
<td><strong>87.8</strong></td>
<td><strong>0.48</strong></td>
<td><strong>150</strong></td>
<td><strong>3559</strong></td>
</tr>
</tbody>
</table>

Figure 34. Example of OS/400 Job Statistics by User, Monthly Overview

The report contains this information:

- **User name**: The user name.
- **Jobs (count)**: The number of jobs.
- **Elapsed time (hour)**: The total elapsed time. This is calculated as \( \text{SUM(ELAPSED_SECONDS)}/3600 \).
- **CPU time (hours)**: The processor time, in hours. This is calculated as \( \text{SUM(CPU_SECONDS)}/3600 \).
- **I/O (1000s)**: The total number of auxiliary I/O, in thousands. This is calculated as \( \text{SUM(IO_COUNT)}/1000 \).
- **Trans (count)**: The number of transactions.
OS/400 Job CPU Usage by User, Monthly Overview

For a specific OS/400 system in the network, this graphical display (see Figure 35) shows the processor utilization by a user, during a given month. The display is produced by period name (for example, PRIME or NIGHT). The information used in this display is also included in the report "OS/400 Job Statistics by User, Monthly Overview" on page 79.

This information identifies the report:

- **Report ID**: OS400J02
- **Report group**: OS/400 Job Statistics Reports
- **Source**: OS400_JOB_STAT_M (described on page 46)
- **Chart format**: DRLG4J02
- **Attributes**: OS400, Job, User, CPU, Monthly, Overview
- **Variables**: Month, Period name, OS400 system ID

The report contains this information:

- **User name**: The user name.
- **CPU Time (hours)**: The processor time, in hours. This is calculated as \( \text{SUM(CPU SECONDS)}/3600 \).
OS/400 Job Statistics All Systems, Daily Trend

For each OS/400 system in the network, this report (see Figure 36) provides daily trend information about how much of the system resources are being used. The report is produced by period name (for example, PRIME or NIGHT). You might use the report (for example) to determine when batch jobs can be scheduled. The same information over a monthly trend period, is provided in “OS/400 Job Statistics All Systems, Monthly Trend” on page 82.

This information identifies the report:

Report ID OS400J03
Report group OS/400 Job Statistics Reports
Source OS400_JOB_STAT_D (described on page 46)
Attributes OS400, Job, Daily, Trend
Variables From date, To date, Period name

The report contains this information:

Date
Jobs (count)
Elapsed time (hour)
CPU time (hours)
I/O (1000s)
Trans (count)

Tivoli Decision Support for OS/390 Report: OS400J03

Figure 36. Example of OS/400 Job Statistics all Systems, Daily Trend
OS/400 Job Statistics all Systems, Monthly Trend

For each OS/400 system in the network, this report (see Figure 37) provides monthly trend information about how much of the system resources are being used. The report is summarized by OS/400 system, and is produced by period name (for example, PRIME or NIGHT). You might use the report to anticipate potential resource constraints (for example, if processor usage is increasing over the time-period). The same information over a daily trend period is provided in "OS/400 Job Statistics All Systems, Daily Trend" on page 81.

This information identifies the report:

- **Report ID**: OS400J04
- **Report group**: OS/400 Job Statistics Reports
- **Source**: OS400_JOB_STAT_M (described on page 46)
- **Attributes**: OS400, Job, Monthly, Trend
- **Variables**: From month, To month, Period name

The report contains this information:

- **OS/400 system ID**: The system identification.
- **Month**: The month.
- **Jobs (count)**: The number of jobs.
- **Elapsed time (hour)**: The elapsed time, in hours. This is calculated as \( \text{SUM(ELAPSED SECONDS)} / 3600 \).
- **CPU time (hours)**: The processor time, in hours. This is calculated as \( \text{SUM(CPU SECONDS)} / 3600 \).
- **I/O (1000s)**: The total number of auxiliary I/O, in thousands. This is calculated as \( \text{SUM(IO COUNT)} / 1000 \).

---

**Figure 37. Example of OS/400 Job Statistics all Systems, Monthly Trend**

The report contains this information:
OS/400 Job Statistics for a User, Monthly Overview

For a specific OS/400 system in the network, this report (see Figure 38) provides monthly overview information about how much of the system resources a specific user has used. The report is produced by period name (for example, PRIME or NIGHT).

This information identifies the report:

**Report ID**  OS400J05  
**Report group**  OS/400 Job Statistics Reports  
**Source**  OS400_JOB_STAT_M (described on page 46)  
**Attributes**  OS400, Job, User, Type, Monthly, Overview  
**Variables**  Month, Period name, OS400 system id, User name

The report contains this information:

**Job Type**  The job type.  
**Jobs (count)**  The number of jobs.  
**Elapsed time (hour)**  The elapsed time, in hours. This is calculated as \( \frac{\text{SUM(ELAPSED_SECONDS)}}{3600} \).  
**CPU time (hours)**  The processor time, in hours. This is calculated as \( \frac{\text{SUM(CPU_SECONDS)}}{3600} \).  
**I/O (1000s)**  The total number of auxiliary I/Os, in thousands. This is calculated as \( \frac{\text{SUM(IO_COUNT)}}{1000} \).  
**Trans (count)**  The number of transactions.  
**Total resp (seconds)**  The total response time, in seconds.  
**Average resp (seconds)**  The average response time, in seconds. This is calculated as \( \frac{\text{SUM(RESPONSE_SECONDS)}}{\text{SUM(TRANSATIONS)}} \)

<table>
<thead>
<tr>
<th>Job Type</th>
<th>Jobs (count)</th>
<th>Elapsed time (hours)</th>
<th>CPU time (hours)</th>
<th>I/O (1000s)</th>
<th>Trans (count)</th>
<th>Total resp (seconds)</th>
<th>Average resp (seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>52</td>
<td>43.0</td>
<td>0.52</td>
<td>272</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>I</td>
<td>106</td>
<td>34.3</td>
<td>0.33</td>
<td>99</td>
<td>2836</td>
<td>3159</td>
<td>1.11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>158</strong></td>
<td><strong>77.3</strong></td>
<td><strong>0.85</strong></td>
<td><strong>371</strong></td>
<td><strong>2836</strong></td>
<td><strong>3159</strong></td>
<td><strong>1.11</strong></td>
</tr>
</tbody>
</table>

Figure 38. Example of OS/400 Jobs Statistics for a User, Monthly Overview
OS/400 Job Type Statistics, Monthly Overview

For a specific OS/400 system in the network, this report (see Figure 39) provides monthly overview information about how much resources have been used. The report is produced by period name (for example, PRIME or NIGHT). You might use this report to determine if resources should be re-allocated between processing types batch and online (by increasing or decreasing the main storage pool for a processing type).

This information identifies the report:

Report ID OS400J06
Report group OS/400 Job Statistics Reports
Source OS400_JOB_STAT_M (described on page 46)
Attributes OS400, Job, Type, Monthly, Overview
Variables Month, Period name, OS400 system ID

The report contains this information:

Job Type The job type.
Jobs (count) The number of jobs.
Elapsed time (hours) The elapsed time, in hours. This is calculated as SUM(ELAPSED_SECONDS)/3600.
CPU time (hours) The processor time, in hours. This is calculated as SUM(CPU_SECONDS)/3600.
I/O (1000s) The total number of auxiliary I/Os, in thousands. This is calculated as SUM(IO_COUNT)/1000.
Trans (count) The number of transactions.
OS/400 Job Acct from History Log, Monthly Overview

For a specific OS/400 system in the network, this report (see Figure 40) provides monthly overview information about how much resources have been used by each account code. The report is produced by period name (for example, PRIME or NIGHT).

This information identifies the report:

Report ID OS400J07
Report group OS/400 Job Statistics Reports
Source OS400_JOB_STAT_M (described on page 46)
Attributes OS400, Acct, Accounting, Job, Monthly, Overview
Variables Month, Period name, OS400 system ID

The report contains this information:

<table>
<thead>
<tr>
<th>Account code</th>
<th>User name</th>
<th>Jobs (count)</th>
<th>CPU time (hours)</th>
<th>I/O (1000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>999999999999999</td>
<td>AURELL</td>
<td>51</td>
<td>0.22</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>LENMARK</td>
<td>19</td>
<td>0.01</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>QPGMR</td>
<td>67</td>
<td>0.35</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>QSECOFR</td>
<td>10</td>
<td>0.11</td>
<td>39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>147</strong></td>
<td><strong>0.69</strong></td>
<td><strong>77</strong></td>
</tr>
</tbody>
</table>

**Figure 40. Example of OS/400 Job Acct from History Log, Monthly Overview**

The report contains this information:

Account code The accounting code, taken from the account code lookup table.

User name The user name.

Jobs (count) The number of jobs.

CPU time (hours) The total processor time, in hours. This is calculated as \( \text{SUM} \text{(CPU_SECONDS)/3600} \).

I/O (count) The total number of auxiliary I/O, in thousands. This is calculated as \( \text{SUM} \text{(IO_COUNT)/1000} \).
Reports in the messages component

This section describes the following messages component reports:

- “OS/400 Messages All Systems, Monthly Overview” on page 87
- “OS/400 Messages Most Frequent, Daily Overview” on page 88
- “OS/400 Messages Most Frequent, Monthly Overview” on page 89
- “OS/400 Messages by Sev. Codes, Monthly Overview” on page 90
- “OS/400 Messages for a User, Monthly Overview” on page 91
- “OS/400 Messages by Type, Monthly Overview” on page 92
- “OS/400 Messages by User Name, Monthly Overview” on page 93

The data flow for the messages component (including the names of OS/400 logs, Tivoli Decision Support for OS/390 records and tables) is given in “SP400 feature messages component data flow” on page 35.
OS/400 Messages All Systems, Monthly Overview

For each OS/400 system in the network, this report (see Figure 41) provides monthly overview information about the messages generated. The report is produced by period name (for example, PRIME or NIGHT). Although mainly reference information is given here, you could also use the report to check the amount of data being generated into the OS/400 history log.

This information identifies the report:

- **Report ID**: OS400M01
- **Report group**: OS/400 Messages Component Reports
- **Source**: OS400_MSG_STAT_M (described on page 46)
- **Attributes**: OS400, Message, Monthly, Overview
- **Variables**: From month, To month, Period name

The report contains this information:

- **OS/400 system ID**
- **Month**
- **Messages (count)**
- **Lines (/message)**
- **Text bytes (/message)**
- **Data bytes (/message)**

---

**Tivoli Decision Support for OS/390 Report: OS400M01**

**Figure 41. Example of OS/400 Messages All Systems, Monthly Overview**

The report contains this information:

**OS/400 system ID**

The system identification.

**Month**

The month.

**Messages (count)**

The number of messages.

**Lines (/message)**

The number of print lines per message. This is calculated as \( \text{SUM(LINE_COUNT)}/\text{SUM(MESSAGE_COUNT)} \).

**Text bytes (/message)**

The number of bytes of text per message. This is calculated as \( \text{SUM(TEXT_BYTE_COUNT)}/\text{SUM(MESSAGE_COUNT)} \).

**Data bytes (/message)**

The number of bytes of data per message. This is calculated as \( \text{SUM(DATA_BYTE_COUNT)}/\text{SUM(MESSAGE_COUNT)} \).
OS/400 Messages Most Frequent, Daily Overview

For a specific OS/400 system in the network, this report (see Figure 42) provides daily overview information about the messages generated. The report is produced by period name (for example, PRIME or NIGHT). You could use this report to identify potential problems within an application, since the message ID allows you to differentiate between errors caused by software applications, operational errors, and so on. A monthly summary of the information in this report is provided in “OS/400 Messages Most Frequent, Monthly Overview” on page 89.

This information identifies the report:

- **Report ID**: OS400M02
- **Report group**: OS/400 Messages Component Reports
- **Source**: OS400_MSG_STAT_D (described on page 47)
- **Attributes**: OS400, Message, Daily, Overview
- **Variables**: Date, Period name, OS400 system id, Maxrows

The report contains this information:

<table>
<thead>
<tr>
<th>Message file</th>
<th>Message ID</th>
<th>Messages (count)</th>
<th>Messages (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMOMSGF</td>
<td>AMO8001</td>
<td>24</td>
<td>31.17</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF1884</td>
<td>15</td>
<td>19.48</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF1164</td>
<td>11</td>
<td>14.29</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF590A</td>
<td>5</td>
<td>6.49</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF4058</td>
<td>4</td>
<td>5.19</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF4067</td>
<td>3</td>
<td>3.90</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF3722</td>
<td>3</td>
<td>3.90</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF1124</td>
<td>2</td>
<td>2.60</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF2758</td>
<td>2</td>
<td>2.60</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF1269</td>
<td>2</td>
<td>2.60</td>
</tr>
</tbody>
</table>

Figure 42. Example of OS/400 Messages Most Frequent, Daily Overview

The report contains this information:

- **Date**: The date.
- **Message file**: The name of the message file.
- **Message ID**: The message identification.
- **Messages (count)**: The number of messages.
- **Messages (%)**: The percentage occurrence of a message.
OS/400 Messages Most Frequent, Monthly Overview

For a specific OS/400 system in the network, this report (see Figure 43) provides monthly overview information about the messages generated. The report is produced by period name (for example, PRIME or NIGHT). You could use this report to identify potential problems within an application since the message ID allows you to differentiate between errors caused by software applications, operational errors, and so on. For a daily summary of some of the information in this report, see “OS/400 Messages Most Frequent, Daily Overview” on page 88.

This information identifies the report:

**Report ID** OS400M03  
**Report group** OS/400 Messages Component Reports  
**Source** OS400_MSG_STAT_M (described on page 47)  
**Attributes** OS400, Message, Monthly, Overview  
**Variables** Month, Period name, OS400 system id, Maxrows

<table>
<thead>
<tr>
<th>Message file</th>
<th>Message ID</th>
<th>Messages (count)</th>
<th>Messages (%)</th>
<th>Text bytes (/message)</th>
<th>Data bytes (/message)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMOMSGF</td>
<td>AMO8001</td>
<td>24</td>
<td>31.17</td>
<td>132.00</td>
<td>38.00</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF9941</td>
<td>15</td>
<td>19.48</td>
<td>64.00</td>
<td>34.00</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF1164</td>
<td>11</td>
<td>14.29</td>
<td>132.00</td>
<td>251.00</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF1290A</td>
<td>5</td>
<td>6.49</td>
<td>42.00</td>
<td>10.00</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF4058</td>
<td>4</td>
<td>5.19</td>
<td>45.00</td>
<td>46.00</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPC3722</td>
<td>3</td>
<td>3.90</td>
<td>45.67</td>
<td>217.00</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPA4067</td>
<td>3</td>
<td>3.90</td>
<td>58.00</td>
<td>40.00</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF1124</td>
<td>2</td>
<td>2.60</td>
<td>132.00</td>
<td>266.00</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF2758</td>
<td>2</td>
<td>2.60</td>
<td>39.00</td>
<td>10.00</td>
</tr>
<tr>
<td>QCPFMSG</td>
<td>CPF1269</td>
<td>2</td>
<td>2.60</td>
<td>106.00</td>
<td>93.00</td>
</tr>
</tbody>
</table>

Figure 43. Example of OS/400 Messages Most Frequent, Monthly Overview

The report contains this information:

**Message file** The name of the message file.  
**Message ID** The message identification.  
**Messages (count)** The number of messages.  
**Messages (%)** The percentage occurrence of a message.  
**Text bytes (/message)** The number of bytes of text per message. This is calculated as SUM(TEXT_BYTE_COUNT)/SUM(MESSAGE_COUNT).  
**Data bytes (/message)** The number of bytes of data per message. This is calculated as SUM(DATA_BYTE_COUNT)/SUM(MESSAGE_COUNT).
OS/400 Messages by Sev. Codes, Monthly Overview

For a specific OS/400 system in the network, this report provides monthly overview information about the severity codes of messages generated. The report is produced by period name (for example, PRIME or NIGHT). You could use this report to change the message filter to reduce the numbers of low severity messages that are sent to users.

This information identifies the report:

- **Report ID**: OS400M04
- **Report group**: OS/400 Messages Component Reports
- **Source**: OS400_MSG_STAT_M (described on page 47)
- **Attributes**: OS400, Message, Code, Monthly, Overview
- **Variables**: Month, Period name, OS400 system ID

The report contains this information:

- **Messages severity code**
- **Messages (count)**
- **Messages (%)**

<table>
<thead>
<tr>
<th>Messages severity code</th>
<th>Messages (count)</th>
<th>Messages (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>68</td>
<td>88.31</td>
</tr>
<tr>
<td>40</td>
<td>5</td>
<td>6.49</td>
</tr>
<tr>
<td>99</td>
<td>3</td>
<td>3.90</td>
</tr>
<tr>
<td>30</td>
<td>1</td>
<td>1.30</td>
</tr>
</tbody>
</table>

*Figure 44. Example of OS/400 Messages by Sev. Codes, Monthly Overview*

The message severity code.
The number of messages.
The percentage occurrence of a message.
OS/400 Messages for a User, Monthly Overview

For a specific OS/400 system in the network, this report (see Figure 45) provides monthly overview information about the messages generated for a system user. The report is produced by period name (for example, PRIME or NIGHT). You could use this report to identify problems caused by a user. The message ID allows you to differentiate between errors caused by software applications, operational errors, and so on.

This information identifies the report:

- **Report ID**: OS400M05
- **Report group**: OS/400 Messages Component Reports
- **Source**: OS400_MSG_STAT_M, OS400_MSG_STAT_MV (View) (described on pages 47 and 48 respectively)
- **Attributes**: OS400, Message, User, Monthly, Overview
- **Variables**: Month, Period name, OS400 system id, User, Maxrows

The report contains this information:

- **Message file**: The name of the message file.
- **Message ID**: The message identification.
- **Messages (count)**: The number of messages with the message ID.
- **Messages (%)**: The percentage of messages in the message file with the message ID.
- **Message lines (count)**: The number of message lines.

![Figure 45. Example of OS/400 Messages for a User, Monthly Overview](image)

Chapter 5. Reports  91
OS/400 Messages by Type, Monthly Overview

For a specific OS/400 system in the network, this report (see Figure 46) provides monthly overview information about the message types generated. The report is produced by period name (for example, PRIME or NIGHT). You could use this report for example, to check if the system operator is spending too much time replying to inquiry messages.

This information identifies the report:

Report ID OS400M06
Report group OS/400 Messages Component Reports
Source OS400_MSG_STAT_M (described on page 37)
Attributes OS400, Message, Type, Monthly, Overview
Variables Month, Period name, OS400 system ID

The report contains this information:

<table>
<thead>
<tr>
<th>Message type</th>
<th>Messages (count)</th>
<th>Messages (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>63</td>
<td>81.82</td>
</tr>
<tr>
<td>01</td>
<td>14</td>
<td>18.18</td>
</tr>
</tbody>
</table>

Figure 46. Example of OS/400 Messages by Type, Monthly Overview

The report contains this information:

Message type The message type.
Messages (count) The number of messages.
Messages (%) The percentage of messages with the message type.
OS/400 Messages by User Name, Monthly Overview

For a specific OS/400 system in the network, this report (see Figure 47) provides monthly overview information about the messages generated by the system users. The report is produced by period name (for example, PRIME or NIGHT). You could use this report to identify problems caused by certain users (together with the information from "OS/400 Messages for a User, Monthly Overview" on page 91.

This information identifies the report:

- **Report ID**: OS400M07
- **Report group**: OS/400 Messages Component Reports
- **Source**: OS400_MSG_STAT_M (described on page 47)
- **Attributes**: OS400, Message, User, Monthly, Overview
- **Variables**: Month, Period name, OS400 system id, Maxrows

<table>
<thead>
<tr>
<th>User name</th>
<th>Messages (count)</th>
<th>Messages (%)</th>
<th>Message lines (count)</th>
</tr>
</thead>
<tbody>
<tr>
<td>QSYS</td>
<td>28</td>
<td>36.36</td>
<td>60</td>
</tr>
<tr>
<td>SMAO400</td>
<td>24</td>
<td>31.17</td>
<td>72</td>
</tr>
<tr>
<td>AURELL</td>
<td>11</td>
<td>14.29</td>
<td>41</td>
</tr>
<tr>
<td>QSECOFR</td>
<td>10</td>
<td>12.99</td>
<td>25</td>
</tr>
<tr>
<td>LENNART</td>
<td>4</td>
<td>5.19</td>
<td>17</td>
</tr>
</tbody>
</table>

*Figure 47. Example of OS/400 Messages by User Name, Monthly Overview*

The report contains this information:

- **User name**: The user name.
- **Messages (count)**: The number of messages.
- **Messages (%)**: The percentage occurrence of the message type.
- **Message lines (count)**: The number of message lines for this user.
Reports in the performance component

This section describes the following performance component reports:

- “OS/400 Perf CPU and RTM Statistics, Hourly Trend” on page 95
- “OS/400 Perf Exception and Lock Stat, Hourly Trend” on page 97
- “OS/400 Perf Disk I/O Statistics, Hourly Trend” on page 98
- “OS/400 Perf Disk Capacity Statistics, Hourly Trend” on page 100
- “OS/400 Perf Disk Arm Movements, Hourly Trend” on page 102
- “OS/400 Perf CPU and Trans by Job Group, Hourly Trend” on page 104
- “OS/400 Perf CPU by Job Group, Hourly Trend” on page 106
- “OS/400 Perf Paging Statistics, Hourly Trend” on page 108
- “OS/400 Perf Storage Pool & Act Level, Hourly Trend” on page 110
- “OS/400 Perf Transition Statistics, Hourly Trend” on page 112
- “OS/400 Perf Max & Avg CPU Usage, Hourly Trend” on page 114
- “OS/400 Perf CPU Usage all Systems, Daily Overview” on page 115
- “OS/400 Perf Summary all Systems, Daily Overview” on page 116
- “OS/400 Perf Summary for a System, Daily Trend” on page 118
- “OS/400 Perf Summary for a System, Hourly Trend” on page 120

The data flow for the performance component (including the names of OS/400 logs, Tivoli Decision Support for OS/390 records and tables) is given in “SP400 feature performance component data flow” on page 37.
OS/400 Perf CPU and RTM Statistics, Hourly Trend

For a specific OS/400 system in the network, this report (see Figure 48) provides hourly trend information about the average and maximum percentage processor time used, and the percentage of transactions falling within five response time (RTM) brackets. You can use the report to determine the times of peak processor load, and (for interactive processing) how response time varies during the hourly periods, and how many users have bad response times.

This information identifies the report:

**Report ID** OS400P01

**Report group** OS/400 Performance Component Reports

**Source** OS400_PM_SYS_H (described on page 53)

**Attributes** OS400, Performance, CPU, Utilization, Usage, Hourly, Trend

**Variables** Date, OS400 system ID

The report contains this information:

**Hour** The hour.

**CPU1 avg (%)** The average percentage CPU1. This is calculated as CPU1_MILLISEC/MEASURED_SEC/10.

**CPU1 max (%)** The maximum percentage CPU1.

**CPU2 avg (%)** The average percentage CPU2. This is calculated as CPU2_MILLISEC/MEASURED_SEC/10.

**CPU2 max (%)** The maximum percentage CPU2.

**CPUH avg (%)** The average percentage CPUH. This is calculated as CPUH_MILLISEC/MEASURED_SEC/10.

**CPUH max (%)** The maximum percentage CPUH.

**Trans 1st RTM (%)** The percentage of transactions in the first RTM bracket. This is calculated as TRAN_RTM1_CNT*100/(TRAN_RTM1_CNT + TRAN_RTM2_CNT + TRAN_RTM3_CNT + TRAN_RTM4_CNT + TRAN_RTM5_CNT).

**Trans 2nd RTM (%)** The percentage of transactions in the second RTM bracket. This is calculated as TRAN_RTM2_CNT*100/(TRAN_RTM1_CNT + TRAN_RTM2_CNT + TRAN_RTM3_CNT + TRAN_RTM4_CNT + TRAN_RTM5_CNT).

---

**OS/400 Perf CPU and RTM Statistics, Hourly Trend**

System: 'S44A0001' Date: 2000-05-12

<table>
<thead>
<tr>
<th>Hour</th>
<th>CPU1 avg (%)</th>
<th>CPU1 max (%)</th>
<th>CPU2 avg (%)</th>
<th>CPU2 max (%)</th>
<th>CPUH avg (%)</th>
<th>CPUH max (%)</th>
<th>Trans 1st RTM (%)</th>
<th>Trans 2nd RTM (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>25.5</td>
<td>59.2</td>
<td>0.0</td>
<td>0.0</td>
<td>3.3</td>
<td>5.8</td>
<td>78.1</td>
<td>9.5</td>
</tr>
<tr>
<td>10</td>
<td>29.1</td>
<td>42.5</td>
<td>0.0</td>
<td>0.0</td>
<td>5.1</td>
<td>8.2</td>
<td>72.7</td>
<td>6.7</td>
</tr>
<tr>
<td>11</td>
<td>22.8</td>
<td>40.2</td>
<td>0.0</td>
<td>0.0</td>
<td>5.3</td>
<td>10.2</td>
<td>66.5</td>
<td>2.7</td>
</tr>
<tr>
<td>12</td>
<td>14.0</td>
<td>31.8</td>
<td>0.0</td>
<td>0.0</td>
<td>2.0</td>
<td>4.2</td>
<td>69.6</td>
<td>4.5</td>
</tr>
<tr>
<td>13</td>
<td>6.8</td>
<td>12.4</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>3.7</td>
<td>8.0</td>
<td>0.0</td>
</tr>
<tr>
<td>14</td>
<td>9.6</td>
<td>22.1</td>
<td>0.0</td>
<td>0.0</td>
<td>2.3</td>
<td>9.5</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>15</td>
<td>27.1</td>
<td>58.9</td>
<td>0.0</td>
<td>0.0</td>
<td>4.6</td>
<td>12.2</td>
<td>57.1</td>
<td>21.4</td>
</tr>
</tbody>
</table>

Figure 48. Example of OS/400 Perf CPU and RTM Statistics, Hourly Trend
TRAN_RTM2_CNT + TRAN_RTM3_CNT + 
TRAN_RTM4_CNT + TRAN_RTM5_CNT).

Trans 3rd RTM (%)  
The percentage of transactions in the third RTM 
bracket. This is calculated as 
TRAN_RTM3_CNT*100/ (TRAN_RTM1_CNT + 
TRAN_RTM2_CNT + TRAN_RTM3_CNT + 
TRAN_RTM4_CNT + TRAN_RTM5_CNT).

Trans 4th RTM (%)  
The percentage of transactions in the fourth RTM 
bracket. This is calculated as 
TRAN_RTM4_CNT*100/ (TRAN_RTM1_CNT + 
TRAN_RTM2_CNT + TRAN_RTM3_CNT + 
TRAN_RTM4_CNT + TRAN_RTM5_CNT).

Trans 5th RTM (%)  
The percentage of transactions in the fifth RTM 
bracket. This is calculated as 
TRAN_RTM5_CNT*100/ (TRAN_RTM1_CNT + 
TRAN_RTM2_CNT + TRAN_RTM3_CNT + 
TRAN_RTM4_CNT + TRAN_RTM5_CNT).
OS/400 Perf Exception and Lock Stat, Hourly Trend

For a specific OS/400 system in the network, this report (see Figure 49) provides hourly trend information about exceptions and locks on the system.

This information identifies the report:

Report ID: OS400P02

Report group: OS/400 Performance Component Reports

Source: OS400_PM_SYS_H (described on page 53)

Attributes: OS400, Performance, Exception, Lock, Hourly, Trend

Variables: Date, OS400 system ID

<table>
<thead>
<tr>
<th>Hour</th>
<th>EXPNR (/sec)</th>
<th>EAOLR (/sec)</th>
<th>EAOTR (/sec)</th>
<th>BSYCR (/sec)</th>
<th>SEZCR (/sec)</th>
<th>SIZCR (/sec)</th>
<th>ASYLR (/sec)</th>
<th>SYNLR (/sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>0.58</td>
<td>0.02</td>
<td>0.07</td>
<td>0.35</td>
<td>0.02</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
</tr>
<tr>
<td>17</td>
<td>0.58</td>
<td>0.03</td>
<td>0.16</td>
<td>0.08</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
</tr>
<tr>
<td>18</td>
<td>0.38</td>
<td>0.04</td>
<td>0.20</td>
<td>0.06</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Figure 49. Example of OS/400 Perf Exception and Lock Stat, Hourly Trend

The report contains this information:

Hour: The hour.

EXPNR (/second): The number of exceptions, per second. This is calculated as EXCEPTION_CNT/MEASURED_SEC.

EAOLR (/second): The number of effective address length overflow exceptions, per second. This is calculated as EADDR_LOFL_EXC_CNT/MEASURED_SEC.

EAOTR (/second): The number of effective address overflow exceptions, per second. This is calculated as EADDR_OFL_EXC_CNT/MEASURED_SEC.

BSYCR (/second): The number of busy exceptions, per second. This is calculated as BUSY_EXC_CNT/MEASURED_SEC.

SEZCR (/second): The number of seize wait exceptions, per second. This is calculated as SEIZE_WAIT_EXC_CNT/MEASURED_SEC.

SIZCR (/second): The number of size exceptions, per second. This is calculated as SIZE_EXC_CNT/MEASURED_SEC.

ASYLR (/second): The number of asynchronous lock conflicts, per second. This is calculated as ASYNCH_LOCK_CNT/MEASURED_SEC.

SYNLR (/second): The number of synchronous lock conflicts, per second. This is calculated as SYNCH_LOCK_CNT/MEASURED_SEC.
OS/400 Perf Disk I/O Statistics, Hourly Trend

For a specific OS/400 system in the network, this report (see Figure 50) provides hourly trend information about disk arm utilization. For guidelines on how to interpret this information, refer to the AS/400 Performance Tools/400 Guide.

This information identifies the report:

- **Report ID**: OS400P03
- **Report group**: OS/400 Performance Component Reports
- **Source**: OS400_PM_DISK_H (described on page 49)
- **Attributes**: OS400, Performance, Disk, Dasd, I/O, Hourly, Trend
- **Variables**: Date, OS400 system ID

The report contains this information:

<table>
<thead>
<tr>
<th>Hour</th>
<th>IOP address</th>
<th>Disk arm number</th>
<th>Average access (/second)</th>
<th>Maximum access (/second)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>02</td>
<td>0001</td>
<td>0.5 1.1 0.035 0.056 1.5 2.2 0.0 0.0 5.0 7.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0002</td>
<td>1.4 3.1 0.029 0.056 3.5 8.6 0.1 0.1 6.9 13.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0003</td>
<td>2.3 5.6 0.029 0.035 6.6 17.0 0.1 0.2 11.9 26.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0004</td>
<td>1.6 3.8 0.023 0.033 4.1 10.1 0.0 0.1 6.9 13.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0005</td>
<td>2.0 4.2 0.027 0.031 5.4 11.7 0.1 0.2 9.3 16.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0006</td>
<td>1.5 3.0 0.029 0.042 3.9 6.9 0.0 0.1 5.0 7.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0007</td>
<td>1.9 4.8 0.032 0.045 6.8 16.1 0.1 0.2 11.9 26.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0008</td>
<td>1.9 4.9 0.022 0.028 4.3 18.4 0.0 0.1 9.3 16.8</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>02</td>
<td>0001</td>
<td>0.6 1.3 0.035 0.056 2.1 5.1 0.0 0.1 6.3 15.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0002</td>
<td>2.2 6.0 0.027 0.034 5.7 11.5 0.1 0.1 9.0 21.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0003</td>
<td>3.1 6.9 0.030 0.039 9.5 20.5 0.1 0.2 16.3 28.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0004</td>
<td>1.8 3.0 0.028 0.038 5.2 8.7 0.1 0.1 9.0 12.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0005</td>
<td>1.8 2.7 0.028 0.038 5.1 9.5 0.1 0.1 9.5 14.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0006</td>
<td>1.9 5.7 0.025 0.032 4.9 13.8 0.1 0.2 6.3 15.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0007</td>
<td>2.6 4.3 0.033 0.041 8.4 13.0 0.1 0.2 16.3 28.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0008</td>
<td>2.0 3.2 0.025 0.033 5.2 9.8 0.1 0.1 9.5 14.6</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>02</td>
<td>0001</td>
<td>0.3 0.6 0.028 0.056 0.8 1.5 0.0 0.0 4.3 8.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0002</td>
<td>1.3 3.2 0.027 0.037 3.4 8.3 0.0 0.1 6.2 12.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0003</td>
<td>1.9 4.2 0.029 0.035 5.8 14.4 0.1 0.2 11.2 24.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0004</td>
<td>1.4 2.9 0.024 0.043 3.2 7.2 0.0 0.1 6.2 12.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0005</td>
<td>2.1 4.6 0.027 0.034 5.8 12.6 0.1 0.2 10.3 23.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0006</td>
<td>1.3 3.1 0.025 0.043 3.4 8.0 0.0 0.1 4.3 8.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0007</td>
<td>1.9 4.2 0.030 0.042 6.3 13.8 0.1 0.1 11.2 24.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0008</td>
<td>2.3 5.7 0.027 0.039 6.4 17.2 0.1 0.2 10.3 23.6</td>
<td></td>
</tr>
</tbody>
</table>

Figure 50. Example of OS/400 Perf Disk I/O Statistics, Hourly Trend

The report contains this information:

- **Hour**: The hour.
- **IOP address**: The IOP address.
- **Disk arm number**: The disk arm number.
- **Average access (/second)**: The average access time, per second. This is calculated as \((\text{READ\_DATA\_CMD\_CNT}+\text{WRITE\_DATA\_CMD\_CNT})/\text{MEASURED\_SEC})\).
- **Maximum access (/second)**: The maximum access time, in seconds.
Average service time (seconds)
The average service time, in seconds. This is calculated as
\( \frac{(SAMPLES_{2\text{PERSEC}} - ARM_{\text{NOTBUSY_CNT}})/ SAMPLES_{2\text{PERSEC}}}{((READ\_DATA\_CMD\_CNT + WRITE\_DATA\_CMD\_CNT)/ MEASURED\_SEC)}. \)

Maximum service time (seconds)
The maximum service time, in seconds.

Average diskarm util (%)
The average percentage disk arm utilization. This is calculated as
\( (100(\frac{SAMPLES_{2\text{PERSEC}} - ARM_{\text{NOTBUSY_CNT}}}{SAMPLES_{2\text{PERSEC}}}). \)

Maximum diskarm util (%)
The maximum percentage disk arm utilization.

Average queue length (count)
The average queue length. This is calculated as
\( \frac{\text{QUEUE\_ELEMENT\_CNT}}{\text{SAMPLES}_{2\text{PERSEC}}}. \)

Maximum queue length (count)
The maximum queue length.

Average IOP util (%)
The average percentage IOP utilization. This is calculated as
\( (100\left(\frac{\text{MEASURED\_SEC} - \left(\frac{\text{PROC\_IDLELOOP\_CNT}}{\text{SAMPLES} \times \text{PROC\_IDLELOOP\_HMS}}\right)/100000000}{\text{MEASURED\_SEC}}\right). \)

Maximum IOP util (%)
The maximum percentage IOP utilization.
OS/400 Perf Disk Capacity Statistics, Hourly Trend

For a specific OS/400 system in the network, this report (see Figure 51) provides hourly trend information about the amount of data on each disk. Disk drive capacity should not vary (since disks are not normally added or removed during the day). However the available space will change as the result of files being restored or deleted.

This information identifies the report:

Report ID OS400P04
Report group OS/400 Performance Component Reports
Source OS400_PM_DISK_H (described on page 49)
Attributes OS400, Performance, Disk, Dasd, Usage, Hourly, Trend
Variables Date, OS400 system ID

The report contains this information:

<table>
<thead>
<tr>
<th>Hour</th>
<th>IOP address</th>
<th>Disk arm number</th>
<th>Disk drive type</th>
<th>Available space (MB)</th>
<th>Drive capacity (MB)</th>
<th>Permanent available space (MB)</th>
<th>Permanent drive cap (MB)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>02</td>
<td>0001</td>
<td>9332</td>
<td>0</td>
<td>191</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>02</td>
<td>0002</td>
<td>9332</td>
<td>26</td>
<td>191</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>02</td>
<td>0003</td>
<td>9332</td>
<td>26</td>
<td>191</td>
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<td>11</td>
<td>02</td>
<td>0001</td>
<td>9332</td>
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<td>0</td>
<td>0</td>
</tr>
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<td>0002</td>
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<td>191</td>
<td>0</td>
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<td>0</td>
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<td>0003</td>
<td>9332</td>
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<td>191</td>
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<td>0</td>
</tr>
<tr>
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<td>9332</td>
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<td>9332</td>
<td>22</td>
<td>191</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>02</td>
<td>0008</td>
<td>9332</td>
<td>22</td>
<td>191</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Figure 51. Example of OS/400 Perf Disk Capacity Statistics, Hourly Trend

The report contains this information:

<p>| Hour | The hour. |
| IOP address | The IOP address. |
| Disk arm number | The disk arm number. |
| Disk drive type | The disk drive type. |
| Available space (MB) | The drive available space, in megabytes. This is calculated as AVAILABLE_SPACE_MB/SAMPLES. |</p>
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive capacity (MB)</td>
<td>The drive capacity, in megabytes. This is calculated as DRIVE_CAPACITY_MB/SAMPLES.</td>
</tr>
<tr>
<td>Permanent availspace (MB)</td>
<td>The permanent storage available, in megabytes. This is calculated as PERM_STOR_AVAIL_MB/SAMPLES.</td>
</tr>
<tr>
<td>Permanent drivecap (MB)</td>
<td>The permanent storage capacity, in megabytes. This is calculated as PERM_STOR_CAP_MB/SAMPLES.</td>
</tr>
</tbody>
</table>
OS/400 Perf Disk Arm Movements, Hourly Trend

For a specific OS/400 system in the network, this report (see Figure 52) provides hourly trend information about the seek (disk arm) movements, total seeks, and the average seek service time. The disk arm movements are broken down into six category of seek movements: from zero seek movement, to seek movements greater than two-thirds of the disk space. For guidelines on how to interpret this information, refer to the AS/400 Performance Tools/400 Guide.

This information identifies the report:

- **Report ID**: OS400P05
- **Report group**: OS/400 Performance Component Reports
- **Source**: OS400_PM_DISK_H (described on page 49)
- **Attributes**: OS400, Performance, Disk, Dasd, Hourly, Trend
- **Variables**: Date, OS400 system ID

The report contains this information:

<table>
<thead>
<tr>
<th>Hour</th>
<th>Disk arm number</th>
<th>Disk drive type</th>
<th>Zero seeks (%)</th>
<th>Seeks &lt;1/12</th>
<th>Seeks &lt;1/6</th>
<th>Seeks &lt;2/3</th>
<th>Seeks &gt;2/3</th>
<th>Average service time (seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>0001</td>
<td>2800</td>
<td>13</td>
<td>27</td>
<td>13</td>
<td>9</td>
<td>13</td>
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<tr>
<td></td>
<td>0002</td>
<td>2800</td>
<td>20</td>
<td>27</td>
<td>12</td>
<td>19</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0003</td>
<td>2800</td>
<td>16</td>
<td>29</td>
<td>20</td>
<td>15</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0004</td>
<td>2800</td>
<td>13</td>
<td>31</td>
<td>13</td>
<td>18</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td>17</td>
<td>0001</td>
<td>2800</td>
<td>20</td>
<td>25</td>
<td>12</td>
<td>6</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>0002</td>
<td>2800</td>
<td>22</td>
<td>25</td>
<td>11</td>
<td>18</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0003</td>
<td>2800</td>
<td>19</td>
<td>27</td>
<td>16</td>
<td>20</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0004</td>
<td>2800</td>
<td>17</td>
<td>28</td>
<td>14</td>
<td>17</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td>18</td>
<td>0001</td>
<td>2800</td>
<td>18</td>
<td>27</td>
<td>12</td>
<td>6</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>0002</td>
<td>2800</td>
<td>21</td>
<td>27</td>
<td>11</td>
<td>18</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0003</td>
<td>2800</td>
<td>22</td>
<td>25</td>
<td>15</td>
<td>21</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0004</td>
<td>2800</td>
<td>21</td>
<td>26</td>
<td>14</td>
<td>16</td>
<td>23</td>
<td>0</td>
</tr>
</tbody>
</table>

Figure 52. Example of OS/400 Perf Disk Arm Movements, Hourly Trend

The report contains this information:

- **Hour**: The hour.
- **Disk arm number**: The disk arm number.
- **Disk drive type**: The disk drive type.
- **Zero seeks (%)**: The percentage of zero seeks. This is calculated as
  \[
  \text{SEEK\_EQ\_0\_CNT} \times 100 / (\text{SEEK\_GT\_2\_3\_CNT} + \text{SEEK\_GT\_1\_3\_CNT} + \text{SEEK\_GT\_1\_6\_CNT} + \text{SEEK\_GT\_1\_12\_CNT} + \text{SEEK\_LT\_1\_12\_CNT} + \text{SEEK\_EQ\_0\_CNT}).
  \]
Seeks <1/12 (%)
The percentage of seeks less than 1/12. This is calculated as
\[
\frac{\text{SEEK_LT}_1\text{.12_CNT}}{\text{SEEK_GT}_2\text{.3_CNT} + \text{SEEK_GT}_1\text{.3_CNT} + \text{SEEK_GT}_1\text{.6_CNT} + \text{SEEK_GT}_1\text{.12_CNT} + \text{SEEK_LT}_1\text{.12_CNT} + \text{SEEK_EQ}_0\text{.CNT}} \times 100
\]

Seeks < 1/6 (%)
The percentage of seeks less than 1/6. This is calculated as
\[
\frac{\text{SEEK_LT}_1\text{.6_CNT}}{\text{SEEK_GT}_2\text{.3_CNT} + \text{SEEK_GT}_1\text{.3_CNT} + \text{SEEK_GT}_1\text{.6_CNT} + \text{SEEK_GT}_1\text{.12_CNT} + \text{SEEK_LT}_1\text{.12_CNT} + \text{SEEK_EQ}_0\text{.CNT}} \times 100
\]

Seeks < 1/3 (%)
The percentage of seeks less than 1/3. This is calculated as
\[
\frac{\text{SEEK_LT}_1\text{.3_CNT}}{\text{SEEK_GT}_2\text{.3_CNT} + \text{SEEK_GT}_1\text{.3_CNT} + \text{SEEK_GT}_1\text{.6_CNT} + \text{SEEK_GT}_1\text{.12_CNT} + \text{SEEK_LT}_1\text{.12_CNT} + \text{SEEK_EQ}_0\text{.CNT}} \times 100
\]

Seeks < 2/3 (%)
The percentage of seeks less than 2/3. This is calculated as
\[
\frac{\text{SEEK_LT}_2\text{.3_CNT}}{\text{SEEK_GT}_2\text{.3_CNT} + \text{SEEK_GT}_1\text{.3_CNT} + \text{SEEK_GT}_1\text{.6_CNT} + \text{SEEK_GT}_1\text{.12_CNT} + \text{SEEK_LT}_1\text{.12_CNT} + \text{SEEK_EQ}_0\text{.CNT}} \times 100
\]

Seeks > 2/3 (%)
The percentage of seeks greater than 2/3. This is calculated as
\[
\frac{\text{SEEK_GT}_2\text{.3_CNT}}{\text{SEEK_GT}_2\text{.3_CNT} + \text{SEEK_GT}_1\text{.3_CNT} + \text{SEEK_GT}_1\text{.6_CNT} + \text{SEEK_GT}_1\text{.12_CNT} + \text{SEEK_LT}_1\text{.12_CNT} + \text{SEEK_EQ}_0\text{.CNT}} \times 100
\]

Seeks (count) The total number of seeks.
\[
\text{SEEK_GT}_2\text{.3_CNT} + \text{SEEK_GT}_1\text{.3_CNT} + \text{SEEK_GT}_1\text{.6_CNT} + \text{SEEK_GT}_1\text{.12_CNT} + \text{SEEK_LT}_1\text{.12_CNT} + \text{SEEK_EQ}_0\text{.CNT}
\]
OS/400 Perf CPU and Trans by Job Group, Hourly Trend

For a specific OS/400 system in the network, this report (see Figure 53) provides the following hourly trend information about job groups on the OS/400 system:

- Processor utilization
- Average and maximum response times
- Average and maximum transaction rates
- Total number of transactions

The information shows how the system is being used, and what type of jobs are being run over a specified time period. A graphical representation of the processor utilization for job groups, together with an explanation of job group types, are given in "OS/400 Perf CPU by Job Group, Hourly Trend" on page 106.

This information identifies the report:

Report ID    OS400P06
Report group OS/400 Performance Component Reports
Source       OS400_PM_SYS_JGR_H, OS400_JOBGROUP (described on pages 59 and 66 respectively)
Attributes   OS400, Performance, CPU, Transaction, Hourly, Trend
Variables    Date, OS400 system ID

<table>
<thead>
<tr>
<th>Hour</th>
<th>Job group</th>
<th>CPU Avg (%)</th>
<th>Resp Avg (seconds)</th>
<th>Resp Max (seconds)</th>
<th>Trans Avg (count)</th>
<th>Trans Max (count)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>A-PCS</td>
<td>1.3</td>
<td>5.1</td>
<td>1.6</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>B-AUTO</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>B-BTCH</td>
<td>2.6</td>
<td>2.6</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>B-COMM</td>
<td>0.4</td>
<td>0.4</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>B-CPF</td>
<td>0.2</td>
<td>0.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>A-PCS</td>
<td>2.9</td>
<td>13.1</td>
<td>1.2</td>
<td>4.7</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>B-AUTO</td>
<td>0.1</td>
<td>1.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>B-BTCH</td>
<td>3.1</td>
<td>6.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>B-COMM</td>
<td>0.3</td>
<td>1.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>B-CPF</td>
<td>0.1</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Figure 53. Example of OS/400 Perf CPU and Trans by Job Group, Hourly Trend

The report contains this information:

- **Hour**: The hour.
- **Job group**: The job group.
- **CPU Avg (%)**: The average processor time used, as a percentage.
This is calculated as
CPU.MILLISEC/MEASURED.SEC/10.

**CPU Max (%)**
The maximum processor time used, as a percentage.

**Resp time Avg (seconds)**
The average response time, in seconds. This is calculated as TRAN.MILLISEC/TRANSACTIONS.

**Resp time Max (seconds)**
The maximum response time, in seconds.

**Trans rate Avg (/second)**
The average transaction rate, in seconds. This is calculated as TRANSACTIONS/MEASURED.SEC.

**Trans rate Max (/second)**
The maximum number of transaction per seconds.

**Trans (count)**
The number of transactions.
OS/400 Perf CPU by Job Group, Hourly Trend

For a specific OS/400 system in the network, this graphical display (see Figure 54) shows the processor utilization by job group, over a specified time period. The information used in this display is also included in the report “OS/400 Perf CPU and Trans by Job Group, Hourly Trend” on page 104.

This information identifies the report:

- **Report ID**: OS400P07
- **Report group**: OS/400 Performance Component Reports
- **Source**: OS400_PM_SYS_JGR_H, OS400_JOBGROUP (described on pages 59 and 66 respectively)
- **Chart format**: DRLG4P07
- **Attributes**: OS400, Performance, CPU, Utilization, Hourly, Trend
- **Variables**: Date, OS400 system ID

![Graph of OS/400 Perf CPU by Job Group, Hourly Trend](image)

**Figure 54. Example of OS/400 Perf CPU by Job Group, Hourly Trend**

The report contains this information:

- **Hour**: The hour.
- **CPU Avg (%)**: The average percentage processor time used. This is calculated as (CPU.MILLISEC/MEASURED.SEC/10).
- **Job group**: The job group.

**Explanation of job group types**

Jobs are assigned to one of the job groups under the following circumstances:

- **B-S/36**: A System/36™ job runs on the AS/400.
- **B-MRT**: A multiple terminal request job is run.
- **B-CPF**: A control program facility job (one that is “owned” by the OS/400 system) is run.
- **B-COMM**: A session is started between a workstation and an AS/400.
- **B-BTCH**: An OS/400 batch job is submitted.
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-AUTO</td>
<td>A job is automatically started by a action on the system (for example, an IPL).</td>
</tr>
<tr>
<td>A-PCS</td>
<td>A workstation supported function is started (for example, terminal emulation, shared folder, or virtual printer).</td>
</tr>
<tr>
<td>A-INT</td>
<td>An interactive session is started.</td>
</tr>
<tr>
<td>A-DDM</td>
<td>A <em>distributed data management</em> job is started.</td>
</tr>
<tr>
<td>A-PTT</td>
<td>A passthrough target job is started.</td>
</tr>
</tbody>
</table>
OS/400 Perf Paging Statistics, Hourly Trend

For a specific OS/400 system in the network, this report (see Figure 55) provides hourly trend information about the system paging. For each of the five main storage pools (operating system, base, interactive, batch, and spool), information is given about:

- Total number of faults
- Database and non-database fault rates (maximum and average)
- Database and non-database paging rates (maximum and average)

For guidelines on how to interpret this information, refer to the AS/400 Performance Tools/400 Guide.

This information identifies the report:

- **Report ID**: OS400P08
- **Report group**: OS/400 Performance Component Reports
- **Source**: OS400_PM_POOL_H (described on page 52)
- **Attributes**: OS400, Performance, Page, Paging, Hourly, Trend
- **Variables**: Date, OS400 system ID

The report contains this information:

<table>
<thead>
<tr>
<th>Hour</th>
<th>Pool nbr</th>
<th>Maximum db faults</th>
<th>Average db faults</th>
<th>Maximum non-db faults</th>
<th>Average non-db faults</th>
<th>Maximum pg reads</th>
<th>Average pg reads</th>
<th>Maximum db non-db reads</th>
<th>Average db non-db reads</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>01</td>
<td>3.2</td>
<td>0.0</td>
<td>3.2</td>
<td>0.0</td>
<td>7.6</td>
<td>7.6</td>
<td>7.6</td>
<td>7.6</td>
</tr>
<tr>
<td>02</td>
<td>7.2</td>
<td>0.5</td>
<td>6.7</td>
<td>0.9</td>
<td>0.9</td>
<td>29.0</td>
<td>29.0</td>
<td>29.0</td>
<td>29.0</td>
</tr>
<tr>
<td>03</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>04</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>05</td>
<td>0.9</td>
<td>0.0</td>
<td>0.9</td>
<td>0.1</td>
<td>0.1</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>17</td>
<td>01</td>
<td>0.9</td>
<td>0.0</td>
<td>2.3</td>
<td>0.9</td>
<td>5.6</td>
<td>2.7</td>
<td>5.6</td>
<td>2.7</td>
</tr>
<tr>
<td>02</td>
<td>4.5</td>
<td>1.2</td>
<td>5.7</td>
<td>2.5</td>
<td>5.3</td>
<td>31.1</td>
<td>25.5</td>
<td>31.1</td>
<td>25.5</td>
</tr>
<tr>
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<td>0.0</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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</tr>
<tr>
<td>04</td>
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<td>4.9</td>
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</tr>
<tr>
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<tr>
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<td>1.5</td>
<td>5.9</td>
<td>1.5</td>
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<tr>
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<td>9.5</td>
<td>3.2</td>
<td>3.0</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>03</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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<td>6.2</td>
</tr>
<tr>
<td>05</td>
<td>0.1</td>
<td>0.0</td>
<td>0.5</td>
<td>0.1</td>
<td>0.1</td>
<td>2.6</td>
<td>0.3</td>
<td>2.6</td>
<td>0.3</td>
</tr>
</tbody>
</table>

*Figure 55. Example of OS/400 Perf Paging Statistics, Hourly Trend*

The number of database faults, per second. This is calculated as

```
DB_FAULT_SUM+NDB_FAULT_SUM/MEASURED_SEC
```
Maximum db faults (/second)  The maximum number of database faults, per second.

Average db faults (/second)  The average number of database faults, per second. This is calculated as DB_FAULT_SUM/MEASURED_SEC.

Maximum nondb faults (/second)  The maximum number of non-database faults, per second.

Average nondb faults (/second)  The average number of non-database faults, per second. This is calculated as NDB_FAULT_SUM/MEASURED_SEC.

Maximum db pg reads (/second)  The maximum database page read rate, per second.

Average db pg reads (/second)  The average database page read rate, per second. This is calculated as DBPG_READ_SUM/MEASURED_SEC.

Maximum nondb pg reads (/second)  The maximum non-database page read rate, per second.

Average nondb pg reads (/second)  The average non-database page read rate, per second. This is calculated as NDBPG_READ_SUM/MEASURED_SEC.
OS/400 Perf Storage Pool & Act Level, Hourly Trend

For a specific OS/400 system in the network, this report (see Figure 56) provides hourly trend information about the OS/400 storage pools. For each of the five main storage pools (operating system, base, interactive, batch, and spool), information is given about:

- Activity levels (maximum, average, minimum)
- Pool sizes (maximum, average, minimum)
- Reserved pool sizes (maximum, average, minimum)

For guidelines on how to interpret this information, refer to the AS/400 Performance Tools/400 Guide.

This information identifies the report:

- **Report ID**: OS400P09
- **Report group**: OS/400 Performance Component Reports
- **Source**: OS400_PM_POOL_H (described on page 52)
- **Attributes**: OS400, Performance, Storage, Hourly, Trend
- **Variables**: Date, OS400 system ID

The report contains this information:

- **Hour**: The hour.
- **Pool nbr**: The pool number.
- **Maximum activity level (count)**: The number of maximum activity levels.
- **Average activity level (count)**: The average number of maximum activity levels.

<table>
<thead>
<tr>
<th>Hour</th>
<th>Pool nbr</th>
<th>Maximum activity level (count)</th>
<th>Average activity level (count)</th>
<th>Minimum activity level (count)</th>
<th>Maximum poolsize (KB)</th>
<th>Average poolsize (KB)</th>
<th>Minimum poolsize (KB)</th>
<th>Maximum reserved poolsize (KB)</th>
<th>Average reserved poolsize (KB)</th>
<th>Minimum reserved poolsize (KB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
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<td>3500</td>
<td>3500</td>
<td>3500</td>
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</tr>
<tr>
<td></td>
<td>02</td>
<td>4</td>
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<td>0</td>
</tr>
<tr>
<td></td>
<td>03</td>
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<td>1</td>
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<td>4</td>
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<td>3500</td>
<td>3500</td>
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<tr>
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</tr>
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</table>

Figure 56. Example of OS/400 Perf Storage Pool & Act Level, Hourly Trend
This is calculated as
ACT_LVL_SET_SUM/SAMPLES.

**Minimum activity level (count)**
The number of minimum activity levels.

**Maximum poolsize (KB)**
The maximum pool size, in kilobytes.

**Average poolsize (KB)**
The average pool size, in kilobytes. This is calculated as POOL_SIZE_SUM/SAMPLES.

**Minimum poolsize (KB)**
The minimum pool size, in kilobytes.

**Maximum reserved poolsize (KB)**
The maximum reserved pool size, in kilobytes.

**Average reserved poolsize (KB)**
The average reserved pool size, in kilobytes. This is calculated as POOL_SIZE_RSV_SUM/SAMPLES.

**Minimum reserved poolsize (KB)**
The minimum reserved pool size, in kilobytes.
OS/400 Perf Transition Statistics, Hourly Trend

For a specific OS/400 system in the network, this report (see Figure 57) provides hourly trend information about the activity that is taking place within each OS/400 storage pool. For each of the five main storage pools (operating system, base, interactive, batch, and spool), information is given about:

- Active-to-Wait (maximum and average)
- Wait-to-Ineligible (maximum and average)
- Active-to-Ineligible (maximum and average)

For guidelines on how to interpret this information, refer to the AS/400 Performance Tools/400 Guide.

This information identifies the report:

<table>
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<th>OS400P10</th>
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</thead>
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<tr>
<td>Report group</td>
<td>OS/400 Performance Component Reports</td>
</tr>
<tr>
<td>Source</td>
<td>OS400_PM_POOL_H (described on page 52)</td>
</tr>
<tr>
<td>Attributes</td>
<td>OS400, Performance, Transition, Hourly, Trend</td>
</tr>
<tr>
<td>Variables</td>
<td>Date, OS400 system ID</td>
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</tbody>
</table>

The report contains this information:

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<th>Hour</th>
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<th>Average A to W (/second)</th>
<th>Maximum W to I (/second)</th>
<th>Average W to I (/second)</th>
<th>Maximum A to I (/second)</th>
<th>Average A to I (/second)</th>
</tr>
</thead>
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<td>0.1</td>
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<td>0.0</td>
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<td>0.1</td>
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<td>0.0</td>
</tr>
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<td>0.1</td>
<td>0.5</td>
<td>0.2</td>
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<tr>
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<td>1.1</td>
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<td>04</td>
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<td>0.0</td>
<td>0.0</td>
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<td>0.0</td>
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<tr>
<td></td>
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<td>0.9</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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</tr>
</tbody>
</table>

Figure 57. Example of OS/400 Perf Transition Statistics, Hourly Trend

The report contains this information:

- **Hour**: The hour.
- **Pool nbr**: The pool number.
- **Maximum A to W (/second)**: The maximum active-to-wait transitions rate, in seconds.
- **Average A to W (/second)**: The average active-to-wait transitions rate, in seconds.
seconds. This is calculated as
ACT_WAIT_SUM/MEASURED_SEC.

**Maximum W to I (/second)**  The maximum wait-to-ineligible transitions rate, in seconds.

**Average W to I (/second)**  The average wait-to-ineligible transitions rate, in seconds. This is calculated as
WAIT_INEL_SUM/MEASURED_SEC.

**Maximum A to I (/second)**  The maximum active-to-ineligible transition rate, in seconds.

**Average A to I (/second)**  The average active-to-ineligible transition rate, in seconds. This is calculated as
ACT_INEL_SUM/MEASURED_SEC.
OS/400 Perf Max & Avg CPU Usage, Hourly Trend

For a specific OS/400 system in the network, this graphical representation (see Figure 58) shows the hourly trend of processor utilization, over a specified time period. A graphical display of average processor usage for all OS/400 systems in the network, is given in “OS/400 Perf CPU Usage all Systems, Daily Overview” on page 115.

This information identifies the report:

- **Report ID**: OS400P11
- **Report group**: OS/400 Performance Component Reports
- **Source**: OS400_PERF_SUM_H (described on page 62)
- **Chart format**: DRLG4P11
- **Attributes**: OS400, Performance, CPU, Utilization, Hourly, Trend
- **Variables**: Date, OS400 system ID

![Graph of OS/400 Perf Max & Avg CPU Usage, Hourly Trend](image)

*Figure 58. Example of OS/400 Perf Max & Avg CPU Usage, Hourly Trend*

The report contains this information:

- **Hour**: The hour.
- **CPU Avg (%)**: The average percentage processor usage. This is calculated as 
  \[100 \times \text{CPU SECONDS}/\text{MEASURED SEC}.\]
- **CPU Max (%)**: The maximum percentage processor usage. This is calculated as 
  \[100 \times \text{SAMPLES} \times \text{CPU SECONDS}_\text{MAX}/\text{MEASURED SEC}.\]
OS/400 Perf CPU Usage all Systems, Daily Overview

For all OS/400 systems in the network, this graphical representation (see Figure 59) shows a daily overview of average processor utilization. Such information is useful as an entry point when investigating system performance. The display is produced by period name (for example, PRIME or NIGHT). If you require an hourly graphical display of the processor utilization for a specific OS/400 system, you can proceed to the report “OS/400 Perf Max & Avg CPU Usage, Hourly Trend” on page 114.

This information identifies the report:

- **Report ID**: OS400P12
- **Report group**: OS/400 Performance Component Reports
- **Source**: OS400_PERF_SUM_D (described on page 62)
- **Chart format**: DRLG4P12
- **Attributes**: OS400, Performance, CPU, Utilization, Daily, Overview
- **Variables**: Date, Period name

The report contains this information:

- **OS/400 system ID**: The system identification.
- **CPU Avg (%)**: The average percentage processor usage. This is calculated as $100 \times \frac{\text{CPU SECONDS}}{\text{MEASURED SEC}}$. 

Figure 59. Example of OS/400 Perf CPU Usage all Systems, Daily Overview
OS/400 Perf Summary all Systems, Daily Overview

For each OS/400 system in the network, this report (see Figure 60) provides daily overview information about:

- Processor usage (average and maximum)
- The number of I/Os (average and maximum)
- The amount of paging per second (average and maximum)
- The average number of jobs
- The total auxiliary storage used
- The percentage of auxiliary storage used

The report is produced by period name (for example, PRIME or NIGHT). For guidelines on how to interpret this information, refer to the AS/400 Performance Tools/400 Guide. If you require more detail about a specific OS/400 system, you can proceed to the report “OS/400 Perf Summary for a System, Daily Trend” on page 118.

This information identifies the report:

- **Report ID**: OS400P13
- **Report group**: OS/400 Performance Component Reports
- **Source**: OS400_PERF_SUM_D (described on page 62)
- **Attributes**: OS400, Performance, Summary, Daily, Overview
- **Variables**: Date, Period name

![Figure 60. Example of OS/400 Perf Summary all Systems, Daily Overview](image)

The report contains this information:

<table>
<thead>
<tr>
<th>OS/400 system ID</th>
<th>CPU Avg (%)</th>
<th>I/O Avg (/second)</th>
<th>Paging Avg</th>
<th>Paging Max</th>
<th>Avg aux</th>
<th>Total used aux</th>
</tr>
</thead>
<tbody>
<tr>
<td>S44A0001</td>
<td>9.4</td>
<td>32.9</td>
<td>6.3</td>
<td>15.0</td>
<td>25.7</td>
<td>71.8</td>
</tr>
<tr>
<td>S44A0002</td>
<td>15.2</td>
<td>45.8</td>
<td>12.1</td>
<td>28.0</td>
<td>15.1</td>
<td>53.7</td>
</tr>
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</table>

This information identifies the report:

- **Report ID**: OS400P13
- **Report group**: OS/400 Performance Component Reports
- **Source**: OS400_PERF_SUM_D (described on page 62)
- **Attributes**: OS400, Performance, Summary, Daily, Overview
- **Variables**: Date, Period name
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paging Avg (/second)</td>
<td>The average number of pages per second. This is calculated as PAGE_COUNT/MEASURED_SEC.</td>
</tr>
<tr>
<td>Paging Max (/second)</td>
<td>The maximum number of pages per second. This is calculated as SAMPLES*PAGE_COUNT_MAX/MEASURED_SEC.</td>
</tr>
<tr>
<td>Avg Jobs (count)</td>
<td>The average number of jobs. This is calculated as JOB_COUNT/SAMPLES.</td>
</tr>
<tr>
<td>Total AIX storage (MB)</td>
<td>The total auxiliary storage, in megabytes. This is calculated as AUX_STOR_MB/SAMPLES.</td>
</tr>
<tr>
<td>Used AIX storage (%)</td>
<td>The total used auxiliary storage, in megabytes. This is calculated as (100*(AUX_STOR_MB-AUX_STOR_AVAIL_MB)/SAMPLES)/(AUX_STOR_MB/SAMPLES).</td>
</tr>
</tbody>
</table>
OS/400 Perf Summary for a System, Daily Trend

For a specific OS/400 system in the network, this report (see Figure 61) provides daily trend information about:

- Processor usage (average and maximum)
- The number of I/Os (average and maximum)
- The amount of paging per second (average and maximum)
- The average number of jobs
- The total auxiliary storage used
- The percentage of auxiliary storage used

The report is produced by period name (for example, PRIME or NIGHT). For guidelines on how to interpret this information, refer to the AS/400 Performance Tools/400 Guide. If you require hourly trend information about a specific OS/400 system, you can proceed to the report “OS/400 Perf Summary for a System, Hourly Trend” on page 120.

This information identifies the report:

Report ID OS400P14
Report group OS/400 Performance Component Reports
Source OS400_PERF_SUM_D (described on page 62)
Attributes OS400, Performance, Summary, Daily, Trend
Variables From date, To date, Period name, OS400 system ID

The report contains this information:

CPU Avg (%) The average percentage processor usage. This is calculated as 100*CPU.SECONDS/MEASURED_SEC.

CPU Max (%) The maximum percentage processor usage. This is calculated as 100*SAMPLES*CPU.SECONDS_MAX/MEASURED_SEC.

I/O Avg (/second) The average number of I/O, per second. This is calculated as IO_COUNT/MEASURED_SEC.

I/O Max (/second) The maximum number of I/O, per second. This is calculated as SAMPLES*IO_COUNT_MAX/MEASURED_SEC.

Figure 61. Example of OS/400 Perf Summary for a System, Daily Trend

OS/400 Perf Summary for A System, Daily Trend
System: 'S44A0001' Date: '2000-03-01' to '2000-05-01'
Period: 'PRIME'

<table>
<thead>
<tr>
<th>Date</th>
<th>CPU Avg (%)</th>
<th>CPU Max (%)</th>
<th>I/O Avg (/sec)</th>
<th>I/O Max (/sec)</th>
<th>Paging Avg (%)</th>
<th>Paging Max (%)</th>
<th>Avg辅存 jobs</th>
<th>Alloc辅存 storage</th>
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</thead>
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<td>25.3</td>
<td>71.8</td>
<td>1221</td>
<td>66.8</td>
</tr>
</tbody>
</table>

Tivoli Decision Support for OS/390 Report: OS400P14
**Paging Avg (/second)**: The average number of pages per second. This is calculated as \( \text{PAGE\_COUNT}/\text{MEASURED\_SEC} \).

**Paging Max (/second)**: The maximum number of pages per second. This is calculated as \( \text{SAMPLES} \times \text{PAGE\_COUNT\_MAX}/\text{MEASURED\_SEC} \).

**Avg Jobs (count)**: The average number of jobs. This is calculated as \( \text{JOB\_COUNT}/\text{SAMPLES} \).

**Total Aux storage (MB)**: The total auxiliary storage, in megabytes. This is calculated as \( \text{AUX\_STOR\_MB}/\text{SAMPLES} \).

**Used Aux storage (%)**: The total used auxiliary storage, in megabytes. This is calculated as \( \left(100 \times \frac{\text{AUX\_STOR\_MB} - \text{AUX\_STOR\_AVAIL\_MB}}{\text{SAMPLES}}\right)/\left(\text{AUX\_STOR\_MB}/\text{SAMPLES}\right) \).
OS/400 Perf Summary for a System, Hourly Trend

For a specific OS/400 system in the network, this report (see Figure 62) provides hourly trend information about:

- Processor usage (average and maximum)
- The number of I/Os (average and maximum)
- The amount of paging per second (average and maximum)
- The average number of jobs
- The total auxiliary storage used
- The percentage of auxiliary storage used

The report is produced by period name (for example, PRIME or NIGHT). For guidelines on how to interpret this information, refer to the AS/400 Performance Tools/400 Guide.

This information identifies the report:

- **Report ID**: OS400P15
- **Report group**: OS/400 Performance Component Reports
- **Source**: OS400_PERF_SUM_H (described on page 52)
- **Attributes**: OS400, Performance, Summary, Hourly, Trend
- **Variables**: Date, OS400 system ID

The report contains this information:

**Tivoli Decision Support for OS/390 Report: OS400P15**

**Figure 62. Example of OS/400 Perf Summary for a System, Hourly Trend**

The report contains this information:

- **Hour**: The hour.
- **CPU Avg (%)**: The average percentage processor usage. This is calculated as 
  \[100 \times \frac{CPU\_SECONDS}{MEASURED\_SEC}\].

<table>
<thead>
<tr>
<th>Hour</th>
<th>CPU Avg (%)</th>
<th>CPU Max (%)</th>
<th>I/O Avg (sec)</th>
<th>I/O Max (sec)</th>
<th>Paging Avg (sec)</th>
<th>Paging Max (sec)</th>
<th>Jobs</th>
<th>Total辅存 (MB)</th>
<th>Aux辅存 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>13.0</td>
<td>13.1</td>
<td>6.7</td>
<td>6.7</td>
<td>27.3</td>
<td>27.3</td>
<td>72.0</td>
<td>1221</td>
<td>67.2</td>
</tr>
<tr>
<td>15</td>
<td>14.9</td>
<td>32.9</td>
<td>9.1</td>
<td>15.0</td>
<td>38.8</td>
<td>38.8</td>
<td>72.4</td>
<td>1221</td>
<td>67.0</td>
</tr>
<tr>
<td>16</td>
<td>3.6</td>
<td>8.2</td>
<td>3.4</td>
<td>12.2</td>
<td>12.6</td>
<td>43.0</td>
<td>70.0</td>
<td>1221</td>
<td>66.6</td>
</tr>
<tr>
<td>17</td>
<td>0.6</td>
<td>2.0</td>
<td>0.4</td>
<td>3.2</td>
<td>1.5</td>
<td>11.8</td>
<td>64.0</td>
<td>1221</td>
<td>66.4</td>
</tr>
<tr>
<td>18</td>
<td>0.4</td>
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<td>0.1</td>
<td>0.5</td>
<td>0.5</td>
<td>2.2</td>
<td>64.0</td>
<td>1221</td>
<td>66.4</td>
</tr>
<tr>
<td>19</td>
<td>0.4</td>
<td>1.0</td>
<td>0.1</td>
<td>0.6</td>
<td>0.4</td>
<td>2.3</td>
<td>64.0</td>
<td>1221</td>
<td>66.4</td>
</tr>
<tr>
<td>20</td>
<td>0.4</td>
<td>0.8</td>
<td>0.1</td>
<td>0.5</td>
<td>0.3</td>
<td>2.2</td>
<td>64.0</td>
<td>1221</td>
<td>66.4</td>
</tr>
<tr>
<td>21</td>
<td>0.4</td>
<td>1.0</td>
<td>0.1</td>
<td>0.5</td>
<td>0.4</td>
<td>2.3</td>
<td>64.0</td>
<td>1221</td>
<td>66.4</td>
</tr>
<tr>
<td>22</td>
<td>6.5</td>
<td>30.8</td>
<td>5.2</td>
<td>25.6</td>
<td>20.2</td>
<td>98.3</td>
<td>64.1</td>
<td>1221</td>
<td>66.7</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPU Max (%)</td>
<td>The maximum percentage processor usage. This is calculated as $100 \times \text{SAMPLES} \times \text{CPU_SECONDS_MAX} / \text{MEASURED_SEC}$.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I/O Avg (/second)</td>
<td>The average number of I/O, per second. This is calculated as $\text{IO_COUNT} / \text{MEASURED_SEC}$.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I/O Max (/second)</td>
<td>The maximum number of I/O, per second. This is calculated as $\text{SAMPLES} \times \text{IO_COUNT_MAX} / \text{MEASURED_SEC}$.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paging Avg (/second)</td>
<td>The average number of pages per second. This is calculated as $\text{PAGE_COUNT} / \text{MEASURED_SEC}$.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paging Max (/second)</td>
<td>The maximum number of pages per second. This is calculated as $\text{SAMPLES} \times \text{PAGE_COUNT_MAX} / \text{MEASURED_SEC}$.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Jobs (count)</td>
<td>The average number of jobs. This is calculated as $\text{JOB_COUNT} / \text{SAMPLES}$.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Aux storage (MB)</td>
<td>The total auxiliary storage, in megabytes. This is calculated as $\text{AUX_STOR_MB} / \text{SAMPLES}$.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used Aux storage (%)</td>
<td>The total used auxiliary storage, in megabytes. This is calculated as $(100 \times (\text{AUX_STOR_MB} - \text{AUX_STOR_AVAIL_MB}) / \text{SAMPLES}) / (\text{AUX_STOR_MB} / \text{SAMPLES})$.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix A. AS/400 system performance commands

This Appendix describes the AS/400 System Performance Feature (SP400) commands. You can use this information as a reference to request functions from the SP400 feature.

How to read syntax diagrams

This chapter uses syntax diagrams to illustrate the required syntax of commands and statements. This section describes how to use these diagrams.

Reading syntax diagrams

The syntax diagrams start with double arrowheads on the left (►) and move along the main line until you end with two arrowheads facing each other (◄). To use a syntax diagram, follow any path from left to right. When you reach the end of a line, go to the beginning of the next line, if there is one. For whatever path you choose, code every item that appears on the path. All spaces, commas, and other characters are significant.

Abbreviating keywords

In a syntax diagram, keywords are all or partly in uppercase. Where an abbreviation is possible, the abbreviation is shown in uppercase and the rest of the keyword is shown in lowercase. Variable values that you provide are shown in italics.

The previous diagram shows that you can code the SEND command in either of the following ways:

SE 'message text'
SEND 'message text'

Parameters

The following are types of parameters used in syntax diagrams:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required</td>
<td>Required parameters are displayed on the main path.</td>
</tr>
<tr>
<td>Optional</td>
<td>Optional parameters are displayed below the main path.</td>
</tr>
<tr>
<td>Default</td>
<td>Default parameters are displayed above the main path.</td>
</tr>
</tbody>
</table>

Parameters are classified as keywords or variables. Keywords are displayed in uppercase letters and can be typed in uppercase or lowercase. For example, a command is a keyword.

Variables are italicized, appear in lowercase letters, and represent names or values you supply. For example, a file name is a variable.

In the following example, NSASOLCT is a command, the variable parameter is *ncp_name*, the keyword is CLOCK, and CLOCK’s variable is *time*. You replace the variables with your own values.
Required parameters
A stack of parameters with the first parameter on the main path means that you must choose only one from the stack.

In the following example, the required parameters are LU, GROUP, CDRM, or APPL.

Default and optional parameters
Items shown above the main line are defaults. Items shown below the main line are optional.

The previous diagram shows that if you do not specify a host, HOST=LOCAL is used. To send a message to a different host, for example NYC, code the SEND command as follows:
SEND 'message text',HOST=NYC

Repeating parameters
Items that can be repeated are shown as follows:

The previous diagram shows that the following are all valid ways of coding the CRITERIA statement:
CRITERIA
CRITERIA 'expression'
CRITERIA 'expression1','expression2'
CRITERIA 'expression1','expression2','expression3'
CRITERIA 'expression1','expression2','expression3','expression4'
and so on.

Reading fragments
Syntax diagrams can contain fragments. A fragment is indicated by vertical bars with the name of the fragment between the bars. The fragment appears after the main diagram, as shown in the following example.
The previous diagram shows that the following are all valid ways of coding the SEND command:
SE 'message text'
SE 'message text',ROUTE=GLOBAL
SE 'message text',ROUTE=ALL
SE 'message text',ROUTE=CONSOLE
SE 'message text',ROUTE=EXTERNAL

Long syntax diagrams
When more than one row is needed for a syntax diagram, the continued line ends with a single arrowhead (➔) and following line begins with a single arrowhead (➔), as shown in the following example.

Commands for Tivoli Decision Support for OS/390
The following are commands you can use with Tivoli Decision Support for OS/390. You can find a description of the commands, the parameters you can specify and some examples on the use the commands.
STRSPSRV (Start SP400 Server) command

Note: You can specify all the parameters in positional form.

Purpose
The Start SP400 Server (STRSPSRV) command is used to start the SP400 monitoring job. The SP400 job sends the DRL8003 message to the system history log. The DRL8003 message includes performance information on the system, such as CPU utilization, auxiliary storage available, I/O, and paging.

Optional Parameters
INTERVAL  Specifies the time interval, in minutes, between two consecutive retrievals of performance data and, therefore, two consecutive sendings of the message DRL8003. Performance data is computed as the average values for the specified time interval.

5  A time interval of 5 minutes is assumed by default.

time-interval  Specify an integer between 1 to 3600.

JOBQ  Specifies the job queue to which the SP400 server job is submitted. The name of the job queue can be qualified by one of the following library values:

*LIBL  All libraries in the job’s library list are searched until the first match is found.

*CURLIB  The current library for the job is searched.

library-name  Specify the name of the library to be searched.

QCTL  The job queue to which the SP400 job is submitted by default.

job-queue  Specify the name of the job queue to which you want the SP400 job to be submitted.

Example
STRSPSRV INTERVAL(10) JOBQ(*LIBL/QCTL)

This command starts the SP400 monitoring job in the QCTL job queue of the first matching library in the job’s library list. The SP400 job retrieves performance data from the system and computes average values for the time interval of 10 minutes. The DRL8003 message is sent every 10 minutes to the system history log.
STRSP400 (Start SP400 data capturing) command

**Note:** All parameters preceding MBR can be specified in positional form.

**Purpose**
The Start SP400 Data Capturing (STRSP400) command starts the data capturing process. The way in which the STRSP400 command works depends on the value selected for FILE parameter. See the FILE parameter for an explanation.

**Optional Parameters**

**FILE**
Specifies the qualified name of the physical file that will contain the data being captured (except for FILE(DRLQPFR)). The physical files need to be already existing. Note that if you select the default library DRLDTA, you will have those physical files delivered with the product.

The name of the file can be qualified by one of the following library values:

- **DRLDTA**
  The DRLDTA library, delivered with the product, is searched.

- ***LIBL**
  All libraries in the job’s library list are searched until the first match is found.

- **library-name**
  Specify the name of the library to be searched.

- **DRLQHST**
  Leave the default value DRLQHST, to capture data from the system history log. DRLQHST file is cleaned up and filled in with the output of capturing.

- **DRLQACG**
  Select DRLQACG to capture data from the Job Accounting journal receivers. DRLQACG file is cleaned up and filled in with the output of capturing.
DRLQHDW  Select DRLQHDW to capture System Resource data. The DRLQHDW file is cleaned up and filled in with the output of capturing. Note that when selecting the DRLQHDW value you are not prompted to select any other parameter values.

DRLQPFR  Select DRLQPFR to start the performance monitoring job and capture performance data into system-supplied database files (such as QAPMSYS, QAPMDISK, QAPMPOOL) in the library specified with the LIB parameter. Note that STRSP400 FILE(DRLQPFR) only starts the performance monitoring job and produces system-supplied database files. Later you are allowed to capture such performance data into the physical files DRLQSYS, DRLQDSK, DRLQPOL by using the Save SP400 Data (SAVSPDTA) command. Unlike the other choices, no physical file DRLQPFR is produced.

PERIOD  This parameter is only prompted for DRLQHST and DRLQACG values of the FILE parameter. It specifies the time period covered by the logged message data, if FILE(DRLQHST), or by the Job Accounting data, if FILE(DRLQACG), being captured. The values that can be coded for this parameter are specified as a list of three elements, the last of which is a list of two elements. If PERIOD is not specified, the following values are assumed:

PERIOD(*AVAIL *BEGIN (*AVAIL *CURRENT))

Note that if the defaults are used, the command will go back to the last time it was run and start there to capture data to the present. The first time the command is executed with the defaults, data will be collected from the beginning of all of the history files if FILE(DRLQHST), or from the beginning of all of the Job Accounting journal receivers if FILE(DRLQACG).

Element 1: Starting Time

One of the following is used to specify the starting time at which or after which the history data must have been logged or the accounting data must have been journaled. Entries logged or journaled before the specified time and date are not captured.

The logged or journaled data that is available starting from the specified starting date and since the last time this command was run is captured. The first time this command is run the data that is available since the specified starting date is captured.

starting-time  Specify the starting time on the specified starting date that indicates the logged or journaled data to start to be captured. The time is specified in 24-hour format with or without a time separator as follows:

- With a time separator, specify a string of 5 or 8 digits where the time separator separates the hours, minutes and seconds. If this command is
entered from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command fails.

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes and ss = seconds. Valid values for hh range from 00 through 23. Valid values for mm and ss range from 00 through 59.

**Element 2: Starting Date**

One of the following is used to specify the starting date on which or after which the history data must have been logged or the accounting data must have been journaled. Entries logged or journaled before the specified date are not captured.

**BEGIN**

The logged or journaled data that is available since the last date this command was ran is captured. The first time the capture is ran the data that is available since the beginning of all of the history files, if FILE(DRLQHST), or the beginning of all of the Job Accounting journal receivers, if FILE(DRLQACG), is captured.

**CURRENT**

The logged or journaled data for the current day and between the specified starting and ending times is captured.

**start-date** Specify the date that indicates the logged or journaled data to start to be captured. The date must be entered in the format specified by the system values QDATFMT and, if separators are used, QDATSEP.

**Element 3: Ending Time**

One of the following is used to specify the ending time before which, or at which, the history data must have been logged or the accounting data must have been journaled. Entries logged or journaled after the specified time and date are not captured.

**AVAIL**

The logged or journaled data that is available until the specified ending date is captured.

**ending-time** Specify the ending time for the specified ending date that determines the time by which the data has to be captured. See “starting-time” of Element 1 for the time format.

**Element 4: Ending Date**

One of the following is used to specify the ending date before which or on which the history data must have been logged or the accounting data must have been journaled. Entries logged or journaled after the specified date are not captured.

**CURRENT**

The current day is the last day for which the data is captured.
ending-date Specify the ending date by which logged or journaled data has to be captured. See “starting-date” of Element 2 for the date format.

MBR This parameter is only prompted for the DRLQPFR value of the FILE parameter. It specifies the database file member that receives the output for the collected performance data. If the member already exists, the system replaces the existing data in the database file member.

The possible values are:

*GEN The member name is generated by the system. The name of the member that is created is Qyydddhhmm where yy is the year, ddd is the date in Julian format and hhmm is the time (in hours and minutes) at which the Performance Monitor job creates the member.

member-name Specify the name of the member that is used by the Performance Monitor. If a member does not exist, the system creates a member that has the specified name.

LIB This parameter is only prompted for the DRLQPFR value of the FILE parameter. It specifies the library where the database files for performance data are collected. Each file that is not found in the specified library is automatically created by the system in the specified library.

The possible values are:

DRLDTA The default library supplied with the product.

library-name Specify the name of the library where the database files are located.

DAY This parameter is only prompted for the DRLQPFR value of the FILE parameter. It specifies the number of days from the current day until collection ends.

0 Performance data is collected for 0 full days. Data can be collected for less than one full day using the HOUR and MINUTE parameters.

number-of-days Specify the number of days from the current day until data collection ends. Valid values range from 0 through 7.

HOUR This parameter is only prompted for the DRLQPFR value of the FILE parameter. It specifies the number of hours to collect data.

2 The Performance Monitor job runs for 2 hours by default.

hour-number Specify the number of hours to collect data. You can specify a value ranging from 0 through 999.

MIN This parameter is only prompted for the DRLQPFR value of the FILE parameter. It specifies the number of minutes to collect data.

0 Performance data is collected for 0 minutes by default.
number-of-minutes

Specify the number of minutes to collect data. You can specify a value ranging from 0 through 99.

INTV

This parameter is only prompted for the DRLQPFR value of the FILE parameter. It specifies the time interval, in minutes, between each collection of system performance data.

15

Performance data is collected every 15 minutes by default.

number-of-minutes

Specify a collection interval value between 5 and 60 minutes. This value must be a multiple of 5.

TRACE

This parameter is only prompted for the DRLQPFR value of the file parameter. Specifies the type of internal trace that is started.

*NONE

By default a trace is not started.

*ALL

All of the internal traces that contain performance related information are started. Note that if another trace is running, then the other trace is canceled.

Examples

STRSP400 PERIOD((000000 970101))

This command captures data from the history logged data available from the midnight of 1997 January 1st until the current date and time. The data is captured into the DRLQHST physical file of the DRLDTA library.

STRSP400 FILE(DRLQPFR) LIB(MYLIB) HOUR(0) MIN(30)

This command starts the Performance Monitor job. It will run for 30 minutes and will produce database files with system-supplied names, such as QAPMSYS, QAPMDISK, and QAPMPOOL, into the MYLIB library. Members with names Qyydddhhmm will be created into the above files every 15 minutes.
SAVSPDTA (Save SP400 Data) command

**Note:** All parameters preceding MBR can be specified in positional form.

**Purpose**
The Save SP400 Data (SAVSPDTA) command saves the data captured with the Start SP400 Data Capturing (STRSP400) command and provides the file transfer of this data from the AS/400 system to the OS/390 host system, where the data collecting will take place.

**Optional Parameters**

**FILE** Specifies the data to be saved and transferred.

- **ALL** The following database files in the library specified in the LIB parameter will be saved and will be candidates for the file transfer: DRLQHST, DRLQACG, DRLQHDW, DRLQSYS, DRLQDSK, and DRLQPFR.

- **DRLQHST** The DRLQHST database file, filled in with history logged data captured with the STRSP400 FILE(DRLQHST) command, is selected for the file transfer.

- **DRLQACG** The DRLQACG database file, filled in with job accounting data captured with the STRSP400 FILE(DRLQACG) command, is selected for the file transfer.

- **DRLQHDW** The DRLQHDW database file, filled in with system resource data captured with the STRSP400 FILE(DRLQHDW) command, is selected for the file transfer.

- **DRLQPFR** The DRLQSYS, DRLQDSK, and DRLQPOL database files are saved with the contents of the QAPMSYS, QAPMDISK, and QAPMPOOL system-supplied database files captured with the STRSP400 FILE(DRLQPFR) command, and are candidates for the file transfer.

- **DLTF** DRLQPFR has an additional parameter, DLTF (delete performance files). The default value is *NO*, which means that the unused performance...
files are not deleted from the data library. If you specify a value of *YES, the unused performance files are deleted from the data library.

**LIB**
Specifies the library containing the files being saved and transferred. It has to be the same library where the files have been captured with the STRSP400 command.

**DRLDTA**
The DRLDTA library, delivered with the product, is searched for the files being saved and transferred.

*LIBL*
All libraries in the job’s library list are searched until the first match is found.

*CURLIB*
The current library for the job is searched.

**library-name**
Specify the name of the library to be searched.

**TYPE**
Specifies the file transfer method to transfer the saved files to the OS/390 host side.

*TAPE*
The saved files are transferred to tape.

*NJE*
The saved files are transferred through Network Job Entry. The selected database files will be sent to the TSO user at the host site specified in the TOUSRID parameter.

*USER*
The saved files are sent with a file transfer method other than *TAPE or *NJE. When you use the *USER value, you must have created a user exit program and a data area. The user exit program must reside in a library of the library list. It must define two parameters: LIBRARY and FILE, since it will be called from the SP400 feature with the different qualified file names selected for transferring. The user data area must have the name DRLDTA/USERD TAARA and the program name must reside in the first 10 characters of the user data area. However, executing the SAVSPDTA command the first time with *USER will create the DRLDTA/USERD TAARA. Since it is blank, the program name must be added.

**TOUSRID**
This parameter is only prompted when *NJE is selected for TYPE parameter. Specify the Userid and Address of the TSO user to which The data is being sent.

**Examples**

SAVSPDTA FILE(DRLQPFR) TYPE(*NJE) TOUSRID(TRAMO ROMEPPC)

This command saves the performance files captured with the STRSP400 FILE(DRLQPFR) command into the database files DRLQSYS, DRLQDSK, and DRLQPOL in the DRLDTA library delivered with the product. The command then sends them through the network to the TSO user TRAMO at ROMEPPC.

SAVSPDTA FILE(DRLQHST) LIB(MYLIB) DEV(TAP01)

This command transfers the DRLQHST database file of the MYLIB library, captured with the STRSP400 FILE(DRLQHST) command, to the tape TAP01. The database file can later be transferred from tape to the host OS/390 system, where the collecting will take place.
INZTAP (Initialize Tape) command

This command is for all users of Tivoli Decision Support for OS/390 Version 1.6.0 and of previous versions of Performance Reporter.

```
INZTAP (DEV TAP01 device name)

NEWVOL (*NONE)

*CTGID

new vol id
```
Note: All parameters preceding DENSITY can be specified in positional form.

**Purpose**
The Initialize Tape (INZTAP) command prepares magnetic tapes for later use of saving captured data, by means of the command. This command is used to write volume labels on standard-labeled magnetic tapes so the tape device support can do standard-label processing. Unlabeled tapes must also be initialized by this command or by a similar process on another system before these tapes can be used on the AS/400 system.
Required parameter

DEV Specifies the name of the device in which the volume being initialized is placed. TAP01 has been set as default value.

Optional Parameters

NEWVOL Specifies the volume identifier for a tape being initialized for use as a standard labeled tape.

SP400 This is the default value.

*NONE The tape is initialized for use as an unlabeled tape. Only tape marks are used to indicate the beginning and the end of the volume itself.

*CTGID The tape is initialized as a standard labeled tape. The new logical volume identifier is the same as the external identifier of the tape cartridge. Each tape within a library device must have a unique external identifier.

new-volume-identifier Specify no more than 6 characters to identify the new volume. The identifier must contain only alphanumeric characters (A through Z, $, #, @, and 0 through 9), and cannot have a prefix or contain blanks.

DENSITY Specifies the recording format in which to write the data on the tape.

*DEVTYPE The data that is written on the tape volume is based on the type of tape unit being used.

Tape Device Default Density

<table>
<thead>
<tr>
<th>Tape Device Default Density</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2440</td>
<td>6250</td>
</tr>
<tr>
<td>3422</td>
<td>6250</td>
</tr>
<tr>
<td>3430</td>
<td>6250</td>
</tr>
<tr>
<td>3480</td>
<td>*FMT3480</td>
</tr>
<tr>
<td>3490E</td>
<td>*FMT3490E</td>
</tr>
<tr>
<td>3570-BXX</td>
<td>*FMT3570</td>
</tr>
<tr>
<td>3570-CXX</td>
<td>*FMT3570E</td>
</tr>
<tr>
<td>3590</td>
<td>*FMT3590</td>
</tr>
<tr>
<td>6335</td>
<td>*QIC3040</td>
</tr>
<tr>
<td>6341</td>
<td>*QIC120</td>
</tr>
<tr>
<td>6342</td>
<td>*QIC525</td>
</tr>
<tr>
<td>6343</td>
<td>*QIC1000</td>
</tr>
<tr>
<td>6344</td>
<td>*QIC2GB</td>
</tr>
<tr>
<td>6346</td>
<td>*QIC120</td>
</tr>
<tr>
<td>6347</td>
<td>*QIC525</td>
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<tr>
<td>6348</td>
<td>*QIC1000</td>
</tr>
<tr>
<td>6349</td>
<td>*QIC2GB</td>
</tr>
<tr>
<td>6366</td>
<td>*QIC120</td>
</tr>
<tr>
<td>6368</td>
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<tr>
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<td>*QIC2GB</td>
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<tr>
<td>6378</td>
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<tr>
<td>6379</td>
<td>*QIC1000</td>
</tr>
<tr>
<td>6380</td>
<td>*QIC2GB</td>
</tr>
<tr>
<td>6385</td>
<td>*QIC5010</td>
</tr>
<tr>
<td>6390</td>
<td>*FMT7GB</td>
</tr>
<tr>
<td>7208-002</td>
<td>*FMT2GB</td>
</tr>
<tr>
<td>7208-012</td>
<td>*FMT5GB</td>
</tr>
<tr>
<td>7208-222</td>
<td>*FMT7GB</td>
</tr>
<tr>
<td>9346</td>
<td>*QIC120</td>
</tr>
<tr>
<td>9347</td>
<td>3200</td>
</tr>
<tr>
<td>9348</td>
<td>6250</td>
</tr>
</tbody>
</table>
1600 The data density on this tape volume is 1,600 bits per inch. This density is used for 1/2 inch reel tapes.

3200 The data density on this tape volume is 3,200 bits per inch. This density is used for 1/2 inch reel tapes on devices that support this density.

6250 The data density on this tape volume is 6,250 bits per inch. This density is used for 1/2 inch reel tapes on devices that support this density.

*FMT3480 The format of this tape is FMT3480. The data density on this tape volume is formatted to support a 3480 device. This density is used for 1/2 inch cartridge tapes.

*FMT3490E The format of this tape is FMT3490E. The data density on this tape volume is formatted to support a 3490E device. This density is used for 1/2 inch cartridge tapes.

*FMT3570 The format of this tape is FMT3570. The data format is written on the tape volume with a 3570-BXX device.

*FMT3570E The format of this tape is FMT3570E. The data format is written on the tape volume with a 3570-CXX device.

*FMT3590 The format of this tape is FMT3590. The data format is written on the tape volume with a 3590 device. This density is used for 1/2 inch cartridge tapes.

*QIC120 The format of this tape is QIC120. This density is used for 1/4 inch cartridge tapes that can hold 120 megabytes of data.

*QIC525 The format of this tape is QIC525. This density is used for 1/4 inch cartridge tapes that can hold 525 megabytes of data.

*QIC1000 The format of this tape is QIC1000. This density is used for 1/4 inch cartridge tapes that can hold 1200 megabytes of data.

*QIC2GB The format of this tape is QIC2GB, which is used for 1/4 inch cartridge tapes that can hold 2.5 gigabytes of data.

*QIC3040 The format of this tape is QIC3040, which is used for 1/4 inch cartridge tapes that can hold 840 megabytes of data.

*QIC5010 The format of this tape is QIC5010, which is used for 1/4 inch cartridge tapes that can hold 13.5 gigabytes of data.

*FMT2GB The format of this tape is FMT2GB, which is used for 8 millimeter cartridge tapes that can hold 2 gigabytes of data.

*FMT5GB The format of this tape is FMT5GB, which is used for 8 millimeter cartridge tapes that can hold 5 gigabytes of data.

*FMT7GB The format of this tape is FMT7GB, which is used for 8 millimeter cartridge tapes that can hold 7 gigabytes of data.

Example

INZTAP DEV(TAP01) NEWVOL(SP400) DENSITY(*DEVTYPE)
This command initializes the volume on the tape device named TAP01 with new volume identifier SP400 with a density based on the device type.
Appendix B. List of abbreviations

These abbreviations appear in this book:

ACB application control block
CCU central control unit
CDRM cross-domain resource manager
CSA common service area
CTC channel to channel
CICS Customer Information and Control System
CMF CICS monitoring facility
CPU central processing unit
DB2 DATABASE 2
DDR dynamic definite response
FTP File Transfer Protocol
JCL job control language
IMS Information Management System
I/O input/output
ISPF Interactive System Productivity Facility
LAN local area network
LU logical unit
NCP network control program
NEO network extension option
NJE Network Job Entry
NPM NetView Performance Monitor
NTRI NCP/Token-Ring interconnection
NVAS NetView Access Service
NV/SM NetView session monitor
ODCL outboard data link control
PU physical unit
QMF Query Management Facility
RJE Remote Job Entry
RMF™ Resource Management Facility
RTM response time monitor
SDLC synchronous data link control
SMF System Management Facilities
SMP/E System Modification Program/Extended
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNA</td>
<td>system network architecture</td>
</tr>
<tr>
<td>SNMP</td>
<td>Simple Network Management Protocol</td>
</tr>
<tr>
<td>SP400</td>
<td>AS/400 System Performance feature</td>
</tr>
<tr>
<td>SQL</td>
<td>Structured Query Language</td>
</tr>
<tr>
<td>SRB</td>
<td>service control block</td>
</tr>
<tr>
<td>SSCP</td>
<td>system services control program</td>
</tr>
<tr>
<td>STATMON</td>
<td>Status Monitor</td>
</tr>
<tr>
<td>TCAS</td>
<td>terminal control address space</td>
</tr>
<tr>
<td>TCB</td>
<td>task control block</td>
</tr>
<tr>
<td>TCP/IP</td>
<td>Transmission Control Protocol/Internet Protocol</td>
</tr>
<tr>
<td>TSO</td>
<td>time-sharing option</td>
</tr>
<tr>
<td>UDP</td>
<td>User Datagram Protocol</td>
</tr>
<tr>
<td>VPD</td>
<td>vital product data</td>
</tr>
<tr>
<td>VTAM</td>
<td>Virtual Telecommunication Access Method</td>
</tr>
</tbody>
</table>
Appendix C. Glossary

A

administration. A Tivoli Decision Support for OS/390 task that includes maintaining the database, updating environment information, and ensuring the accuracy of data collected.

administration dialog. The set of host windows used to administer Tivoli Decision Support for OS/390.

C

COLLECT. A process used by Tivoli Decision Support for OS/390 to read data from input log data sets, interpret records in the data set, and store the data in DB2 tables in the Tivoli Decision Support for OS/390 database.

component. An optionally installable part of a Tivoli Decision Support for OS/390 feature.

control table. A predefined Tivoli Decision Support for OS/390 table that controls results returned by some log collector functions.

D


data table. A Tivoli Decision Support for OS/390 table that contains performance data used to create reports.

distributed transaction processing. The distribution of processing among transactions that communicate synchronously with each other over intersystem or interregion links.

E

environment information. All of the information that is added to the log data to create reports. This information can include data such as performance groups, shift periods, installation definitions, and so on.

H

help topics. An online table of contents for the Tivoli Decision Support for OS/390 online help information.

K

key columns. The columns of a DB2 table that together constitute the key.

key value. Value used to sort records into groups.

L

log. Any sequential data set used as input to Tivoli Decision Support for OS/390.

log collector. A Tivoli Decision Support for OS/390 program that processes log data sets and provides other Tivoli Decision Support for OS/390 services.

log collector language. Tivoli Decision Support for OS/390 statements used to supply definitions to and invoke services of the log collector.

log data set. Any sequential data set used as input to Tivoli Decision Support for OS/390.

log definition. The description of a log data set processed by the log collector.
log procedure. A program module that is used to process all record types in certain log data sets.

logical unit (LU). A port through which a user gains access to the services of a network.

lookup expression. An expression that specifies how a value is obtained from a lookup table.

lookup table. A Tivoli Decision Support for OS/390 DB2 table that contains grouping, translation, or substitution information.

object. An integral part of a feature component needed for data collection (for example, record definitions, record procedures, and update definitions).

P

Tivoli Decision Support for OS/390 database. A set of DB2 tables that includes data tables, lookup tables, system tables, and control tables.

purge condition. Instruction for purging unneeded data from the Tivoli Decision Support for OS/390 database.

R

record definition. The description of a record type contained in the log data sets used by Tivoli Decision Support for OS/390, including detailed record layout and data formats.

record procedure. A program module that is called to process some types of log records.

record type. The classification of records in a log data set.

region. A section of the dynamic area that is allocated to a job step or system task.

report definition language. Tivoli Decision Support for OS/390 statements used to define reports and report groups.

report group. A collection of Tivoli Decision Support for OS/390 reports that can be referred to by a single name.

reporting dialog. A set of host or workstation windows used to request reports.

resource. Any facility of the computing system or operating system required by a job or task, including central storage, input/output devices, the processing unit, data sets, and control or processing programs.

resource group. A collection of resources identified as belonging to a particular department or division. Resources are organized into groups to reflect the structure of an organization.

resource information. Environment information that describes the elements in a system (for example, a network).

S

section. A structure within a record that contains one or more fields and may contain other sections.

source. In an update definition, the record or DB2 table that contains the data used to update a Tivoli Decision Support for OS/390 DB2 table.

subcomponent. An optionally installable part of a Tivoli Decision Support for OS/390 feature component.

system table. A DB2 table that stores information for controlling log collector processing, Tivoli Decision Support for OS/390 dialogs, and reporting.
**target.** In an update definition, the DB2 table in which Tivoli Decision Support for OS/390 stores data from the source record or table.

**threshold.** The maximum or minimum acceptable level of usage. Usage measurements are compared with threshold levels.

**Transmission Control Protocol/Internet Protocol (TCP/IP).** A non-proprietary communications protocol for linking workstations to host computers and to other hardware.

**update definition.** Instructions for entering data into DB2 tables from records of different types or from other DB2 tables.

**updates.** Instructions in Tivoli Decision Support for OS/390 on how to process data from log data sets to DB2 tables.

**view.** An alternative representation of data from one or more tables. A view can include all or some of the columns contained in the table on which it is defined.
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Index

A
abbreviations used in this book, list of 139
accessibility xiii
accounting component
data flow 29
reports 68
tables 41
accounting component data tables 41
OS400_ACCT_JOB_D 41
OS400_ACCT_JOB_M 41
OS400_ACCT_PRINT_D 43
OS400_ACCT_PRINT_M 43
accounting component reports 68
OS/400 Acct Job Accounting, Monthly Overview 70
OS/400 Acct Print Accounting, Monthly Overview 71
active to ineligible, on system 112
active to wait, on system 112
activity levels 110, 112
arm movements 102
AS/400 system performance commands
INZTAP 134
SAVSPDTA 132
STRSP400 127
STRSPSRV 126
attributes, report 68
audience for this book, intended ix
auxiliary storage, used 116, 118, 120

B
books
feedback x
online x
ordering x

C
Capturing data on the AS/400 12
collecting performance data, summary 3
commands
INZTAP 134
SAVSPDTA 132
STRSP400 127
STRSPSRV 126
communication between AS/400 and OS/390 7
component installation 16
configuration component
data flow 31
reports 71
tables 44
configuration component reports 71
OS/400 Config all Devices, Overview 73
OS/400 Config DASD Capacity
Overview 74
configuration component reports (continued)
OS/400 OS/400 Config Device Count Type/Model, Overview 76
OS/400 OS/400 Config Device for Specific Type, Overview 77
control tables 27
CPU utilization 70, 79, 80, 84, 85, 95, 104, 106, 114, 115, 116, 118, 120
customer support xiii
data tables (continued)
in the performance component (continued)
OS400_PM_SYS_JGR_H 59
naming standard 39
summarization-level suffixes 39
disk arm movements 98, 102
capacity 100
disk capacity 100
disk space requirements 7

D
daily reports
OS/400 Job Statistics all Systems, Daily Trend (OS400J03) 81
OS/400 Messages Most Frequent, Daily Overview (OS400M02) 88
OS/400 Perf CPU Usage all Systems, Daily Overview (OS400P12) 115
OS/400 Perf Summary all Systems, Daily Overview (OS400P13) 116
OS/400 Perf Summary for a System, Daily Trend (OS400P14) 118
data
sources of performance 11
data capturing 12
data flow from AS/400 to Tivoli Decision Support for OS/390
accounting component 29
configuration component 31
job statistics component 33
messages component 35
overview 25
performance component 37
data tables
in the accounting component 41
OS400_ACCT_JOB_D 41
OS400_ACCT_JOB_M 41
OS400_ACCT_PRINT_D 43
OS400_ACCT_PRINT_M 43
in the job statistics component 46
OS400_JOB_STAT_D 46
OS400_JOB_STAT_M 46
in the messages component 47
OS400_MSG_STAT_D 47
OS400_MSG_STAT_DV (View) 48
OS400_MSG_STAT_M 47
OS400_MSG_STAT_MV (View) 48
in the performance component 49
OS400_PERF_SUM_D 62
OS400_PERF_SUM_H 62
OS400_PM_DISK_D 49
OS400_PM_DISK_H 49
OS400_PM_POOL_D 52
OS400_PM_POOL_H 52
OS400_PM_SYS_D 53
OS400_PM_SYS_H 53
OS400_PM_SYS_JGR_D 59
data tables (continued)
in the performance component (continued)
OS400_PM_SYS_JGR_H 59
elapse time 79, 81, 82, 83, 84
evaluation and planning 6
exceptions, system 97

F
format, Tivoli Decision Support for OS/390 report 67

G
glossary 141
groups, report 4

H
hourly reports
OS/400 Perf CPU and RTM Statistics, Hourly Trend (OS400P01) 95
OS/400 Perf CPU and Trans by Job Group, Hourly Trend (OS400P06) 104
OS/400 Perf CPU by Job Group, Hourly Trend (OS400P07) 106
OS/400 Perf Disk Arm Movements, Hourly Trend (OS400P08) 102
OS/400 Perf Disk Capacity Statistics, Hourly Trend (OS400P04) 100
OS/400 Perf Disk 1/O Statistics, Hourly Trend (OS400P03) 98
OS/400 Perf Exception and Lock Stat, Hourly Trend (OS400P02) 97
OS/400 Perf Max & Avg CPU Usage, Hourly Trend (OS400P11) 114
OS/400 Perf Paging Statistics, Hourly Trend (OS400P08) 108
OS/400 Perf Storage Pool & Act Level, Hourly Trend (OS400P09) 110
OS/400 Perf Summary for a System, Hourly Trend (OS400P15) 120
OS/400 Perf Transition Statistics, Hourly Trend (OS400P10) 112
how to use this book x
lookup tables, updating (continued)
OS400_JOBGROUP 20

monthly reports (continued)
OS/400 Messages Most Frequent,
Monthly Overview (OS400M03) 89

naming standards for tables 39

online publications xii, xiii
ordering publications xii, xiii
OS/400 log files 11

pacing
per second 116, 118, 120
trend 108

performance component
data flow 37
reports 94
tables 49

performance component data tables 49
OS400_PERF_SUM_D 62
OS400_PERF_SUM_H 62
OS400_PM_DISK_D 49
OS400_PM_DISK_H 49
OS400_PM_POOL_D 52
OS400_PM_POOL_H 52
OS400_PM_SYS_D 53
OS400_PM_SYS_H 53
OS400_PM_SYS_JGR_D 59
OS400_PM_SYS_JGR_H 59

performance component reports 94
OS/400 Perf CPU and RTM Statistics,
Hourly Trend 95
OS/400 Perf CPU and Trans by Job
Group, Hourly Trend 104
OS/400 Perf CPU by Job Group,
Hourly Trend 106
OS/400 Perf CPU Usage all Systems,
Daily Overview 115
OS/400 Perf Disk Arm Movements,
Hourly Trend 102
OS/400 Perf Disk Capacity Statistics,
Hourly Trend 100
OS/400 Perf Disk I/O Statistics,
Hourly Trend 98
OS/400 Perf Exception and Lock Stat,
Hourly Trend 97
OS/400 Perf Max & Avg CPU Usage,
Hourly Trend 114
OS/400 Perf Paging Statistics, Hourly
Trend 108
OS/400 Perf Storage Pool & Act Level,
Hourly Trend 110
OS/400 Perf Summary all Systems,
Daily Overview 116
OS/400 Perf Summary for a System,
Daily Trend 118
OS/400 Perf Summary for a System,
Hourly Trend 120
OS/400 Perf Transition Statistics,
Hourly Trend 112

list of abbreviations used in this book 139
list of terms used in this book 141
locks, on system 97
log files on OS/400 11
logs, description 28
LookAt message retrieval tool xii
lookup tables, description 63
OS400_DASDTYPE 43, 64
OS400_DATE_FORMAT 65
OS400_JOB_ACCTCODE 63
OS400_JOBGROUP 66
lookup tables, updating 18
OS400_DASDTYPE 20
OS400_DATE_FORMAT 20
OS400_JOB_ACCTCODE 19

I/Os
number 70, 79, 81, 82, 83, 84, 85, 116
trend 98, 118, 120
implementing SP400 feature
considering components to install 6
installing SP400 feature on AS/400 7
installing SP400 feature on the OS/390 system 16
planning the process 5
putting SP400 feature into production 21
installing SP400 feature on AS/400 7
intended audience for this book ix

INZTAP command 134

job statistics component
data flow 33
reports 78
tables 46
job statistics component data tables 46
OS400_JOB_STAT_D 46
OS400_JOB_STAT_M 46
job statistics component reports 78
OS/400 Job Acct from History Log, Monthly Overview 85
OS/400 Job CPU Usage by User, Monthly Overview 80
OS/400 Job Statistics all Systems, Daily Trend 81
OS/400 Job Statistics all Systems, Monthly Trend 82
OS/400 Job Statistics by User, Monthly Overview 79
OS/400 Job Type Statistics, Monthly Overview 84
OS/400 Jobs Statistics for a User, Monthly Overview 83
jobs, number per system 81, 82, 83, 84, 116, 118
jobs, number per user 70, 71, 79
jobs, number per user 85

L
list of abbreviations used in this book 139
list of terms used in this book 141
locks, on system 97
log files on OS/400 11
logs, description 28
LookAt message retrieval tool xii
lookup tables, description 63
OS400_DASDTYPE 43, 64
OS400_DATE_FORMAT 65
OS400_JOB_ACCTCODE 63
OS400_JOBGROUP 66
lookup tables, updating 18
OS400_DASDTYPE 20
OS400_DATE_FORMAT 20
OS400_JOB_ACCTCODE 19

M
manuals
feedback x
online x
ordering x
measuring response time 83, 95, 104
message retrieval tool, LookAt xii
messages
message lines 87, 91, 93
number 87, 88, 89, 90, 91, 92, 93
percentage occurrence 88, 89, 90, 91, 92, 93
text bytes per 87, 89
messages component
data flow 35
reports 86
tables 47
messages component data tables 47
OS400_MSG_STAT_D 47
OS400_MSG_STAT_DV (View) 48
OS400_MSG_STAT_M 47
OS400_MSG_STAT_MV (View) 48
messages component reports 86
OS/400 Messages All Systems, Monthly Overview 87
OS/400 Messages by Sev. Codes, Monthly Overview 90
OS/400 Messages by Type, Monthly Overview 92
OS/400 Messages by User Name, Monthly Overview 93
OS/400 Messages for a User, Monthly Overview 91
OS/400 Messages Most Frequent, Daily Overview 88
OS/400 Messages Most Frequent, Monthly Overview 89
monthly reports
OS/400 Acct Job Accounting, Monthly Overview (OS400A01) 70
OS/400 Acct Print Accounting, Monthly Overview (OS400A02) 71
OS/400 Job Acct from History Log, Monthly Overview (OS400J07) 84, 85
OS/400 Job CPU Usage by User, Monthly Overview (OS400J02) 79
OS/400 Job Statistics all Systems, Monthly Trend (OS400J04) 80
OS/400 Job Type Statistics, Monthly Overview (OS400J06) 83
OS/400 Jobs Statistics for a User, Monthly Overview (OS400J05) 82
OS/400 Messages All Systems, Monthly Overview (OS400M01) 87
OS/400 Messages by Sev. Codes, Monthly Overview (OS400M04) 90
OS/400 Messages by Type, Monthly Overview (OS400M06) 92
OS/400 Messages by User Name, Monthly Overview (OS400M07) 93
OS/400 Messages for a User, Monthly Overview (OS400M05) 91

N
naming standards for tables 39

O
online publications xii, xiii
ordering publications xii, xiii
OS/400 log files 11
record definitions, description 28
report groups 4
report IDs 67

OS400A01 (OS/400 Acct Job Accounting, Monthly Overview) 70
OS400A02 (OS/400 Acct Print Accounting, Monthly Overview) 71
OS400J01 (OS/400 Job Statistics by User, Monthly Overview) 79
OS400J02 (OS/400 Job CPU Usage by User, Monthly Overview) 80
OS400J03 (OS/400 Job Statistics all Systems, Daily Trend) 81
OS400J04 (OS/400 Job Statistics all Systems, Monthly Trend) 82
OS400J05 (OS/400 Jobs Statistics for a User, Monthly Overview) 83
OS400J06 (OS/400 Job Type Statistics, Monthly Overview) 84
OS400J07 (OS/400 Job Acct from History Log, Monthly Overview) 85
OS400M01 (OS/400 Messages All Systems, Monthly Overview) 87
OS400M02 (OS/400 Messages Most Frequent, Daily Overview) 88
OS400M03 (OS/400 Messages Most Frequent, Monthly Overview) 89
OS400M04 (OS/400 Messages by Sev. Codes, Monthly Overview) 90
OS400M05 (OS/400 Messages for a User, Monthly Overview) 91
OS400M06 (OS/400 Messages by Type, Monthly Overview) 92
OS400M07 (OS/400 Messages by User Name, Monthly Overview) 93
OS400P01 (OS/400 Perf CPU and RTM Statistics, Hourly Trend) 95
OS400P02 (OS/400 Perf Exception and Lock Stat, Hourly Trend) 97
OS400P03 (OS/400 Perf Disk I/O Statistics, Hourly Trend) 98
OS400P04 (OS/400 Perf Disk Capacity Statistics, Hourly Trend) 100
OS400P05 (OS/400 Perf Disk Arm Movements, Hourly Trend) 102
OS400P06 (OS/400 Perf CPU and Trans by Job Group, Hourly Trend) 104
OS400P07 (OS/400 Perf CPU by Job Group, Hourly Trend) 106
OS400P08 (OS/400 Perf Paging Statistics, Hourly Trend) 108
OS400P09 (OS/400 Perf Storage Pool & Act Level, Hourly Trend) 110

reports (continued)
in the messages component (continued)
OS/400 Messages by Sev. Codes, Monthly Overview 90
OS/400 Messages by Type, Monthly Overview 92
OS/400 Messages by User Name, Monthly Overview 93
OS/400 Messages for a User, Monthly Overview 91
OS/400 Messages Most Frequent, Daily Overview 88
OS/400 Messages Most Frequent, Monthly Overview 89

in the performance component 94
OS/400 Perf CPU and RTM Statistics, Hourly Trend 95
OS/400 Perf CPU and Trans by Job Group, Hourly Trend 104
OS/400 Perf CPU by Job Group, Hourly Trend 106
OS/400 Perf CPU Usage all Systems, Daily Overview 115
OS/400 Perf Disk Arm Movements, Hourly Trend 102
OS/400 Perf Disk Capacity Statistics, Hourly Trend 100
OS/400 Perf Disk I/O Statistics, Hourly Trend 98
OS/400 Perf Exception and Lock Stat, Hourly Trend 97
OS/400 Perf Max & Avg CPU Usage, Daily Trend 103
OS/400 Perf Summary all Systems, Daily Overview 109
OS/400 Perf Summary all Systems, Monthly Trend 116
OS/400 Perf Summary for a System, Daily Trend 112
OS/400 Perf Summary for a System, Hourly Trend 113
OS/400 Perf Transition Statistics, Hourly Trend 112

source tables 68
variables 68
requirements on OS/400 software 7
response time 83, 95, 104

S
SAVSPDTA command 132
software support xiii
source tables 68
storage pools 108, 110
STRSP400 command 127
STRSPSRV command 126
suffixes, data-table 39
syntax diagrams, how to use 123
system performance commands
INZTAP 134
SAVSPDTA 132
STRSP400 127
STRSPSRV 126
SystemView and Tivoli Decision Support for OS/390 ix

T

tables
lookup 63
OS400_ACCT_JOB_D 41
OS400_ACCT_JOB_M 41
OS400_ACCT_PRINT_D 43
OS400_ACCT_PRINT_M 43
OS400_DASDTYPE 64
OS400_DATE_FORMAT 65
OS400_JOB_ACCTCODE 63
OS400_JOB_STAT_D 46
OS400_JOB_STAT_M 46
OS400_JOBGROUP 66
OS400_MSG_STAT_D 47
OS400_MSG_STAT_MV (View) 48
OS400_MSG_STAT_M 47
OS400_PERF_SUM_D 62
OS400_PERF_SUM_H 62
OS400_PM_DISK_D 49
OS400_PM_DISK_H 49
OS400_PM_POOL_D 52
OS400_PM_POOL_H 52
OS400_PM_SYS_D 53
OS400_PM_SYS_H 53
OS400_PM_SYS_JGR_D 59
OS400_PM_SYS_JGR_H 59

terms used in this book 141

testing the installation 21
Tivoli Decision Support for OS/390, structure of 3
transactions
number 79, 81, 82, 83, 84, 104
rate 104
transfer of files to OS/390 3, 14

trend reports
OS/400 Job Statistics all Systems, Daily Trend 79, 81
OS/400 Job Statistics all Systems, Monthly Trend 80, 82
OS/400 Perf CPU and RTM Statistics, Hourly Trend 95
OS/400 Perf CPU and Trans by Job Group, Hourly Trend 104
OS/400 Perf CPU by Job Group, Hourly Trend 106
OS/400 Perf Disk Arm Movements, Hourly Trend 102
OS/400 Perf Disk Capacity Statistics, Hourly Trend 100, 108
OS/400 Perf Disk I/O Statistics, Hourly Trend 98, 106
OS/400 Perf Exception and Lock Stat, Hourly Trend 97
OS/400 Perf Max & Avg CPU Usage, Hourly Trend 114
OS/400 Perf Paging Statistics, Hourly Trend 108
OS/400 Perf Storage Pool & Act Level, Hourly Trend 110
OS/400 Perf Summary for a System, Daily Trend 118

U

updating lookup tables 18
use of this book, intended ix

V

variables, report 68
view tables for message component 48

W

wait to ineligible, on system 112
who should use this book ix

152 Tivoli Decision Support for OS/390: AS/400 System Performance Feature Guide and Reference