Lucent Technologies
Bell Labs Innovations

CentreVu™
Report Designer
Version 5

User Guide

585-215-831
Comcode 107860314
Issue1
December 1996

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1

Introduction

About the Report Designer

The Report Designer feature can be purchased with the Lucent *CentreVu*™ Supervisor software. The Report Designer allows you to create reports that are tailored to your call center needs. The reports you create using the Report Designer can be run from the Supervisor application.

The Report Designer allows you to create reports from scratch, edit standard CMS and Supervisor reports, and copy items from one report to another report.

When you are using the Report Designer to edit an existing report or create a new one, you will generally begin by creating or modifying an SQL query. Using the database items contained in the table(s) referenced in the query, you can populate fields, grids, and charts for the report. The fields, grids, and charts can then be sized, moved, and changed on the report.

When you are done creating or editing a report, the report is saved on the CMS server. If you assigned Global user permissions to the report, other Supervisor users with the appropriate permissions can run the report.

When creating real-time, historical, and integrated reports, the Report Designer lets you:

- Copy existing report designs, including standard report designs
- Edit reports by adding, moving, copying, and deleting fields, grids, or charts.
- Define ACD data for report fields, grids, and charts
- Enter text for field labels, column headers, row headers, or special instructions

For historical reports only, the Report Designer lets you:

- Merge data in a report field to include data from different entities within an ACD (for example, defining a field that represents the percentage of calls an agent answered compared to all calls handled by that agent's split or skill)
- Merge data in a report field to include data with different time frames (for example, defining a field that represents the percentage of calls answered in an intrahour interval compared to all calls answered in the day)
- Include data from custom data tables that you create and populate within the *CentreVu* CMS database.

Note If you create custom database tables, as described in Chapter 17, make sure that you name the tables with the prefix “c_”. If you do not use the c_ convention, the custom tables will not automatically be backed up.

Caution If you create custom data tables, then you need to make sure there is enough disk space available to store the data. CMS does not automatically check the available space. If you fill up your disk with custom data, then you will lose or damage stored custom and ACD data.

See the *CentreVu* ™ *CMS R3V5 Administration* (585-215-820) document for more information about disk storage.

Warning Do **not** tamper with standard ACD data in the CMS database. If you do, then you will lose stored data.

For integrated reports only, the Report Designer lets you:

- Display real-time and historical data on the same report
- Display cumulative data that shows up-to-the-moment data since a specified interval start time in the past 24 hours.

Contents of This Document

This book describes what you need to know to use the Report Designer to create new reports and edit existing reports. The book is organized as follows:

- **Chapter 1, Introduction —** gives you background information on the Report Designer application and general information about this book.
- **Chapter 2, Report Designer Basics —** teaches you the basic information that you need to know in order to use the Report Designer. The procedures included in this chapter are Starting the Report Designer, Exiting the Report Designer, Report Designer Menus, Steps Required to Create a New Report, and Steps Required to Edit an Existing Report.
- **Chapter 3, Using the Report Manager —** teaches you the basic procedures you need to know in order to use the Report Manager feature of Supervisor. The procedures included in this chapter are Viewing a Report's Properties, Copying a Report to the Designer Category, Copying a Designer Report to a File, Copying a Designer Report from a File, Deleting a Report from the Designer Category, and Opening the Report Designer Using the Edit or New Button.
- **Chapter 4, Design Mode Basics —** teaches you basic procedures that you will use in the Report Designer design mode. The procedures included in this chapter are Copying an Item and Pasting the Item Into the Same Report, Copying an Item from One Report and Pasting the Item Into Another Report, Cutting an Item from a Report, Deleting an Item from the Report, Using Drag-and-Drop to Arrange Items on the Report, Resizing an Item on the Report, and Selecting Multiple Items on the Report.
- **Chapter 5, Edit | Inputs —** shows you how to edit the existing input fields that are used on the input window for the report you are editing. The procedures included in this chapter are Adding Input Fields to the Input Window, Deleting Input Fields from Input Window, Editing the Order of Input Fields, Editing the Appearance of Input Fields, and Viewing the Input Window.
- **Chapter 6, Edit | Queries —** shows you how to edit the existing queries and create new queries for the report you are editing. The sections included in this chapter are Defining Queries for a Report, Creating a

New Real-Time or Historical Query, Creating a New Integrated Query, Editing an Existing Query, Copying a Query, and Deleting a Query.

- **Chapter 7, Insert | Chart —** teaches you to insert a chart on a report.
- **Chapter 8, Insert | Field —** teaches you to insert a field on a report.
- **Chapter 9, Insert | Grid —** teaches you to insert a grid on a report.
- **Chapter 10, Insert | Text —** teaches you to insert text on a report.
- **Chapter 11, Format | Chart —** gives you general information about the tabs that you access from the Chart option of the Format menu.
- **Chapter 12, Format | Grid —** gives you general information about the tabs that you access from the Grid option of the Format menu.
- **Chapter 13, Format | Field —** gives you general information about the window that you access from the Format option of the Format menu.
- **Chapter 14, Format | Text —** gives you general information about the window that you access from the Text option of the Format menu.
- **Chapter 15, Error Messages — lists the most common errors that you will encounter as a result of errors in queries that you create for reports.**
- **Chapter 16, How *CentreVu* CMS Stores and Retrieves Data — gives you general information about how the CMS server stores and retrieves the data that is used in the reports.**
- **Chapter 17, SQL Query Basics and Working with CMS Database Tables —** gives you general information about how *INFORMIX* SQL queries work and how the *INFORMIX* tables that are used in CMS are structured. If you are not familiar with SQL queries, you need to read this chapter before you attempt to create a query for your report.
- **Appendix A, CMS Database Items and Calculations —** lists all of the standard database items and calculations that are used in CMS.

Conventions Used in This Document

The following conventions are used in this book:

- The instructions given in this book are based on the assumption that you are familiar with your computer and the *Windows* operating system, including standard window conventions, such as using the F1 key to activate Help.
- In order to use this book successfully, you must be familiar with the Supervisor application and have some knowledge of how CMS reports work.

  For instructions on using the Supervisor application, refer to the *CentreVu Supervisor User's Guide* (585-215-829). For information on CMS reports, refer to the *CentreVu CMS Reports* document (585-215-821).
- *Windows* 3.x refers to the following operating systems:
  - *Windows* 3.1
  - *Windows* for Workgroups 3.11
  - *Windows* NT 3.51.
- Unless the right button is specified, use the left mouse button whenever you are instructed to click or select an item.
- Menu names and option names are shown in bold text. For example: Choose **Save** from the **File** menu.
- References to windows are capitalized. For example, Manual Login window.
- *Italics* are used to reference other documents, to reference file names, and for trademarks.
- Sections and chapters that are referred to in text are shown in quotes. For example: See Chapter 1, “Introduction,” for an outline of the information in this book.
- A graphic of each Supervisor window is not included in this book. Graphics are provided to give you general information about a *type* of window, or to help clarify a procedure that is being described. The examples in this book are taken from Supervisor running in *Windows* 95.

Related Documents

The following documents include additional information about the CMS or Supervisor:

- *CentreVu™ Supervisor Installation and Getting Started* (585-215-830)
- *CentreVu™ Supervisor User's Guide* (585-215-829)
- *CentreVu™ CMS Administration* (585-215-820)
- *CentreVu™ CMS Real-Time and Historical Reports* (585-215-821).

2

Report Designer Basics

Introduction

This chapter outlines the features of the Report Designer and teaches you general use of the Report Designer.

The following sections are included in this chapter:

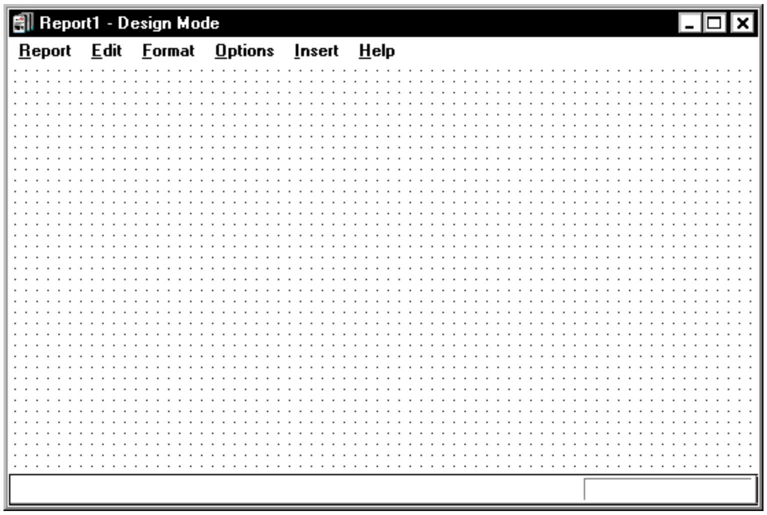
- About the Report Designer
- Starting the Report Designer
- Exiting the Report Designer
- Report Designer Menus
- Steps Required to Create a New Report
- Steps Required to Edit an Existing Report.

Starting the Report Designer

You can start the Report Designer using one of three methods:

- Selecting a report from the Designer category in any folder and clicking the Edit button on the Reports Selector window
- Clicking the New button on the Reports Selector window to create a new report.
- Running a report and then selecting Design from the Report menu on the report.

Any one of these methods of starting the Report Designer will take you to the Design Mode window (the window will be blank if you are creating a new report or will have report information if you are editing an existing report), as shown below:



Exiting the Report Designer

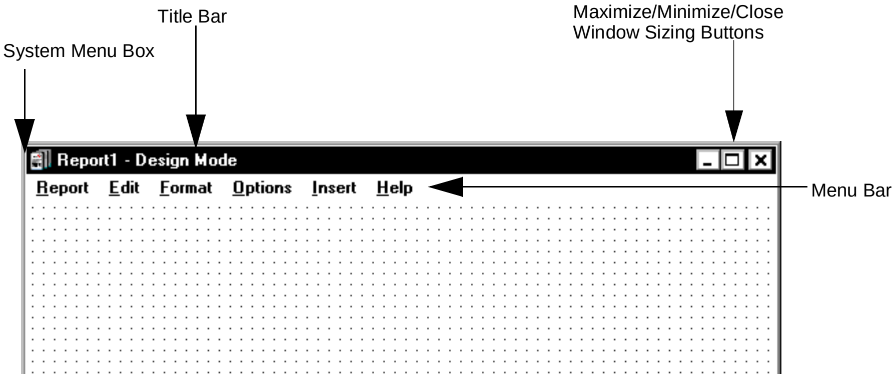
You can close the Report Designer using any of the standard *Windows* methods:

- Select **Exit** from the **Report** menu,
- Double-click the System button, or
- Select the Close button at the top of the window.

If you try to exit the Report Designer without first saving the report you have been working on, a warning gives you the opportunity to save the report before closing the Report Designer.

Report Designer Menus

This section details the Report Designer Design Mode window. The following picture illustrates the Report Designer Design Mode window:


Title Bar
Maximize/Minimize/Close Window Sizing Buttons
System Menu Box
Report1 - Design Mode
Report Edit Format Options Insert Help
Menu Bar

Menu Bar

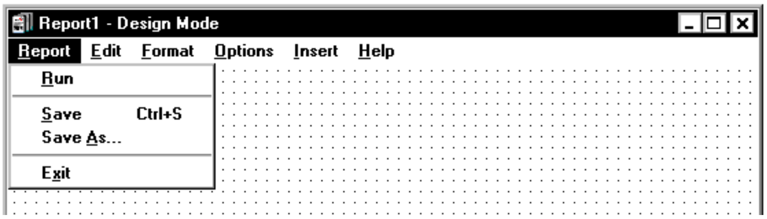
The menu bar lists the available drop-down menus. The following menus are available from the Report Designer Design Mode window:

- Report
- Edit
- Format
- Options
- Insert
- Help.

The following paragraphs outline the options available from each menu.

Report

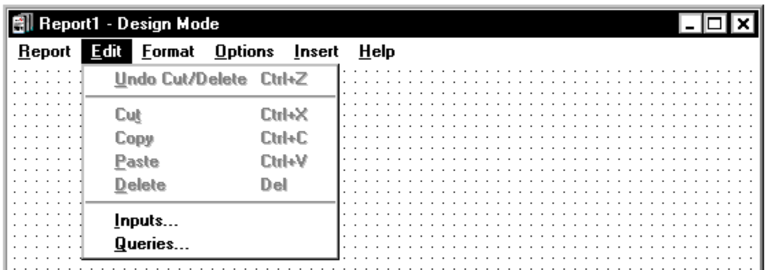
From this menu, you can test the report you are working on, save the report, and exit the Design Mode window. The **Report** menu has the following options:



Menu Item	Action
Run	Selecting **Run** takes you out of design mode and runs the report you are working on. You will use **Run** to test the changes/additions you have made to a report.
Save	Selecting **Save** saves the report on which you have been working.
Save As	Selecting **Save As** allows you to save the report on which you have been working with a new name or with the current name.
Exit	Selecting **Exit** closes the Report Designer without saving the changes/additions you have made to the report. You are prompted to save changes if you made any modifications to the report.

Edit

You will use the **Edit** menu (shown below) to add information to and delete information from the report output window, and to create the report input window and the queries that are used to retrieve data for the output. The **Edit** menu has the following options:

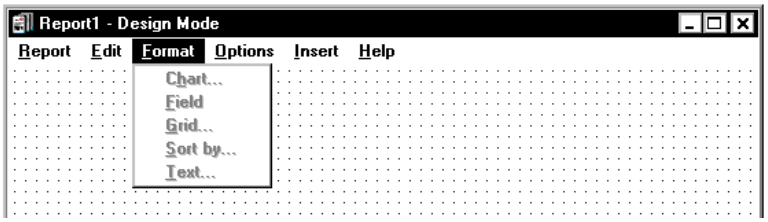

Report1 - Design Mode
Report
Edit
Format
Options
Insert
Help
Undo Cut/Delete Ctrl+Z
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Delete Del
Inputs...
Queries...

Menu Item	Action
Undo Cut/Delete	If you accidentally cut or delete an item from the report that you are designing, you can select **Undo Cut/Delete** to place the item back on the report.
Cut	Selecting **Cut** removes the item that you have selected from the report and places it on the *Windows* clipboard.
Copy	Selecting **Copy** copies the item(s) that you have selected on the report and places it on the *Windows* clipboard. You can only copy entire grids and entire charts. It is not possible to copy only a portion of a grid or chart. If you would like to rearrange the order of the columns on a grid, use the Format Grid window. **Note:** you can copy from one report to another report. To do so, complete these steps: 1. Open the report from which you want to copy. 2. Select the items that you want to copy. 3. Select Copy from the Edit menu. 4. Open the report to which you want to copy. 5. Select Paste from the Edit menu.

Menu Item	Action
Paste	Selecting **Paste** places the item(s) currently on the *Windows* clipboard to the report that is currently selected in Design Mode.
Delete	Selecting **Delete** removes the currently selected item(s) from the report.
Inputs	Selecting **Inputs** starts the Select Inputs assistant, which is where you choose the items that will be included on the report input window for this report. For instructions on how to use the Select Inputs assistant, see the “**Edit | Inputs**” chapter of this book.
Queries	Selecting **Queries** starts the Create a Query assistant, which is where you define the SQL queries that will be used to retrieve the data to be displayed on the report. For instructions on how to use the Create a Query assistant, see the “**Edit | Queries**” chapter of this book.

Format

From this menu, you can edit the charts, grids, and fields that appear on the report. The **Format** menu has the following options:

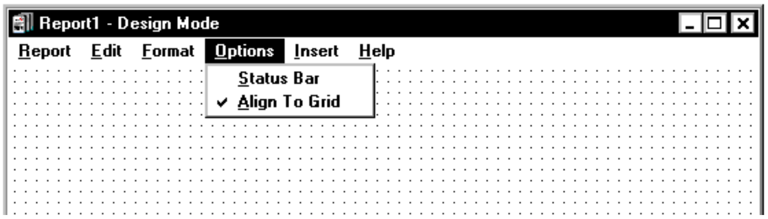


Menu Item	Action
Chart	Selecting **Chart** opens the Chart Format Options window. The Chart Format Options window gives you access to the General, Axis, Data, Data Labels, Fonts, Legend, Series Labels, Title, Type, and 3D Effects tabs for formatting charts on reports. For more information on using the Chart Format Options window, see the "**Format** | **Chart**" chapter in this book
Field	Selecting **Field** opens the Field Format Options window. The Field Format Options window is where you will choose the formats for fields defined in queries. For more information on using the Field Format Options window, see the "**Format** | **Field**" chapter in this book.
Grid	Selecting **Grid** opens the Grid Format Options window. The Grid Format Options window gives you access to the General, Data, Fonts, Format, Headers, Sort, and Summary tabs for formatting grids on reports. For more information on the Grid Format Options window, see the "**Format** | **Grid**" chapter in this book.

Menu Item	Action
Sort by	Selecting **Sort by** opens the Grid Format Options window with the Sort tab active. The Grid Format Options window gives you access to the General and Sort by tabs for formatting grids on reports. For more information on the Grid Format Options window, see the “**Format | Grid**” chapter in this book.
Text	Selecting **Text** when a text item on the report is selected opens the Text Format Options window. The Text Format Options window allows you to change the font display characteristics for the selected text. For more information on the Text Format Options window, see the “**Format | Text**” chapter in this book.

Options

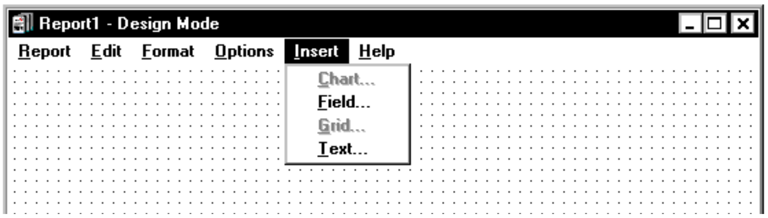
From this menu, you can define whether or not a status bar will appear on the report and set the alignment of text fields to grids. The **Options** menu has the following options:



Menu Item	Action
Status Bar	Selecting **Status Bar** includes a status bar on the bottom of the report you are designing. **Status Bar** is selected when there is a check mark next to the menu item.
Align To Grid	Selecting **Align To Grid** aligns the currently selected items on the report to the Design Mode grid when they are moved. The Design Mode grid is the grid that is shown on the window, behind any charts, grids, or text, when you are in Design Mode. **Align To Grid** is selected when there is a check mark next to the menu item.

Insert

From this menu, you can add charts, grids, fields, and text to the report. The **Insert** menu has the following options:

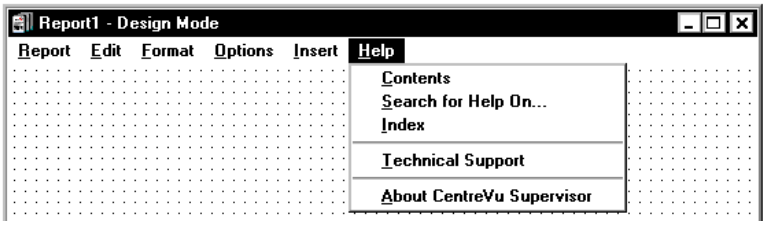


Menu Item	Action
Chart	Selecting **Chart** opens the Chart Assistant, which is where you define the contents of a chart (graphical presentation of the report information). This menu item is grayed-out if no queries have been defined. For more information on using the Chart Assistant, see the "**Insert** | **Chart**" chapter in this book.
Field	Selecting **Field** opens the Field Assistant, which is where you define the contents of a field to be placed on the report. For more information on using the Field Assistant, see the "**Insert** | **Field**" chapter in this book.
Grid	Selecting **Grid** opens the Grid Assistant, which is where you define the contents of a grid (standard CMS report presentation format) to be placed on the report. This menu item is grayed-out if no queries have been defined. For more information on using the Grid Assistant, see the "**Insert** | **Grid**" chapter in this book.
Text	Selecting **Text** opens the Text Assistant, which is where you can enter plain text that will appear on the report. For more information on using the Text Assistant, see the "**Insert** | **Text**" chapter in this book.

Help

You can access Supervisor on-line help for the Report Designer from all of the windows in the Report Designer. There are three ways of accessing the help:

- **Pressing the F1 key** — displays help specific to the current window.
- **Selecting the Help button** (if available) — displays help specific to the current window.
- **Selecting Help from the menu bar** (shown below) — allows you to choose from the following options:


Report1 - Design Mode
Report
Edit
Format
Options
Insert
Help
Contents
Search for Help On...
Index
Technical Support
About CentreVu Supervisor

Menu Item	Action
Contents	Selecting **Contents** opens the Supervisor on-line help table of contents.
Search for Help On	Selecting **Search** opens the Search window. Follow the instructions within this window to easily select specific help information on a given topic.
Index	Selecting **Index** opens a Supervisor help alphabetical index.
Technical Support	Selecting **Technical Support** opens a window that provides Technical Support information.
About	Selecting **About** opens the Supervisor Help About window, which shows the software version number.

Other Attributes of the Design Mode Window

In addition to the available menus, the Design Mode window also makes use of the following standard *Windows* conventions:

- **System Menu Box** — the system menu box allows you to perform common windows conventions, such as closing the current window or application.
- **Title Bar** — the title bar shows the name of the application.
- **Maximize, Minimize, and Close Buttons** — these buttons adjust the size of the window, or close the window.

Steps Required to Create a New Report

There are 10 tasks you need to complete to create a custom report. If you consistently do **all** of these tasks for each report you create, then your reports will run properly and you will be able to create them efficiently. The tasks are:

1. **Access the Report Designer in Design Mode (Chapter 2)**
   Access the Report Designer so that you can design the report.
2. **Define the Inputs for the Report Input Window (Chapter 5)**
   Define inputs for the report input window so that users can run the report using parameters they choose (that is, what split, agent, time, date, etc.).
   NOTE: Inputs can also be defined while you are creating a query. To do so, select the **Inputs** button on the WHERE clause window.
3. **Define the Queries for the Report. (Chapter 6)**
   Define which rows of data from specific CMS database tables will supply data for the grids and charts on the report.
4. **Insert Charts, Grids, and Fields on the Report (Chapters 7, 8, and 9).**
   Define what data from the queries should appear in each chart, field, or grid on the report.
5. **Enter Report Text (Chapter 14) (optional)**
   Enter text to provide headings for the grids and charts on the report, and to provide additional information, such as the report name.
6. **Define Fields to Show Run Time/Date and User Inputs (Chapter 8) (optional)**
   Define fields on the report to show when the report was run and what items the report covers (as defined in the report input window).

7. **Edit the Appearance of the Report (Chapter 4)**
   Edit a report design using the Cut, Copy, and Paste Edit menu options and standard *Windows* drag-and-drop conventions. Editing an existing report design lets you rearrange and delete sections of the report quickly and easily.

8. **Save the Report Design (Chapter 2)**
   Save the report you have been working on prior to testing the report.

9. **Define a Report's Properties (Chapter 3).**
   Define the *name* that you use both to run the report and to access the report design if you want to change the design. Define *access* to determine whether other users can run the report and copy the report's design to create their own custom reports. Define the *type* as real-time, historical, or integrated.

10. **Test (Run) the Report Design (Chapter 2)**
    Test your report immediately after designing and saving it. Testing helps eliminate wasted time in running a report whose design is incomplete.

Steps Required to Edit an Existing Report

There are 11 tasks you need to complete to edit an exiting report in the Report Designer. If you consistently do **all** of these tasks for each report you want to edit, then your reports will run properly and you will be able to create them efficiently. The tasks are:

1. **Copy an Existing Report to the Designer Category (Chapter 3)**
   Copy an existing report so that you start the design process with existing report headings, data fields, queries, charts, grids, and other report features. When you copy a report to the Designer category, the original report remains intact and is still located in the original report category.
   NOTE: You can also run a report and then select **Design** from the **Report** menu. This takes you directly into design mode, and you will be asked if you want to save the report (with a new name, in the Designer category) when you exit design mode.

2. **Define a Report's Properties (Chapter 3).**
   Define the *name* that you use both to run the report and to access the report design if you want to change the design. Define *access* to determine whether other users can run the report and copy the report's design to create their own custom reports. Define the *type* as real-time, historical, or integrated.
   When you copy a report to the Designer category using the Report Manager, the Properties window automatically displays as part of the copy process.

3. **Access the Report Designer in Design Mode (Chapter 2)**
   Access the Report Designer so that you can design the report.

4. **Edit the Appearance of the Report (Chapter 4)**
   Edit a report design using the Cut, Copy, and Paste Edit menu options and standard *Windows* drag-and-drop conventions. Editing an existing report design lets you rearrange and delete sections of the report quickly and easily.

5. **Define Inputs for the Report Input Window (Chapter 5) (optional)**
   Define inputs for the report input window so that users can run the report using parameters they choose (that is, what split, agent, time, date, etc.).
   If you copy a report design, the definition of that report's input window is copied. You can then modify the input fields as required.
   NOTE: Inputs can also be defined while you are creating a query. To do so, select the **Inputs** button on the WHERE clause window.

6. **Define the Queries for the Report. (Chapter 6) (optional)**
   Define which rows of data from specific CMS database tables will supply data for the grids and charts on the report.
   If you copy a report design, the definitions of that report's queries are copied. You can then modify the queries, as required.

7. **Insert Charts, Grids, and Fields on the Report (Chapters 7, 8, and 9). (optional)**
   Define what data from the queries should appear in each chart, field, or grid on the report.
   If you copy a report design, the definitions of that report's charts, fields, and grids are copied. You can then modify the data as required.

8. **Enter Report Text (Chapter 10) (optional)**
   Enter text to provide headings for the grids and charts on the report, and to provide additional information, such as the report name.
   If you copy a report design the text of that report is copied. You can then modify the text, as required.

9. **Define Fields to Show Run Time/Date and User Inputs (Chapter 8) (optional)**
   Define fields on the report to show when the report was run and what items the report covers (as defined in the report input window).
   If you copy a report design these fields are copied. You can modify them as required.

10. **Save the Report Design (Chapter 2)**
    Save the report you have been working on prior to testing the report.

11. **Test (Run) the Report Design (Chapter 2)**
    Test your report immediately after designing and saving it. Testing helps eliminate wasted time in running a report whose design is incomplete.

3

Using the Report Manager

Introduction

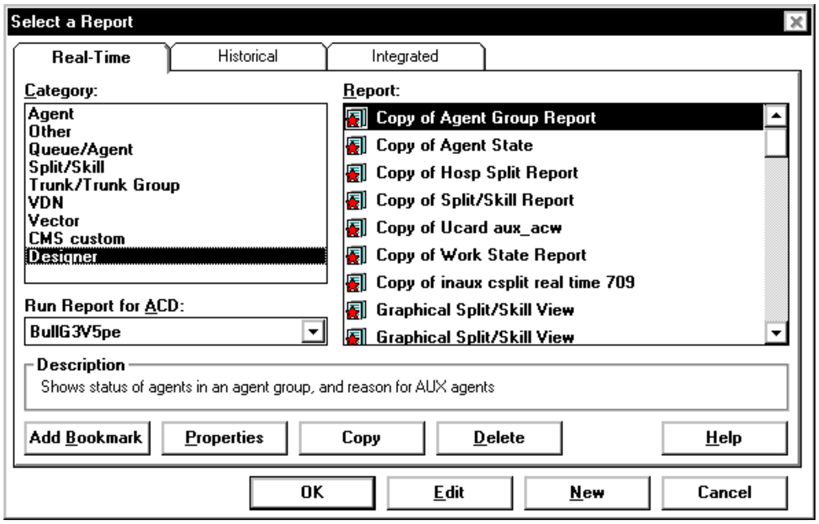
This chapter teaches you to use the report manager feature of the Supervisor application. The sections of the chapter are:

- About Report Manager
- Viewing Report Properties
- Copying a Report to the Designer Category
- Copying a Designer Report to a File
- Copying a Designer Report from a File
- Deleting a Report from the Custom or Designer Category
- Starting the Report Designer using the New or the Edit Button.

About the Report Manager

The report manager is the feature of the Supervisor application that allows you to view report properties, copy reports, and access the Report Designer to edit reports or create new reports.

The report manager is incorporated into the Reports Selector window, as shown below:


Select a Report
Real-Time
Historical
Integrated
Category:
Agent
Other
Queue/Agent
Split/Skill
Trunk/Trunk Group
VDN
Vector
CMS custom
Designer
Report:
Copy of Agent Group Report
Copy of Agent State
Copy of Hosp Split Report
Copy of Split/Skill Report
Copy of Ucard aux_acw
Copy of Work State Report
Copy of inaux csplit real time 709
Graphical Split/Skill View
Graphical Split/Skill View
Add Bookmark
Properties
Copy
Delete
Help
OK
Edit
New
Cancel

Run Report for ACD: BullG3V5pe

Description
Shows status of agents in an agent group, and reason for AUX agents

You can use the **Properties**, **Copy**, and **Edit** buttons on the Report Selector window to manage the standard CMS and Supervisor reports, and to Copy reports to the Designer category for editing. You can use the **New** button to create a new Designer report from scratch. You can use the **Delete** button to delete reports from the Designer category (standard CMS, CMS Custom, and standard Supervisor reports cannot be deleted).

Note For information on using the **Add Bookmark** button, see the *Supervisor User Guide* (585-215-829)

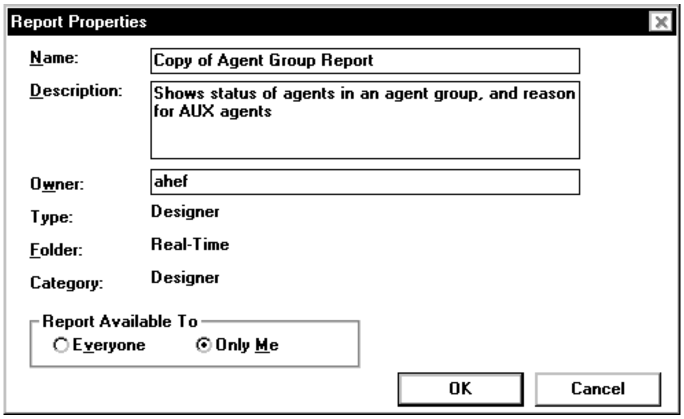
Viewing or Changing a Report’s Properties

The Report Manager gives you the ability to view report properties, such as the report name, description, owner, type, folder, category, and scope (Everyone or Only Me), and the folder the report is stored in.

To view a report’s properties, complete the following steps:

1. Open the Report Selector window.
2. Select the report for which you want to view properties.
3. Click the Properties button.

   The Properties window for the report displays:



Name: Copy of Agent Group Report
Description: Shows status of agents in an agent group, and reason for AUX agents
Owner: ahef
Type: Designer
Folder: Real-Time
Category: Designer
Report Available To
○ Everyone ● Only Me

From the Properties window, you can change the name, description, owner, and scope of a report.

4. To change the **Name**, **Description**, or **Owner** of a report, place the cursor in the appropriate field and make your edits. To change the scope, or who the **Report is Available to,** of a report, select either the **Everyone** or **Only Me** radio button. When you are done making your changes, select the **OK** button to save the changes.

   If you attempt to give a report the same name as an existing designer report, the Report Already Exists window displays. This window allows you to overwrite the existing report or to give the report you are saving a different name.

Copying a Report to the Designer Category

Using the Report Manager, you can copy a report from any category (Agent, Other, Queue / Agent, Split / Skill, Trunk / Trunk Group, VDN, Vector, Custom, or Designer) and folder (Real-Time, Historical, or Integrated) into the Designer category of any folder.

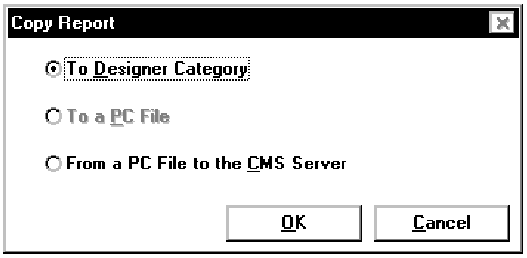
Note Reports that are created or edited using the Report Designer can only be accessed from the Supervisor interface to the CMS server.

Therefore, if you edit a CMS Custom Report using the Report Designer, the changes to that report will not be available when the report is run from the Terminal Emulator or another terminal interface to the CMS.

To copy a report, complete the following steps:

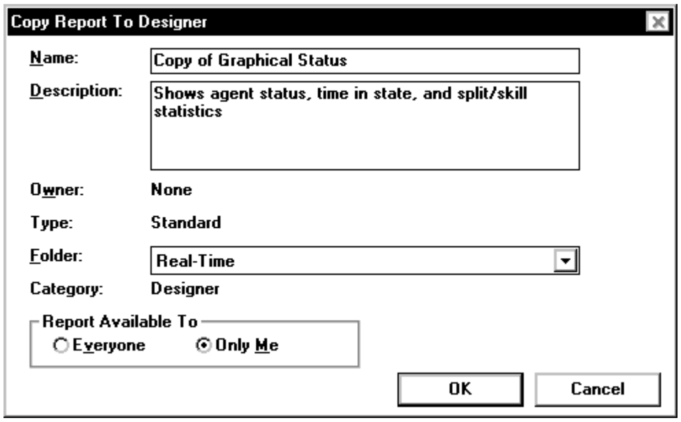
1. Open the Report Selector window.
2. Select the report that you want to copy.
3. Click the **Copy** button.

   The Copy Report window displays. This window allows you to select *where* you are copying the report to (the Designer category, a PC file, or from a PC file to the CMS server).



4. Select the To Designer Category radio button.
5. Select the OK button.

The Copy Report To Designer Window displays, which is where you will define the name, description, folder, and scope of the report.



Name: Copy of Graphical Status
Description: Shows agent status, time in state, and split/skill statistics
Owner: None
Type: Standard
Folder: Real-Time
Category: Designer
○ Everyone ● Only Me

To define the properties information for a copied report, complete the following steps:

6. Enter a name for your report in the **Name** field. The name can have up to 40 characters, including blanks. Because the name you give your report should be unique, you may want to look at existing report names before entering a name for your report.
7. Move the cursor to the **Description** field and enter a description of the report. The description can have up to 100 characters, including blanks. It is not required that you enter a report description.

Warning **Do not use** the \ (backslash), ; (semicolon), ’ (grave accent), ~ (tilde), “ (double quote), | (pipe), * (asterisk), or ? (question mark) characters in your description of the report.

8. Move the cursor to the **Folder** field. Use the pull-down list to select Real-Time, Historical, or Integrated. The report will be stored in the Designer category of the folder you select here.

   When you edit the report you will access the database for the folder you select here. If you select Real-Time, you will not be able to access the Historical database tables to define queries for the report. If you select Historical, you will not be able to access the Real-Time database tables to define queries for the report. However, if you select Integrated, you will be able to access both the Real-Time and Historical databases to define queries for the report.

You **must** select the Historical or Integrated folder if you want to include:

- Exceptions data
- Agent trace data
- Call record data.

9. Select the **Everyone** radio button to make the report accessible to all CMS users who have the appropriate permissions, or select the **Only Me** radio button to make the report accessible only to yourself.

Note It is a good idea *initially* to make your reports available only to yourself until they have been debugged and run successfully. This prevents the possibility of other users running reports that you have saved but not yet tested.

Assigning “Everyone” access to the report allows other users to run the report and to copy the report to create new designer reports.

Assigning “Only Me”access to the report means that only you (and the CMS administrator(s)) can run the report. In addition, no other users, except for CMS administrators, can copy the report design for use in their own designer reports.

Note No other CMS user other than a user with CMS administration permissions can modify a report design you create, regardless of whether the report is accessible by all or only by you. A user with CMS administration permissions always has the ability to modify your report design, even if you make it available only to yourself.

10. Select **OK** to save the report properties.

After you have copied the report to the Designer category, you can use the Edit button to access the Report Designer and edit the report.

Copying a Designer Report to a File

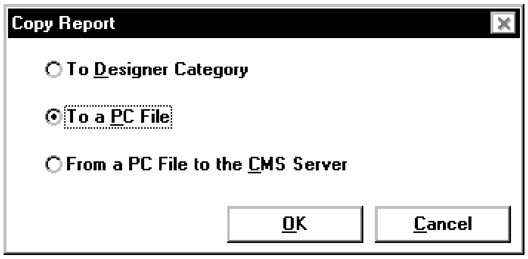
You can use the Report Manager **Copy** button to copy any designer report that you create to a file, either on diskette, on your hard drive, or on a network drive. You can use this feature to easily transport designer reports from one PC to another.

Note If a report was created by Lucent Technologies Professional Services, only a user with CMS administration permissions can copy the report.

To copy a report, complete the following steps:

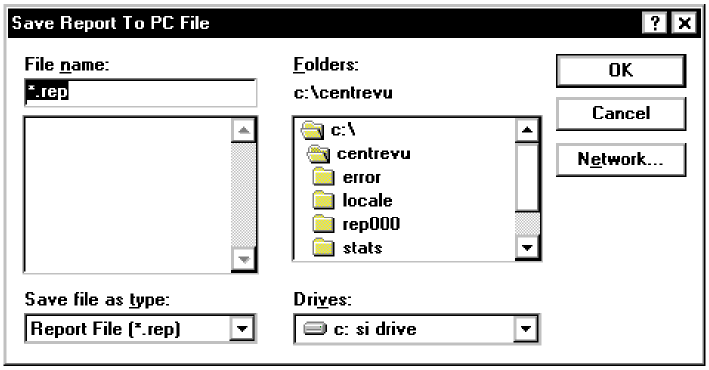
1. Open the Report Selector window.
2. Select the Designer Category
3. Select the designer report that you want to copy.
4. Click the **Copy** button.

   The Copy Report window displays with the **To a PC File** option enabled. This window allows you to select *where* you are copying the report to (the Designer category, a PC file, or from a PC file to the CMS server).



5. Select the **To a PC File** radio button.
6. Select the OK button.

The Save Report to PC File window displays.



File name: *.rep

Folders: c:\centrevu

Save file as type: Report File (*.rep)

Drives: c: si drive

This window is a standard *Windows* browse window.

7. Select the File name and Folder to which you want to save the report.

Note You can copy the report to any drive to which you have access, including the floppy (usually a:\) drive on your PC.

Note You can save the report to a network drive by selecting the Network button, which allows you to access the network drives that you have permissions for.

8. Select the OK button.
9. The file is saved and, upon successful completion of the save, a confirmation window displays.

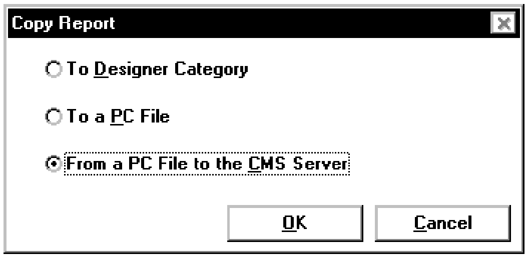
Copying a Designer Report from a File

You can use the Report Manager **Copy** button to copy any designer report that has been saved to a file (either on diskette or on a network drive) onto the CMS server.

To copy a report from a file to the server, complete the following steps:

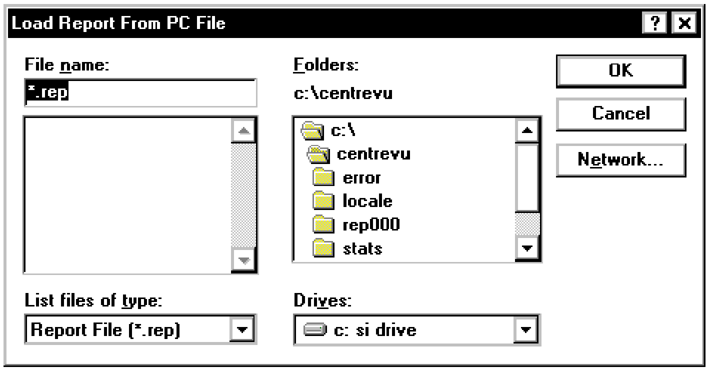
1. Open the Report Selector window.
2. Click the **Copy** button.

   The Copy Report window displays. This window allows you to select *where* you are copying the report to (the Designer category, a PC file, or from a PC file to the CMS server).


Copy Report
○ To Designer Category
○ To a PC File
● From a PC File to the CMS Server
OK
Cancel

3. Select the **From a PC File to the CMS Server** radio button.
4. Select the OK button.

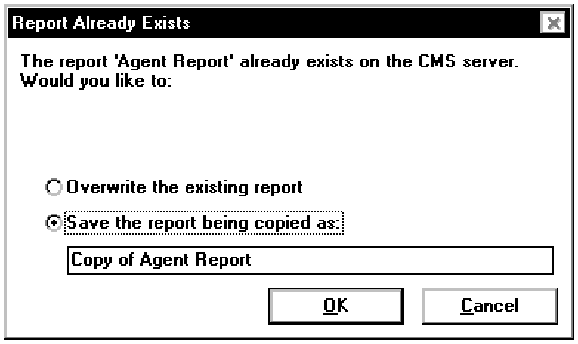
   The Load Report From PC File window displays.


Load Report From PC File
?
File name:
*.rep
Folders:
c:\centrevu
c:\
centrevu
error
locale
rep000
stats
OK
Cancel
Network...
List files of type:
Report File (*.rep)
Drives:
c: si drive

This window is a standard *Windows* browse window.

5. Select the file that you want to copy to the CMS server.
6. Select the OK button.
7. The file is copied to the CMS server and, upon successful completion of the copy, a confirmation window displays.

   If a report with the same name already exists on the CMS server, the following window displays:



The report 'Agent Report' already exists on the CMS server.
Would you like to:

○ Overwrite the existing report

● Save the report being copied as:

Copy of Agent Report

Select the **Overwrite the existing report** radio button to replace the report that currently resides on the CMS server. Select the **Save the report being copied as** radio button and enter a new name for the report if you want to retain the version of the report that currently resides on the CMS server.

Deleting a Report from the Designer Category

The Report Manager allows you to delete any report that resides in the Designer category. You cannot delete any of the standard CMS, CMS Custom, or standard Supervisor reports (reports that reside in the Agent, Other, Queue / Agent, Split / Skill, Trunk / Trunk Group, VDN, Vector, and Custom categories).

To delete a Designer report, complete the following steps:

1. Open the Report Selector window.
2. Select the Designer category under any tab.
3. Highlight the name of the report that you want to delete.
4. Click the Delete button.
5. A message confirming the delete displays. Select OK to delete the report or Cancel if you do not want to delete the report.

Opening the Report Designer Using the Edit or New Button

You can use the Report Manager to open the Report Designer by selecting a report from the Designer category and then clicking the Edit button, or by clicking the New button to create a new report.

You can also access the Report Designer from a report output window. To do so, select Design from the Report menu on the report.

4

Design Mode Basics

Introduction

This chapter teaches you to how to use the basic *Windows* features of the Report Designer Design Mode window, including:

- Copying an Item and Pasting the Item Into the Same Report
- Copying an Item from One Report and Pasting the Item Into Another Report
- Cutting an Item from the Report
- Deleting an Item from the Report
- Using Drag-and-Drop to Arrange Items on the Report
- Resizing an Item on the Report
- Selecting Multiple Items on the Report.

Copying an Item and Pasting the Item Into the Same Report

You can copy an item in one report and paste the copy into the same report. To do so, complete the following steps:

1. Open the report from which you want to copy.
2. Select the item(s) that you want to copy.
3. Select Copy from the Edit menu, or press CTRL+C.
4. Select Paste from the Edit menu, or press CTRL+V.

The item(s) is placed in the upper left-hand corner of the Design Mode window.

Copying an Item from One Report and Pasting the Item Into Another Report

You can copy items from one report to another report. To do so, you can open both reports in design mode and use either the drag-and-drop method, or you can complete the following steps:

1. Open the report from which you want to copy.
2. Select the items that you want to copy.
3. Select Copy from the Edit menu,

   OR

   Press CTRL+C.
4. Open the report to which you want to copy.
5. Select Paste from the Edit menu,

   OR

   Press CTRL+V.

Note Note that **both** reports must be open in design mode in order to copy from one report to another report.

If you want to copy an item from a report that is not a Designer report, complete the following steps:

1. Run the report.
2. Select **Design** from the **Report** menu.
3. Copy the item to the clipboard (using the steps above).
4. Select **Run** from the **Report** menu.

As long as you do not make any changes to the report, you will automatically be returned to the run mode. If you inadvertently make changes to the report, a message displays that gives you the option to save the changes. Select No if you do not want to save the changes.

Cutting an Item from the Report

Selecting Cut removes the currently selected item from the report and places it on the *Windows* clipboard.

To cut an item from a report and place the information on the *Windows* clipboard, complete these steps:

1. Select the item by placing your mouse cursor on the item and clicking.
2. Select Cut from the Edit menu,

   OR

   Press CTRL+X.

Deleting an Item from the Report

Selecting Delete permanently removes the currently selected item(s) from the report.

To delete an item from a report, complete the following steps:

1. Select the item by placing your mouse cursor on the item and clicking.
2. Select Delete from the Edit menu

   or

   Press the DELETE key.

The item is removed from the report and is **no longer** available to be pasted on the report. If you accidentally delete an item that you would like to keep on the report, you can select **Undo** from the **Edit** menu (if you haven't done anything else). If you do not immediately realize that you inadvertently deleted an item, you can use the Insert menu to recreate the item.

Using Drag-and-Drop to Arrange Items on the Report

You can move one or more items around on a report using the *Windows* drag-and-drop method. To do this, complete these steps:

1. Select an item(s) by pointing the mouse cursor at the item and clicking one time.

   You can select additional items by holding down the CTRL key and clicking the mouse cursor on the items.

   You will know when an item is selected because there will be either a frame around the item or sizing handles will display on the corners of the item.

2. Hold down the left mouse button.
3. Move the mouse cursor to the position in which you would like the item to reside.
4. Let go of the mouse button.

Resizing an Item on the Report

To resize an item on a report, complete the following steps:

1. Select the item by placing the mouse cursor over the item and clicking one time.
2. Place the mouse arrow over one of the sizing bars on the item.
3. Hold down the CTRL key and press the left mouse button.
4. Drag the mouse cursor until the item is the appropriate size.
5. Release the mouse button.

Selecting Multiple Items on the Report

To select multiple items on a report (for instance, to copy more than one item at a time), complete the following steps:

1. Select the first item.
2. Hold down the CTRL key.
3. Select the second item.
4. Repeat Steps 2 and 3 until all of the items you want selected are selected.

5

Edit | Inputs

Introduction

This chapter teaches you about report input fields and gives you instruction on how to add, delete, and edit the input fields for a Report Designer report. To access the windows that let you do these things, select **Inputs** from the **Edit** menu. The sections in this chapter are:

- About Report Input Fields
- Adding Input Fields to the Input Window
- Deleting Input fields from the Input Window
- Editing the Order of Input Fields
- Editing the Appearance of Input Fields
- Setting Up Inputs for a Multi-ACD Report
- Viewing the Input Window.

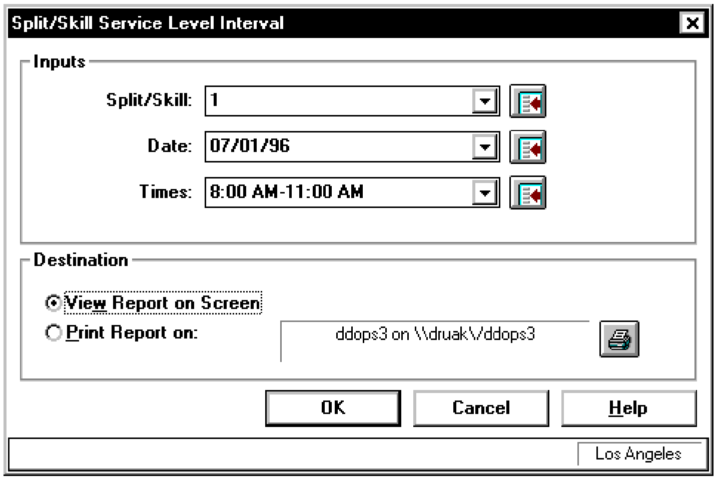
About Report Input Fields

To run a report, you first access a Report Input window. The Report Input window gives you control over what data (which splits/skills, trunks, dates, intrahour intervals, and so on) are included in the report.

To define report input fields for a designer report, use the Define Input window. When you or another user runs the report, this input window appears with the field prompt(s) and the input field(s) you defined.

You define fields for the Report Input window using the steps described in the following pages.

In the example of an input window that is shown below, the user has entered a split number of 1, a date of 07/01/96, and intrahour intervals from 8:00 a.m. to 11:00 a.m.



Split/Skill Service Level Interval

Inputs

Split/Skill: 1

Date: 07/01/96

Times: 8:00 AM-11:00 AM

Destination

● View Report on Screen

○ Print Report on: ddops3 on \\druak\/ddops3

Because the report this input window is associated with is an Historical Interval report, CMS will retrieve the data for the report from the historical database tables, which are designated with an "h" (hagent, hsplit, htrunk, etc.). For more information on how CMS stores and retrieves data, refer to Chapter 15, "How CMS Stores and Retrieves Data" and Appendix A, "Database Items and Calculations," in this book.

Adding Input Fields to the Input Window

Defining the type of an input field enables CMS to do the following when a user runs the report:

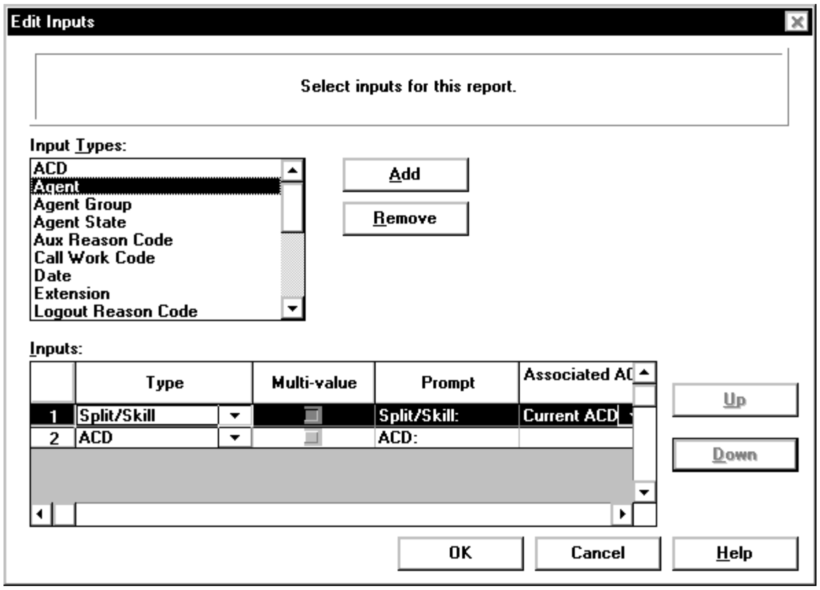
- Check that the user's entries are valid system values and are values CMS can use to search the database tables.
- Check that the user has permissions to run a report for the entries.
- Allow the user to enter names defined in the Dictionary subsystem.

Note Only add inputs that are used in the report queries. If you add additional inputs (that are not used in the queries), then irrelevant information that references those inputs will display on the report.

To define the input fields for a report, complete the following steps:

1. Select **Inputs** from the **Edit** menu.

   The Edit Inputs “Select inputs for this report” window displays, as shown below. If you are editing an existing report, the items that already appear on the input window for the report are shown in the **Inputs** list. If you are creating a new report, the **Inputs** list is blank.


Edit Inputs
Select inputs for this report.
Input Types:
ACD
Agent
Agent Group
Agent State
Aux Reason Code
Call Work Code
Date
Extension
Logout Reason Code
Add
Remove
Inputs:
Up
Down
OK
Cancel
Help

	Type	Multi-value	Prompt	Associated AC
1	Split/Skill	☐	Split/Skill:	Current ACD
2	ACD	☐	ACD:	

2. In the **Input Types** list, highlight the first input you want to require for the report. See the following table for definitions of the available Input Types.
3. Select the **Add** button.

   The item displays on the Inputs list.
4. Repeat Step 2 until you have added all of the inputs required for the report.

Table 5-1: Report Input Field Types

For this type of input:	The user must enter the following information:
ACD	An ACD number or name.
Agent	An agent name (as defined in the Dictionary) or agent login ID. **NOTE:** The Agent input field can only be a single-value input for integrated reports.
Agent group	An agent group name (as defined in the Dictionary).
Agent state	An agent state name (standard or new name as defined in the Dictionary). Standard names are ACD, AUX, ACW, and so on.
Call Work Code	A call work code name or number.
Date	A date must be entered. Dates can be entered in region-specific format or as a relative number (for example, -7 for 7 days ago).
Extension	An extension number of one to five digits (as administered for System 75 / Generic 1 / Generic 3) or three to five digits (as administered for System 85 / Generic 2).
Login ID	A login ID of one to nine digits (as administered for System 75 / Generic 1 / Generic 3) or four digits (as administered for System 85 / Generic 2).

Table 5-1: Report Input Field Types (Contd)

For this type of input:	The user must enter the following information:
Number	A number, which may include digits to the right of the decimal point. This type applies if your variable field asks for specific values about ACD performance (for example, number of ACD calls or percent within service level).
Split/Skill	A split/skill number or name.
String	A character string. Select this type only if one of the following is true: 1. Your variable field is linked to a custom database item that you identify in *INFORMIX** as a CHAR column. 2. Your variable field is linked to a standard database item that is a CHAR column, **AND** you want to allow the user to do pattern searching when running the report. See the following section, “Input Fields That Allow Pattern Matching”.
Time (duration)	A number, including decimals, of seconds. This type only applies if your variable field asks for specific values regarding ACD performance (for example, time in AUX work, average speed of answer, or average talk time).
Time (point in time)	A specific time of day in hh:mm format, either as 24-hour time or with AM or PM appended.
Trunk	A trunk name or number. **NOTE:** The Trunk input field can only be a single-value input for integrated reports.
Trunk group	The number or name of a trunk group.

Table 5-1: Report Input Field Types (Contd)

For this type of input:	The user must enter the following information:
Trunk state	A trunk state name (standard name or new name as defined in the Dictionary subsystem). Standard names are `IDLE, SEIZED, QUEUED,` and so on. **NOTE:** If you use Trunk state as an input in an integrated report, the input **must** be used in a real-time query. It cannot be used in an integrated query.
VDN	A Vector Directory Number of one to five digits (as administered for System 75 / Generic 1 / Generic 3) or three to five digits (as administered for System 85 / Generic 2) or a VDN name. **NOTE:** The VDN input field can only be a single-value input for integrated reports.
Vector	A vector number or name. **NOTE:** The Vector input field can only be a single-value input for integrated reports.

Note

If you are defining a real-time report, you **cannot** and **do not need to** define an “Update Rate in Seconds” input field because the field is automatically included in the Report Input window.

If you are defining a historical report, you **cannot** and **do not need to** define a “Report Destination” input field because the field is automatically included in the Report Input window.

If you are defining an integrated report, you **cannot** and **do not need to** define a “Start Time” input field because the field is automatically included in the Report Input window.

Input Fields That Allow Pattern Matching

CMS can search for values in certain database items according to wild card search patterns. As a result, you can create a report that allows inputs based on character strings, plus either ***** (matches on blank and all characters) or **`?`** (matches on any single character). CMS then includes data for all items that match the character strings the user entered.

The standard database items that allow this type of searching are:

- VDN (the value is a VDN number)
- EXTENSION (the value is an extension number)
- LOGID (the value is an agent login ID)
- EQLOC (the value is a 9-digit trunk location number)
- CWC (the value is a call work code)
- ROW_DATE (the value is a date)

In addition, any custom database items that you define as CHAR columns in *INFORMIX* also allow this type of searching.

As an example of matching with **`*`**, if an input field were a `String` type and were associated with the LOGID database item, the user could enter **`1*`**, and CMS would include data for all agents with login IDs that start with 1 (1, 10, 1238, 190, and so on, depending on the switch's administered login length). As an example of matching with **`?`**, if an input field were a `String` type and were associated with the VDN database item, the user could enter **`21?0`**, and CMS would include data for all VDNs that start with 21, end with 0, and have any single character appearing between the 21 and the 0 (2100, 2110, 2120, 2130, and so on).

Caution If you select **`String`** for an input field, CMS does not check a user's inputs in that field for appropriate read permissions or valid switch parameters. If you want CMS to check permissions for a VDN input field, you must select the **`VDN`** field type. If you want CMS to check switch parameters for a VDN, login ID, extension, or call work code input field, you must select that field type, **`not String`**. In addition, if you select `String` for a field, the user will not be able to enter Dictionary names. So, again, if you want to let the user enter VDN, login ID, or call work code names to run a report, you must select that specific field type, **`not`** `String`.

Deleting Input Fields from the Input Window

To delete one of the inputs you have added for a report input window, complete the following steps:

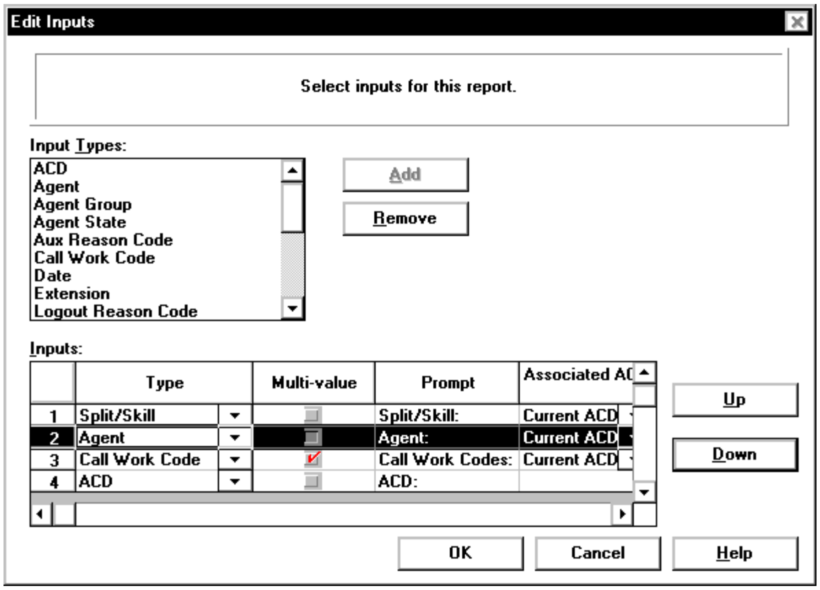
Note If a field is used in a query, the input cannot be removed until the query is removed or modified to eliminate the reference to the input.

1. Select **Inputs** from the **Edit** menu
2. On the **Inputs** table, highlight the row of the item you want to delete by clicking on the left-hand (numbered) column of the row.
3. Select the **Remove** button.

Editing the Order of Input Fields

You can change the order in which input fields appear on the report input window by completing the following steps:

1. Select **Inputs** from the **Edit** menu
2. Add the **Input Types** that will appear on the input window to the **Inputs** table.
3. Select the entire row of the input for which you want to change positions by clicking on the left-hand (numbered) column of the row.
4. Use the **Up** and **Down** buttons to move the entire row up / down one row at a time.
5. Using the **Inputs** list, you can edit the name of the prompt for each input field, control whether multiple values are allowed in the input field, and define the ACD with which the input will be associated.



Select inputs for this report.

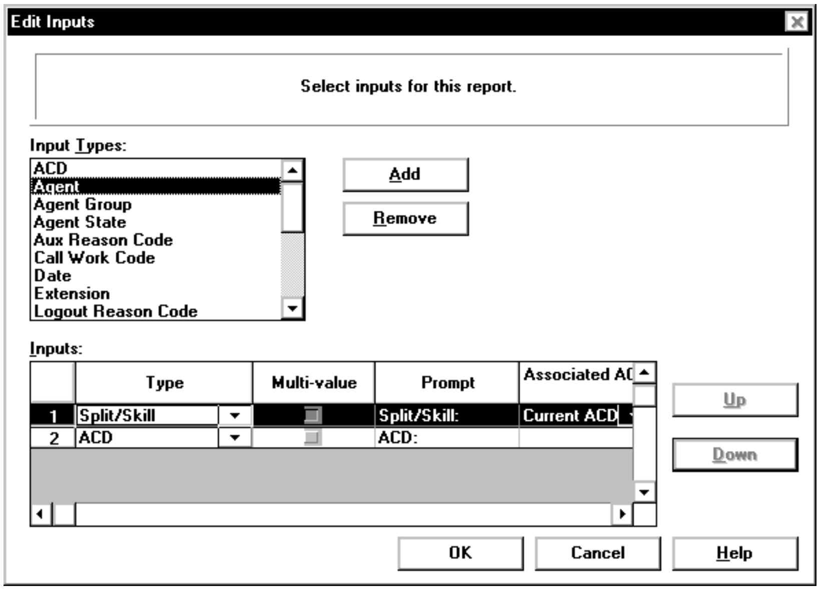
ACD
Agent
Agent Group
Agent State
Aux Reason Code
Call Work Code
Date
Extension
Logout Reason Code

	Type	Multi-value	Prompt	Associated AC
1	Split/Skill	☐	Split/Skill:	Current ACD
2	Agent	☐	Agent:	Current ACD
3	Call Work Code	☑	Call Work Codes:	Current ACD
4	ACD	☐	ACD:	

6. When you are done editing the order of the input fields, select **OK**.

Editing the Appearance of Input Fields

Using the Inputs list, you can edit the name of the prompt for each input field, control whether multiple values are allowed in the input field, and define the ACD with which the input will be associated.


Edit Inputs
Select inputs for this report.
Input Types:
ACD
Agent
Agent Group
Agent State
Aux Reason Code
Call Work Code
Date
Extension
Logout Reason Code
Add
Remove
Inputs:
Up
Down
OK
Cancel
Help

	Type	Multi-value	Prompt	Associated AC
1	Split/Skill	☐	Split/Skill:	Current ACD
2	ACD	☐	ACD:	

When you add an item from the Input Types list to the Inputs list, the columns of the Inputs table are populated with the default values for that input item. The columns of the Inputs table are:

Column	Function
Type	The Type column shows the input field name. You can use the pull-down list to the right of the column to change the input in a particular row to another type.
Multi-value	Select the Multi-Value check box if you want to allow users to enter multiple values in the input field.

Column	Function
Prompt	The prompt column shows the text that will display on the report input window for this input field. You can edit the text for the prompt by selecting the cell in the table and then typing the text that you want to display. If you want to delete the existing prompt text, use the backspace key to erase the letters. You can enter a name that is up to 30 characters long, including blank spaces. The prompt name should describe the information (what split/skill, what date, what time, etc.) a user must enter in the field when ordering the report. For example, if you want the user to enter a date, “Date” would be an appropriate prompt. However, if the user can enter more than one date in the field, “Dates” would be more appropriate.
Associated ACD	The Associated ACD column lets you use the Current ACD or assign a specific ACD to be used for this input. The default for this column is Current ACD. If you want to allow the user to pick a specific ACD for the input field, use the pull-down list to the right of the column to select ACD. If the Associated ACD column is blank, the input cannot be associated with a specific ACD. Select Current ACD if either of the following conditions is true: • You have only one ACD. • You always want the report to show data for the user's current ACD. Select ACD: if the people who will be running the report have read permissions for more than one ACD. Allowing the user to select the ACD for the input is most useful when you are creating a multi-ACD report.

Column	Function
Default Value	You can define a default value for most input fields. To do this, select the browse button to the right of the column. The available values for this type of input are displayed. Highlight one and select OK. **NOTE:** If you select a default value, the user can change the value on the input window.

Setting Up Inputs for a Multi-ACD Report

Two types of multi-ACD reports are available:

- Multi-ACD reports that show data for multiple splits/skills on multiple ACDs, and
- Multi-ACD reports that show data for multiple VDNs on multiple ACDs.

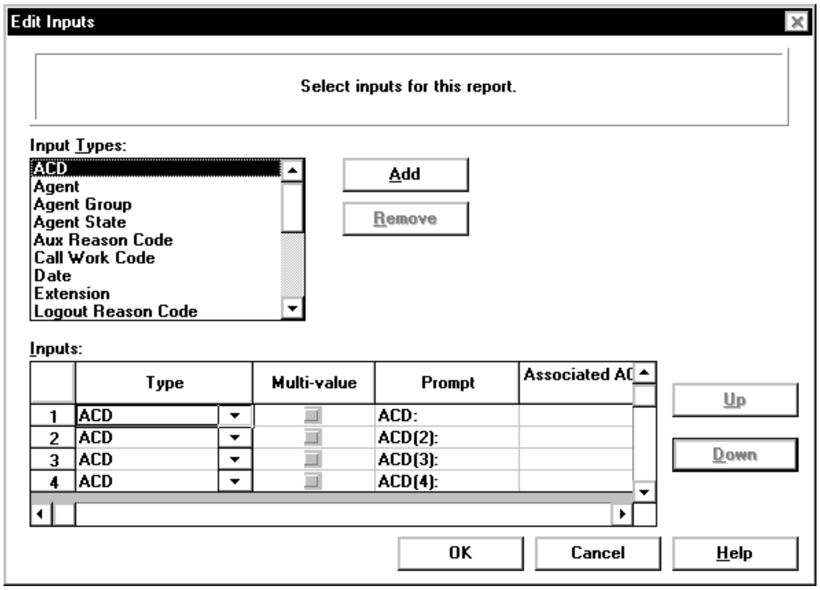
If you are creating a multi-ACD report, you need to make sure that you set up the inputs as detailed below so that the query for the report will work properly.

Note The following instructions use the split/skill multi-ACD report inputs as the example. To create the inputs for a VDN multi-ACD report, use these same instructions, but use the VDN input instead of the Split/Skill input.

The following instructions show you how to create the inputs for a multi-ACD report that allows inputs for up to four ACDs:

1. Select Inputs from the Edit menu.
2. Select ACD from the Input Types box.
3. Select the Add button.
4. Repeat Steps 2 and 3 three times.

The Inputs table will look like this:

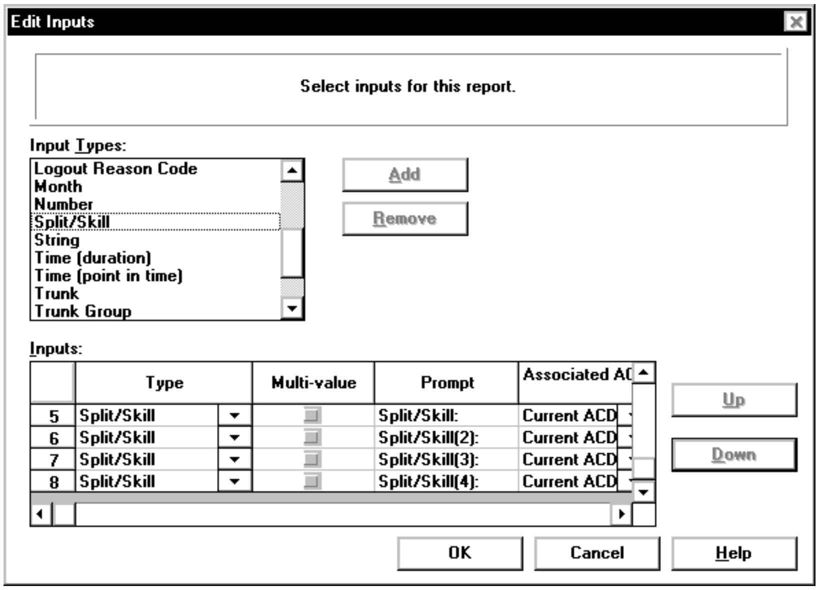

Edit Inputs
Input Types:
ACD
Agent
Agent Group
Agent State
Aux Reason Code
Call Work Code
Date
Extension
Logout Reason Code
Add
Remove
Inputs:
Up
Down
OK
Cancel
Help

Select inputs for this report.

	Type	Multi-value	Prompt	Associated AC
1	ACD	☐	ACD:	
2	ACD	☐	ACD(2):	
3	ACD	☐	ACD(3):	
4	ACD	☐	ACD(4):	

5. Select Split/Skill on the Input Types box.
6. Select the Add button.
7. Repeat Steps 5 and 6 three times.

The Inputs table will look like this:

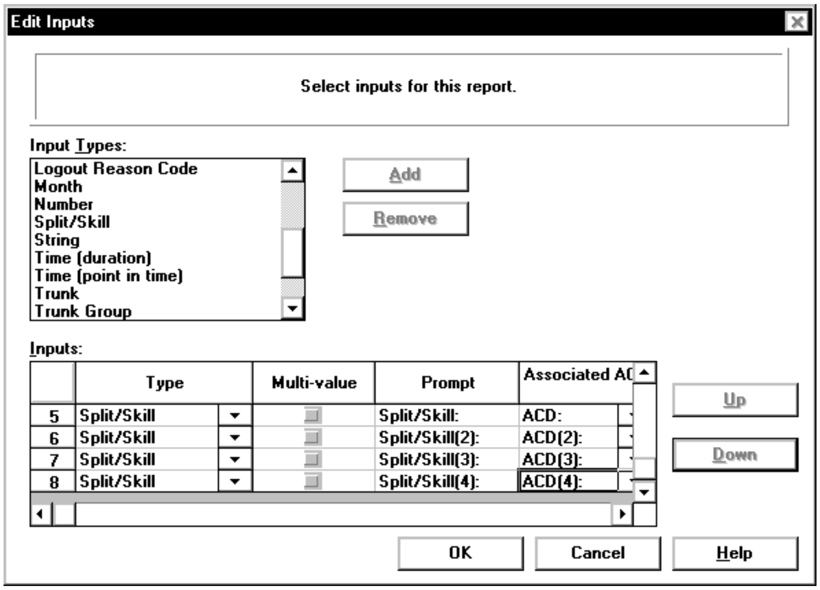

Edit Inputs
Input Types:
Logout Reason Code
Month
Number
Split/Skill
String
Time (duration)
Time (point in time)
Trunk
Trunk Group
Add
Remove
Inputs:
Up
Down
OK
Cancel
Help

Select inputs for this report.

	Type	Multi-value	Prompt	Associated AC
5	Split/Skill	☐	Split/Skill:	Current ACD
6	Split/Skill	☐	Split/Skill(2):	Current ACD
7	Split/Skill	☐	Split/Skill(3):	Current ACD
8	Split/Skill	☐	Split/Skill(4):	Current ACD

8. For the Split/Skill(2) prompt (line 6 of the Inputs table), use the Associated ACD drop-down list to select ACD(2) as the associated ACD.
9. For the Split/Skill(3) prompt (line 7 of the Inputs table), use the Associated ACD drop-down list to select ACD(3) as the associated ACD.
10. For the Split/Skill(4) prompt (line 8 of the Inputs table), use the Associated ACD drop-down list to select ACD(4) as the associated ACD.

The Inputs table looks like this:



Select inputs for this report.

Input Types:

Logout Reason Code
Month
Number
Split/Skill
String
Time (duration)
Time (point in time)
Trunk
Trunk Group

Inputs:

	Type	Multi-value	Prompt	Associated AC
5	Split/Skill	☐	Split/Skill:	ACD:
6	Split/Skill	☐	Split/Skill(2):	ACD(2):
7	Split/Skill	☐	Split/Skill(3):	ACD(3):
8	Split/Skill	☐	Split/Skill(4):	ACD(4):

11. Select OK to save the inputs for this multi-ACD report.

Viewing the Input Window

You can view what the input window will look like at any point during the process of designing the report by selecting Run from the Report menu.

To return to design mode from the report input menu, select the Cancel button.

6

Edit | Queries

Introduction

A report consists of fields, charts, and grids which display data that is retrieved from the CMS database tables. The definition of what data is retrieved for a specific report is done using queries. This chapter teaches you to create queries for reports using the Query Assistant, which is accessed by selecting **Query** from the **Edit** menu. The sections of this chapter are:

- Defining Queries for a Report
- Creating a Real-Time or Historical Query
- Creating an Integrated Query
- Editing an Existing Real-Time or Historical Query
- Editing an Existing Integrated Query
- Copying a Query
- Deleting a Query.

Defining Queries for a Report

To complete the definition of a report's grids, charts, or fields, you must define the queries that select the rows of the appropriate tables in the CMS database.

Queries are values for either **database items** or **calculations**. In most cases, the queries specify the input variables rather than specific values as criteria for retrieving information from the database. The input variables allow CMS to use the values entered in the Report Input window as the query criteria for the report.

Note If you change the prompt in the Edit Inputs window, it is automatically updated in the query.

Queries tell *CentreVu* CMS two things:

- Where to get the data, and
- How to use the data.

CentreVu CMS picks out values from a table with **both** row and column identifiers. *CentreVu* CMS identifies rows of data according to the user's inputs and the row search conditions you define. *CentreVu* CMS identifies columns according to the data expression you define here.

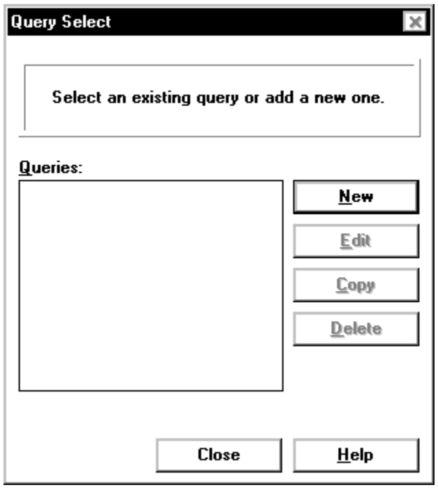
For more information about SQL queries and the CMS Database Tables, refer to the “SQL Queries and CMS Database Tables Basics” chapter of this book and Appendix A, “Database Items and Calculations,” in this document.

Creating a Real-Time or Historical Query

To create a new query to be used in a designer report, complete the following steps from the Report Designer Design Mode window:

1. Select **Query** from the **Edit** menu.

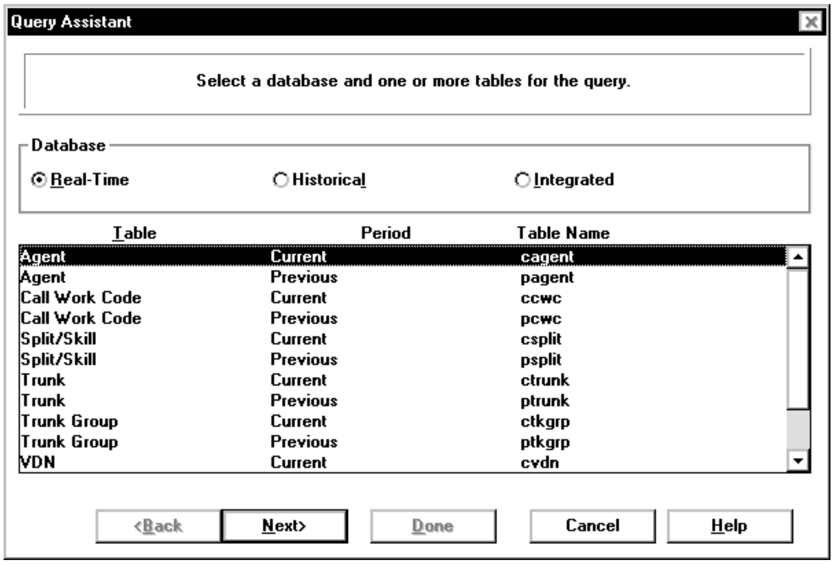
   The Query Select "Select an existing query or add a new one" window displays.



Select an existing query or add a new one.

2. Select the **New** button.

The Query Assistant “Select a database and one or more tables for the query” window in displays:



Select a database and one or more tables for the query.

Database

● Real-Time ○ Historical ○ Integrated

Table	Period	Table Name
Agent	Current	cagent
Agent	Previous	pagent
Call Work Code	Current	ccwc
Call Work Code	Previous	pcwc
Split/Skill	Current	csplit
Split/Skill	Previous	psplit
Trunk	Current	ctrunk
Trunk	Previous	ptrunk
Trunk Group	Current	ctkgrp
Trunk Group	Previous	ptkgrp
VDN	Current	cvdn

3. Depending on the type of report you are creating, select the **Database** radio button next to Real-Time or Historical.

   The tables that are available for the type of database (Real-Time, Historical, or Integrated) selected display.

   Note For instructions on creating an integrated query, see the “Creating an Integrated Query” section in this chapter.

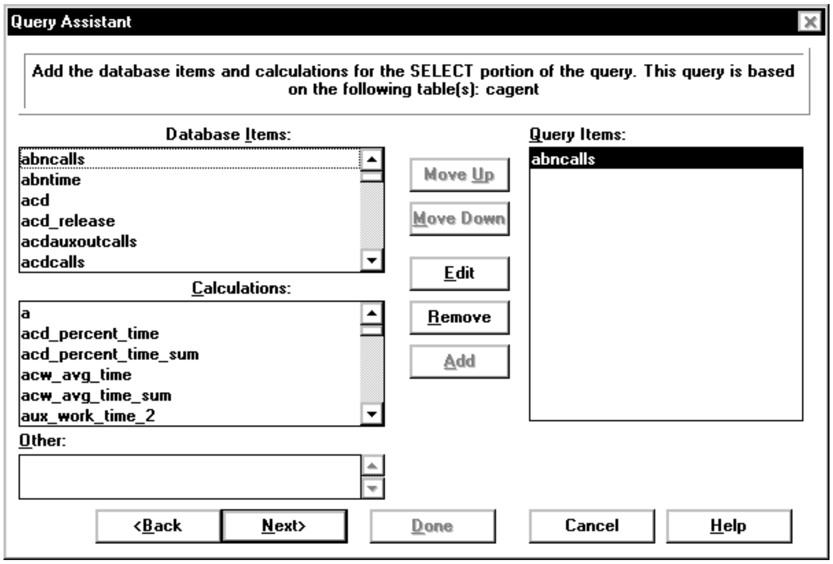
4. In the **Table** list, highlight the name(s) of the table(s) which includes the database items that you want to include in the query. For Real-Time reports, you can select only one table name. For Historical reports, you can select up to three table names.

   Note that the calculations that are associated with the database items in the table(s) you choose will also be available for you to use in your query.

For information on the database items and calculations available in each table, see Appendix A, “Database Items and Calculations,” in this document.

5. Select the **Next** button.

   The Query Assistant “Add the database items and calculations for the SELECT portion of the query” window displays, as shown below. On this window, you will add and remove database items and calculations that will be included in the query.



Add the database items and calculations for the SELECT portion of the query. This query is based on the following table(s): cagent

Query Assistant
Database Items:
abncalls
abntime
acd
acd_release
acdauxoutcalls
acdcalls
Calculations:
a
acd_percent_time
acd_percent_time_sum
acw_avg_time
acw_avg_time_sum
aux_work_time_2
Other:
Move Up
Move Down
Edit
Remove
Add
Query Items:
abncalls
<Back
Next>
Done
Cancel
Help

6. In either the **Database Items** or **Calculations** box, highlight the first database item or calculation that you will reference in the query.

   In the **Other** box, you can type the names of Database Items or Calculations, strings, or constants that you want to use in the query. For instance, if you know that you would like the report to include information that subtracts the quantity of one database item from the quantity of another database item (for instance, ACDCALLS - ACDAUXOUTCALLS), then you could type a “**-**” in the **Other** box and add it to the list of Query Items. When you create the WHERE clause for the query, you can specify a calculation of ACDCALLS - ACDAUXOUTCALLS for the report.

Note Constants that have been defined in the Dictionary are listed in the Calculations box in addition to the calculations.

7. Select the **Add** button, or double click on the item.

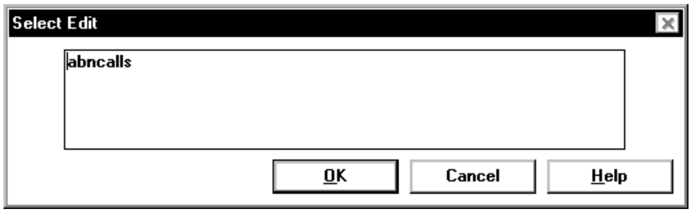
   The item is listed in the **Query Items** box.

8. Repeat Steps 6 and 7 until all of the database items and calculations that you believe will be referenced in the query are listed in the **Query Items** box.

Note You can remove an item from the **Query Items** box by highlighting the item and selecting the Remove button.

You can rearrange the order of the items in the **Query Items** box using the Move Up and Move Down buttons.

You can edit an item in the **Query Items** box by highlighting the item and selecting the Edit button. When you select the Edit button, the following window displays:

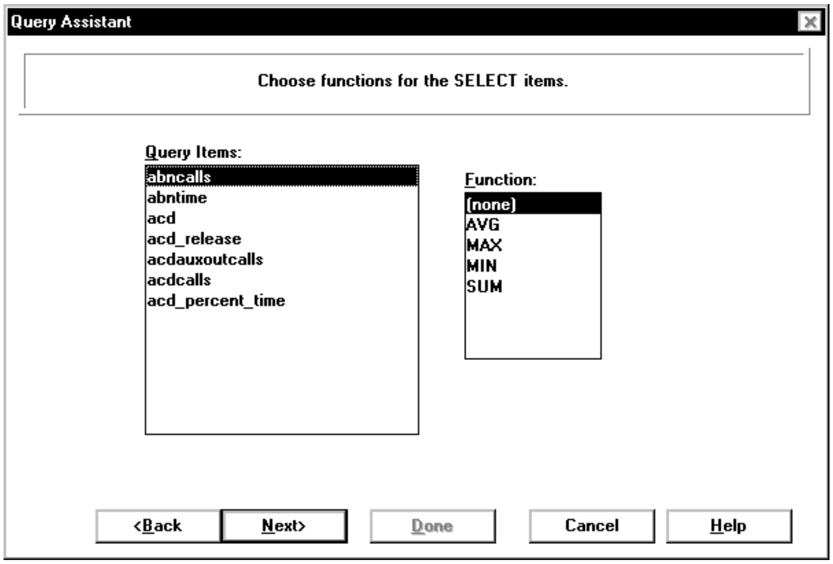


abncalls

An example of how you might want to edit an item would be to create a custom calculation in the edit box. For instance, you may add “callsoffered -” to the abncalls item shown above, so that the item would then read “callsoffered - abncalls” and that is the calculation that would be available for you to use in the query.

9. Select the **Next** button.

The Query Assistant “Choose functions for the SELECT items” window displays:


Query Assistant
Choose functions for the SELECT items.
Query Items:
abncalls
abntime
acd
acd_release
acdauxoutcalls
acdcalls
acd_percent_time
Function:
(none)
AVG
MAX
MIN
SUM
<Back
Next>
Done
Cancel
Help

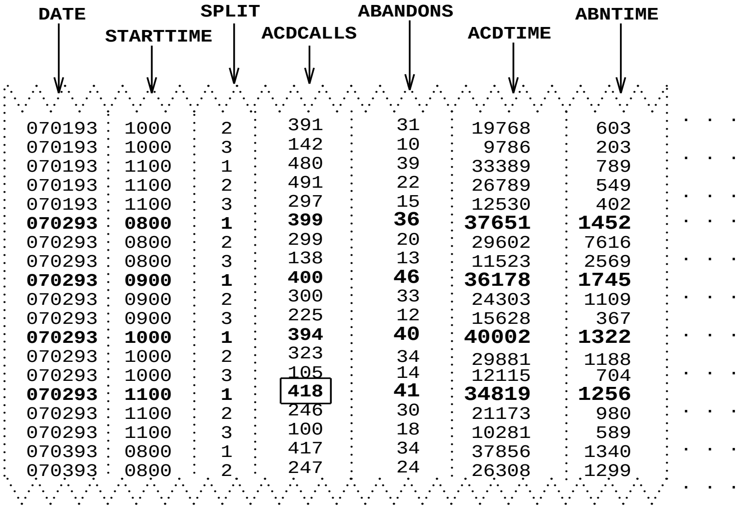
Note If you are creating a query that uses Integrated Data, the steps differ from this point on. See the “Creating an Integrated Query” section for the correct steps.

You will use this window to assign aggregate (AVG, MAX, MIN, and SUM) functions to the **Query Items**. A function is a prefix that is attached to a database item, a calculation, parts of a calculation, or a calculation name. CMS will display only one value on the report if an aggregate function (SUM, AVG, MIN, or MAX) is assigned to a database item or calculation.

10. Highlight the first **Query Item** to which you want to assign an aggregate function.
11. Highlight the **Function** that you would like to assign to the item.

    The available functions are:

- **MAX** — The **MAX** aggregate function retrieves the highest value for a calculation or database item over the time frame of the report. For example, if the Intrahour Split table contained data as shown in Figure 6-1 and you assigned the **MAX** function to the ACDCALLS database item, then ran the report for Split 1 for all intervals on 07/02/93, CMS would find all of the rows that are shown in bold. However, CMS would display only the value **418** (shown in the box), which is the maximum number of ACD calls in any single interval on 07/02/93. Likewise, if you assigned the **MAX** function to the ACDTIME and ACDCALLS database items and then defined a where clause of ACDTIME/ACDCALLS for a report field, CMS would display the value **101.53** (which is the highest average talk time in any single interval on 07/02/93).



DATE	STARTTIME	SPLIT	ACDCALLS	ABANDONS	ACDTIME	ABNTIME
070193	1000	2	391	31	19768	603
070193	1000	3	142	10	9786	203
070193	1100	1	480	39	33389	789
070193	1100	2	491	22	26789	549
070193	1100	3	297	15	12530	402
070293	**0800**	**1**	**399**	**36**	**37651**	**1452**
070293	0800	2	299	20	29602	7616
070293	0800	3	138	13	11523	2569
070293	**0900**	**1**	**400**	**46**	**36178**	**1745**
070293	0900	2	300	33	24303	1109
070293	0900	3	225	12	15628	367
070293	**1000**	**1**	**394**	**40**	**40002**	**1322**
070293	1000	2	323	34	29881	1188
070293	1000	3	105	14	12115	704
070293	**1100**	**1**	**418**	**41**	**34819**	**1256**
070293	1100	2	246	30	21173	980
070293	1100	3	100	18	10281	589
070393	0800	1	417	34	37856	1340
070393	0800	2	247	24	26308	1299

Figure 6-1: Sample Intrahour Split Table Data

- **MIN** — The **MIN** aggregate function retrieves the lowest value for a calculation or database item over the time frame of the report. For example, using the previous example, if you assigned the **MIN** function to the ACDCALLS database item (instead of the **MAX** function) and then ran the report for Split 1 for all intervals on 07/02/93, CMS would display only the value **394** which is the smallest number of ACD calls in any single interval on 07/02/93.

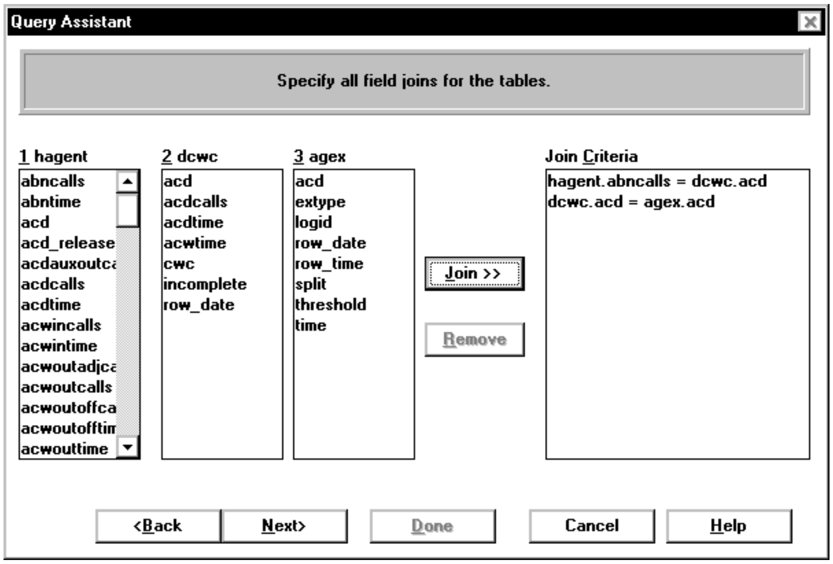
- **SUM** — The **SUM** aggregate function retrieves the sum of all values for a calculation or database item over the time frame of the report. For example, if the Intrahour Split table contained data as shown in Figure 6-1 and you assign the **SUM** function to the ACDCALLS database item, then ran the report for Split 1 and all intervals on 07/02/93, CMS would add all of the values for the ACDCALLS column on that date to display the value **1611**.
- **AVG** — The **AVG** aggregate function retrieves the average of all values found over the time frame of the report. Using the sample table in Figure 6-1, if you assigned the AVG function to the ACDCALLS database item, and then ran the report for Split 1 for all intervals on 07/02/95, the value **402.75**, which is the average of **399**, **400**, **394**, and **418**, would be displayed on the report.

12. Repeat Steps 10 and 11 until you have assigned **Functions** to the appropriate Query Items.

Note If you are creating a Real-Time query, you must assign **Functions** to all of the query items, or to none of the query items. Therefore, if any one of the query items does not have an applicable aggregate function, you cannot assign an aggregate function to any of the query items.

13. Select the **Next** button.
14. If you did not select more than one Historical database table for your query, skip to Step 19.

If you selected the Historical Database for your query and are using more than one table in the query, the "Specify all field joins for the tables" window displays


Query Assistant
Specify all field joins for the tables.
1 hagent
abncalls
abntime
acd
acd_release
acdauxoutca
acdcalls
acdtime
acwincalls
acwintime
acwoutadjca
acwoutcalls
acwoutoffca
acwoutofftim
acwouttime
2 dcwc
acd
acdcalls
acdtime
acwtime
cwc
incomplete
row_date
3 agex
acd
extype
logid
row_date
row_time
split
threshold
time
Join >>
Remove
Join Criteria
<Back
Next>
Done
Cancel
Help

hagent.abncalls = dcwc.acd
dcwc.acd = agex.acd

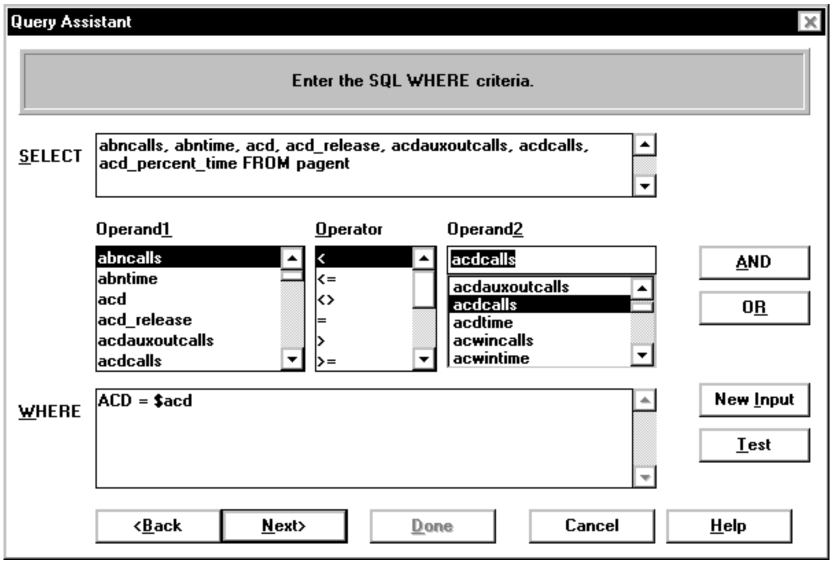
This window allows you to require that items between two or three tables be equal in order to be used in the report. For instance, you might want to select the "acd" item from each agent and make a join clause to ensure that the report is for the same ACD information across the tables.

15. Highlight an item in one of the table lists.
16. Highlight an item in one or both of the remaining table lists.
17. Select the **Join** button.

    The join clause is shown in the **Join Criteria** box.

18. Repeat Steps 15 through 17 until all of the necessary join clauses are listed.

19. The Query Assistant “Enter the SQL WHERE criteria” window displays, as shown below.


Query Assistant
Enter the SQL WHERE criteria.
SELECT
Operand1
abncalls
abntime
acd
acd_release
acdauxoutcalls
acdcalls
Operator
<
<=
<>
=
>
>=
Operand2
acdcalls
acdauxoutcalls
acdcalls
acdtime
acwincalls
acwintime
AND
OR
WHERE
New Input
Test
<Back
Next>
Done
Cancel
Help

SELECT: abncalls, abntime, acd, acd_release, acdauxoutcalls, acdcalls, acd_percent_time FROM pagent

WHERE: ACD = $acd

Note If you are creating an Historical query, a **Unique** check box displays next to the **SELECT** box. Select this check box to make this query unique in the current report. What this means is that, if the query returns multiple rows of the same data, then only one row of the data will display on the report.

This window is where you will define the SQL “where” clauses that will be used to retrieve data for the report. The SQL where clause tells the CMS to retrieve the data defined in the **SELECT** box that matches the criteria defined in the **WHERE** box. The **SELECT** box specifies which *columns* of data to consider in the database table(s). The **WHERE** box species which *rows* of data to consider in the database table(s).

For more information on SQL where clauses, see the “SQL Query and CMS Database Tables Basics” chapter of this book.

This window includes the following elements:

Item	Purpose
SELECT box	Shows the Query Items that were defined on the previous windows, including the database items and calculations and any associated functions assigned to the items, and the database table from which the database items and calculations are to be retrieved. The information displayed in the SELECT box cannot be edited.
Operand1 box	Lists the database items and calculations that can be used in the **WHERE** clause.
Operator box	Lists the standard mathematical operations that can be used in the **WHERE** clause.
Operand2 box	Lists the database items, calculations, and inputs that can be used in the **WHERE** clause and as inputs for the input window.
WHERE box	Shows the current **WHERE** clause.
AND button	Places an **AND** before the currently selected Operand1, Operator, and Operand2.
OR button	Places an **OR** before the currently selected Operand1, Operator, and Operand2.
New Input	Takes you to the Edit Inputs window, where you can add new input fields for the Report Input window. Any new inputs you add will appear in the Operand2 box.
Test button	Allows you to test the query for basic SQL syntax errors.

Note The ACD operand is automatically added to the beginning of each **WHERE** clause.

20. In the **Operand1** box, highlight the first database item or calculation which you want considered in the **WHERE** clause.
21. In the **Operator** box, highlight the appropriate operation.
22. In the **Operand2** box, highlight the second item (input, database item, calculation, or item defined in the Other box on the "Add the database items and calculations for the SELECT portion of the query" window) which you want considered in the **WHERE** clause.

    For example, using the data shown in the window sample above, if you wanted the report to select the data from the table when the number of ACDCALLS is greater than the number of ACWINCALLS, then you would select acdcalls in the Operand1 box, the > sign in the Operator box, and ACWINCALLS in the Operand2 box.
23. Select the **AND** or the **OR** button, as appropriate.

    If you place "and" between clauses, then both of the clauses must be true in order for CMS to retrieve the SELECT data from the table.

    If you place "or" between clauses, then either of the clauses can be true in order for CMS to retrieve the SELECT data from the table.
24. Repeat Steps 20 through 23 until you have completed the query.

Note You can add your own text in the **WHERE** clause (such as parenthesis and numbers) by placing your cursor where you would like the text to appear and then typing in the text.

Note If you are creating a report that will display data for multiple splits/skills or VDNs on multiple ACDs, you can type MULTI_ACD in the where clause, instead of entering each individual OR statement. This will only work if you have correctly set up the inputs for the multi-ACD report. See the Edit | Inputs chapter for information on setting up the inputs for a multi-ACD report.

25. Select the **Test** button.

    CMS checks the syntax of the query and returns a message with any errors.

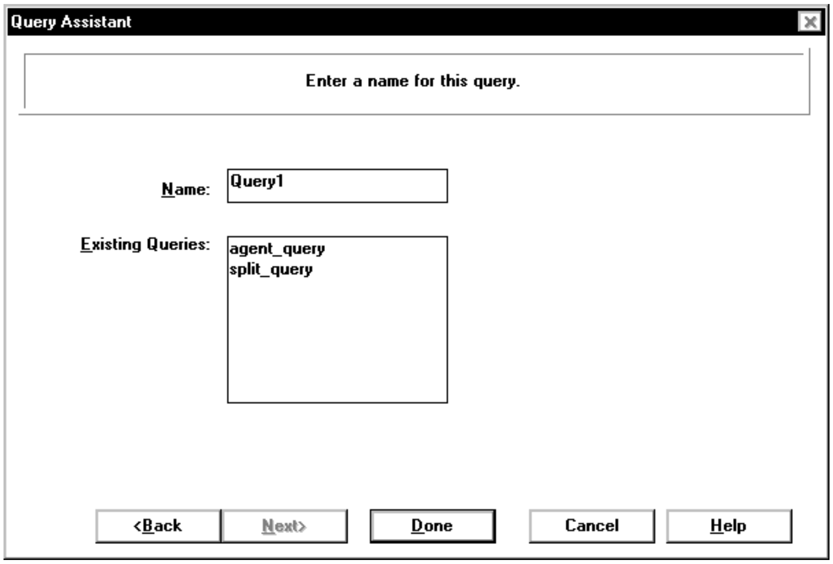
    For information on the most common query errors, see Chapter 15, “Error Messages,” in this book.

    Note that some errors are not detected until you run the report.

26. Correct any of the errors detected in the Test.

27. Select the **Next** button.

    The Query Assistant “Enter a name for this query” window displays:



Enter a name for this query.

Name: Query1

Existing Queries:
agent_query
split_query

28. In the **Name** text box, type the name that you would like to assign to the query you created.

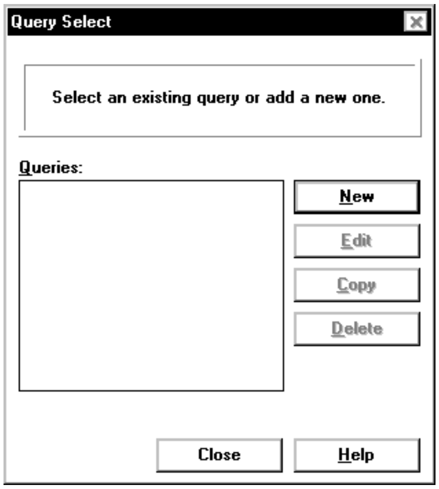
29. Select the **Done** button.

Creating an Integrated Query

To create a new query to be used in a designer report, complete the following steps from the Report Designer Design Mode window:

1. Select **Query** from the **Edit** menu.

   The Query Select window displays:


Query Select
Select an existing query or add a new one.
Queries:
New
Edit
Copy
Delete
Close
Help

2. Select the **New** button.

The Query Assistant “Select a database and one or more tables for the query” window in displays:

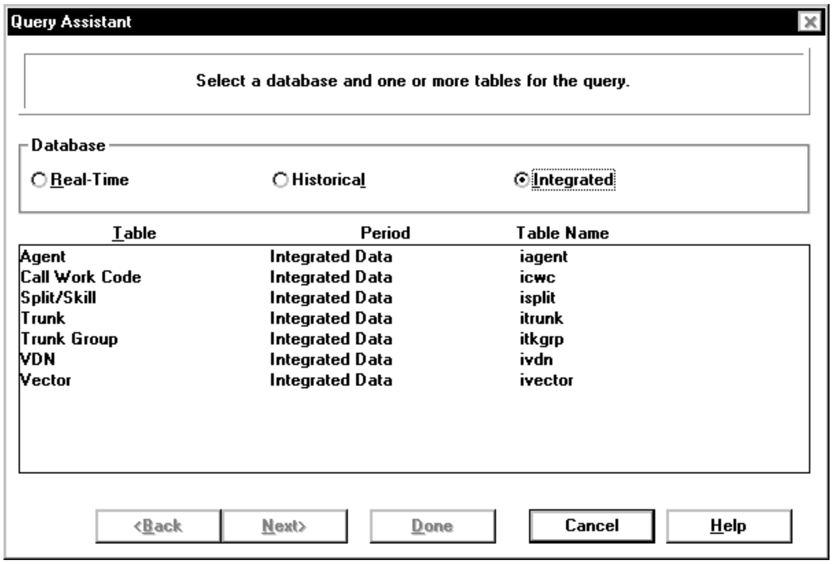

Query Assistant
Select a database and one or more tables for the query.
Database
○ Real-Time
○ Historical
● Integrated
<Back
Next>
Done
Cancel
Help

Table	Period	Table Name
Agent	Integrated Data	iagent
Call Work Code	Integrated Data	icwc
Split/Skill	Integrated Data	isplit
Trunk	Integrated Data	itrunk
Trunk Group	Integrated Data	itkgrp
VDN	Integrated Data	ivdn
Vector	Integrated Data	ivector

3. Select the **Database** radio button next to **Integrated**.

   The tables that are available for integrated reports display.

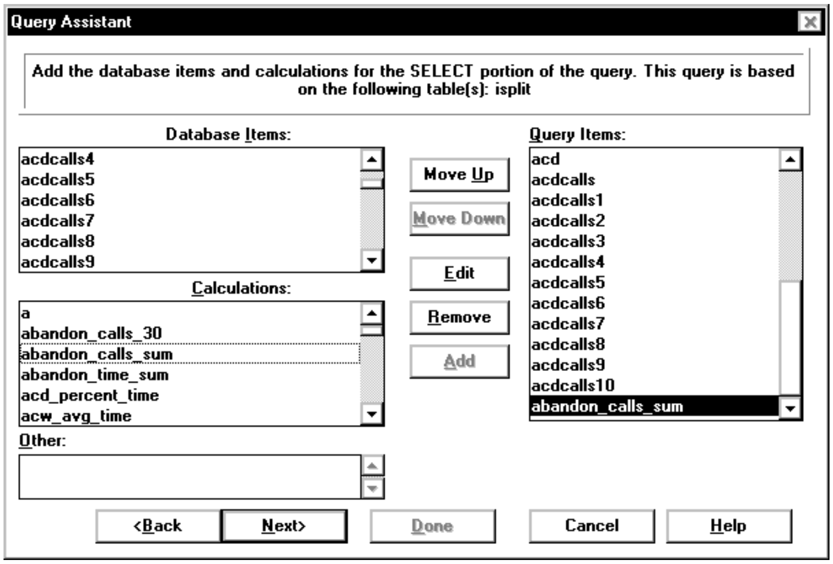
4. In the **Table** list, highlight the name of the table which includes the database items or calculations that you want to include in the query.

   For integrated reports, you can select one table per query.

   For information on the database items and calculations available in each table, see Appendix A, “Database Items and Calculations,” in this document.

5. Select the **Next** button.

   The Query Assistant “Add the database items and calculations for the SELECT portion of the query” window displays, as shown below. On this window, you will add and remove database items and calculations that will be included in the query.



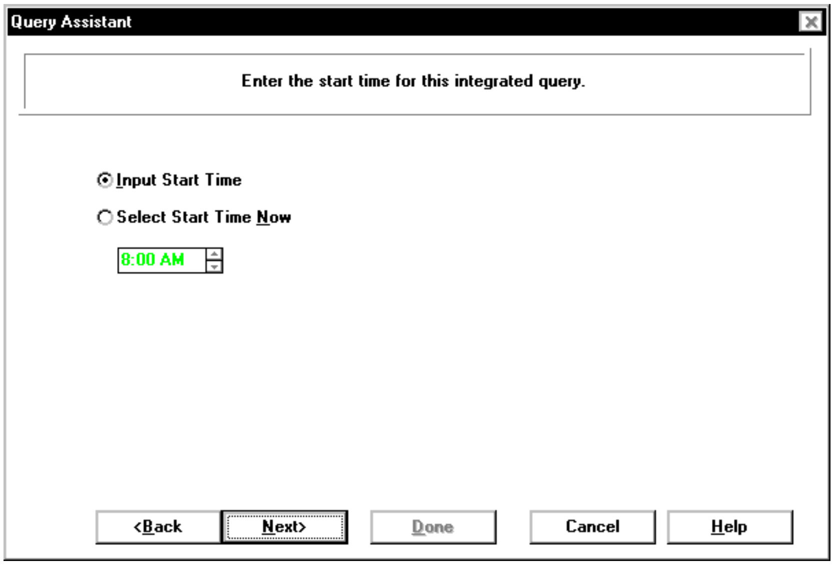
Add the database items and calculations for the SELECT portion of the query. This query is based on the following table(s): isplit

Query Assistant
Database Items:
acdcalls4
acdcalls5
acdcalls6
acdcalls7
acdcalls8
acdcalls9
Calculations:
a
abandon_calls_30
abandon_calls_sum
abandon_time_sum
acd_percent_time
acw_avg_time
Other:
Move Up
Move Down
Edit
Remove
Add
Query Items:
acd
acdcalls
acdcalls1
acdcalls2
acdcalls3
acdcalls4
acdcalls5
acdcalls6
acdcalls7
acdcalls8
acdcalls9
acdcalls10
abandon_calls_sum
<Back
Next>
Done
Cancel
Help

6. In either the **Database Items** or **Calculations** box, highlight the first database item or calculation that you will reference in the query.
7. Select the **Add** button.

   The item is listed in the **Query Items** box.
8. Repeat Steps 6 and 7 until all of the database items and calculations that you believe will be referenced in the query are listed in the **Query Items** box.
9. Select the **Next** button.

The Query Assistant “Enter the start time for this integrated query” window displays:



Query Assistant

Enter the start time for this integrated query.

● Input Start Time

○ Select Start Time Now

8:00 AM

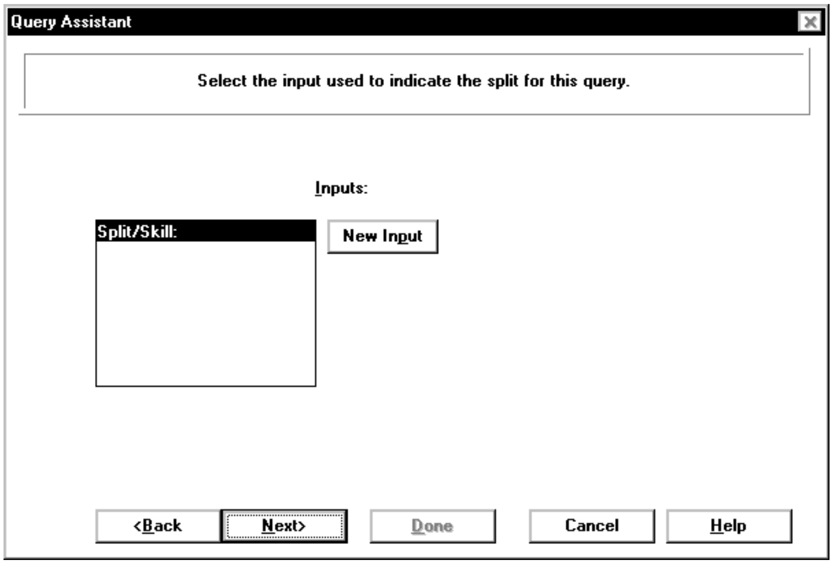
10. Select the **Input Start Time** or **Select Start Time Now** radio button.

    If you select the Select Start Time Now radio button, you need to define the time that the integrated data will always begin accumulating for this report.

    If you select the Input Start Time, a “Start Time” field will be added to the report input window and users can individually define the time that data will begin accumulating for the report.

11. Select the **Next** button.

The Query Assistant “Select the input used to indicate the xxx for this query” window displays:



Select the input used to indicate the split for this query.

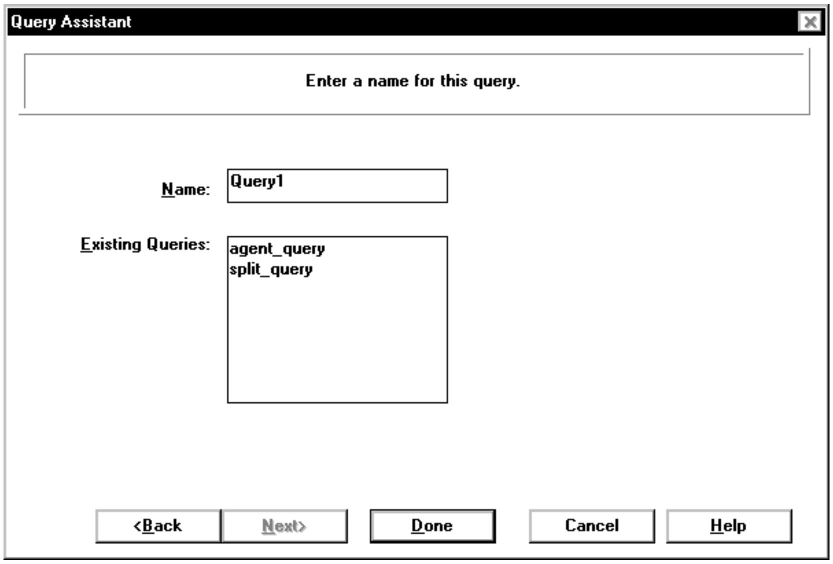
On this window, you can choose the input item that will be used for the query.

12. Highlight the input(s) you would like to use as criteria for the query. You can create a new input by selecting the **New Input** button, which takes you to the **Edit Inputs** assistant.

Note Only the inputs that apply to the table you selected for this query will appear.

13. Select the **Next** button.

The Query Assistant “Enter a name for this query” window displays:


Query Assistant
Enter a name for this query.
Name:
Existing Queries:
<Back
Next>
Done
Cancel
Help

Name: Query1

Existing Queries:
agent_query
split_query

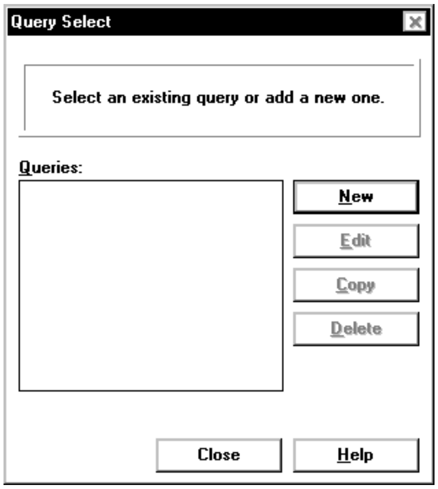
14. In the **Name** text box, type the name that you would like to assign to the query you created.
15. Select the **Done** button.

Editing an Existing Real-Time or Historical Query

To edit an existing real-time or historical query used in a designer report, complete the following steps from the Report Designer Design Mode window:

1. Select **Query** from the **Edit** menu.

   The Query Select window displays:

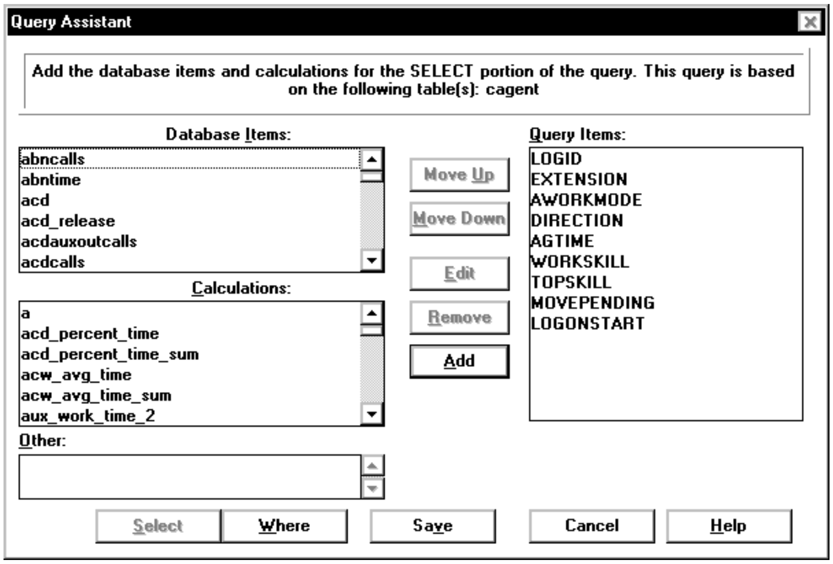
   Query Select
   Select an existing query or add a new one.
   Queries:
   New
   Edit
   Copy
   Delete
   Close
   Help

2. In the **Queries** box, highlight the name of the query you would like to edit.

3. Select the **Edit** button.

   The Query Assistant “Add the database items and calculations for the SELECT portion of the query” window displays, as shown below. The

Database Items and Calculations that are already included in the query are listed in the Query Items list.


Query Assistant
Database Items:
Calculations:
Other:
Query Items:
Move Up
Move Down
Edit
Remove
Add
Select
Where
Save
Cancel
Help

Add the database items and calculations for the SELECT portion of the query. This query is based on the following table(s): cagent

Database Items:

- abncalls
- abntime
- acd
- acd_release
- acdauxoutcalls
- acdcalls

Calculations:

- a
- acd_percent_time
- acd_percent_time_sum
- acw_avg_time
- acw_avg_time_sum
- aux_work_time_2

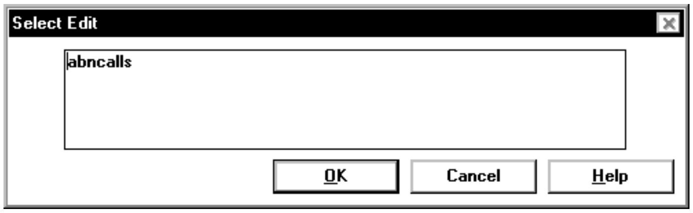
Query Items:

- LOGID
- EXTENSION
- AWORKMODE
- DIRECTION
- AGTIME
- WORKSKILL
- TOPSKILL
- MOVEPENDING
- LOGONSTART

4. If you would like to add database items or calculations to the **Query Items** list, highlight the item in the **Database Items** or **Calculations** box and then select the **Add** button.

   If you would like to remove a database item or calculation from the **Query Items** list, highlight the item in the list and then select the **Remove** button.

   If you would like to edit a database item or calculation on the **Query Items** list, highlight the item in the list and then select the **Edit** button. The following window displays:

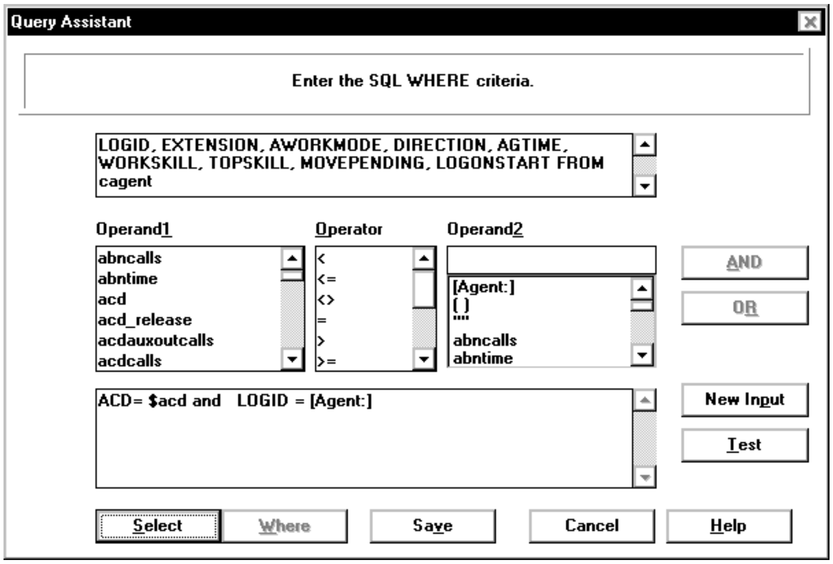

Select Edit
OK
Cancel
Help

abncalls

An example of how you might want to edit an item would be to create a custom calculation in the edit box. For instance, you may add “callsoffered -” to the abncalls item shown above, so that the item would then read “callsoffered - abncalls” and that is the calculation that would be available for you to use in the query.

5. Repeat Step 4 until all of the database items and calculations that you believe will be referenced in the query are listed in the **Query Items** box.
6. Select the **Where** button.

   The Query Assistant “Enter the SQL WHERE criteria” window displays, as shown below.



Enter the SQL WHERE criteria.

LOGID, EXTENSION, AWORKMODE, DIRECTION, AGTIME, WORKSKILL, TOPSKILL, MOVEPENDING, LOGONSTART FROM cagent

ACD= $acd and LOGID = [Agent:]

Query Assistant
Operand1
abncalls
abntime
acd
acd_release
acdauxoutcalls
acdcalls
Operator
<
<=
<>
=
>
>=
Operand2
[Agent:]
( )
""
abncalls
abntime
AND
OR
New Input
Test
Select
Where
Save
Cancel
Help

This window is where you will define the SQL “where” clauses that will be used to retrieve data for the report. The SQL where clause tells the CMS to retrieve the data defined in the **SELECT** box that matches the criteria defined in the **WHERE** box.

For more information on SQL where clauses, see the “SQL Query and CMS Database Tables Basics” chapter of this book.

This window includes the following elements:

Item	Purpose
SELECT box	Shows the Query Items that were defined on the previous windows, including the database items and calculations and any associated functions assigned to the items, and the database table from which the database items and calculations are to be retrieved.
Operand1 box	Lists the database items and calculations that can be used in the **WHERE** clause.
Operator box	Lists the standard mathematical operations that can be used in the **WHERE** clause.
Operand2 box	Lists the database items and calculations that can be used in the **WHERE** clause.
WHERE box	Shows the current **WHERE** clause.
AND button	Places an **AND** before the currently selected Operand1, Operator, and Operand2.
OR button	Places an **OR** before the currently selected Operand1, Operator, and Operand2.
New Input	Takes you to the Edit Inputs window, where you can add new input fields for the Report Input window.
Test button	Allows you to test the query for basic SQL syntax errors.

7. In the **Operand1** box, highlight the first database item or calculation which you want considered in the **WHERE** clause.
8. In the **Operator** box, highlight the appropriate operation.
9. In the **Operand2** box, highlight the second database item or calculation which you want considered in the **WHERE** clause.

For example, using the data shown in the window sample above, if you wanted the report to select the data from the table when the number of ACDCALLS is greater than the number of ACWINCALLS, then you would select acdcalls in the Operand1 box, the > sign in the Operator box, and ACWINCALLS in the Operand2 box.

10. Select the **AND** or the **OR** button, as appropriate.

    If you place “and” between clauses, then both of the clauses must be true in order for CMS to retrieve the SELECT data from the table.

    If you place “or” between clauses, then either of the clauses can be true in order for CMS to retrieve the SELECT data from the table.

11. Repeat Steps 7 through 10 until you have completed the query.

Note You can add your own text in the **WHERE** clause (such as parenthesis and numbers) by placing your cursor where you would like the text to appear and then typing in the text.

12. Select the **Test** button.

    CMS checks the syntax of the query and returns a message with any errors.

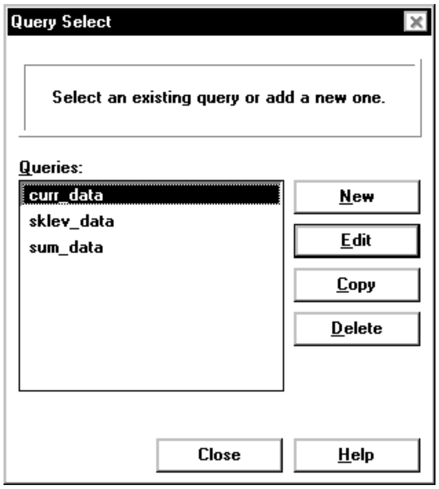
13. Correct any of the errors detected in the Test.
14. Select the **Save** button.
15. The changes to the query are saved and the Query Select window displays.

Editing an Existing Integrated Query

To edit an existing integrated query used in a designer report, complete the following steps from the Report Designer Design Mode window:

1. Select **Query** from the **Edit** menu.

   The Query Select window displays:

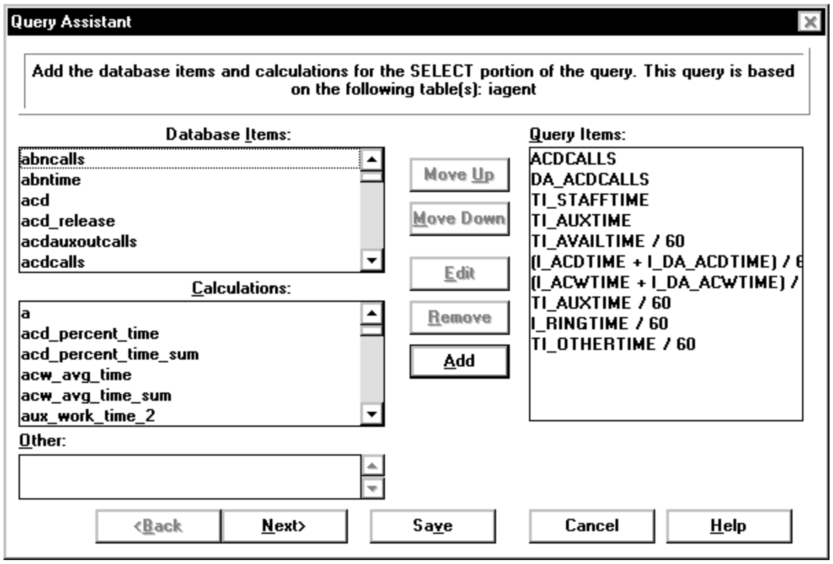


Select an existing query or add a new one.

Query Select
Queries:
curr_data
sklev_data
sum_data
New
Edit
Copy
Delete
Close
Help

2. In the **Queries** box, highlight the name of the integrated query you would like to edit.
3. Select the **Edit** button.

   The Query Assistant “Add the database items and calculations for the SELECT portion of the query” window displays, as shown below. On this window, you will add and remove database items and calculations that will be included in the query.



Add the database items and calculations for the SELECT portion of the query. This query is based on the following table(s): iagent

Database Items:

abncalls
abntime
acd
acd_release
acdauxoutcalls
acdcalls

Calculations:

a
acd_percent_time
acd_percent_time_sum
acw_avg_time
acw_avg_time_sum
aux_work_time_2

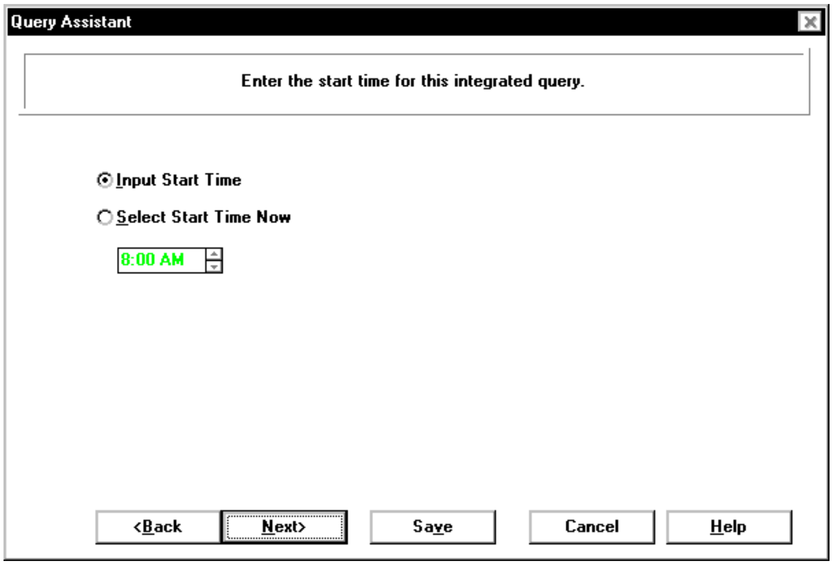
Query Items:

ACDCALLS
DA_ACDCALLS
TI_STAFFTIME
TI_AUXTIME
TI_AVAILTIME / 60
(I_ACDTIME + I_DA_ACDTIME) /
(I_ACWTIME + I_DA_ACWTIME) /
TI_AUXTIME / 60
I_RINGTIME / 60
TI_OTHERTIME / 60

4. In either the **Database Items** or **Calculations** box, highlight the first database item or calculation that you will reference in the query.
5. Select the **Add** button or double click on the item.

   The item is listed in the **Query Items** box.
6. Repeat Steps 4 and 5 until all of the database items and calculations that you believe will be referenced in the query are listed in the **Query Items** box.
7. Select the **Next** button.

The Query Assistant “Enter the start time for this integrated query” window displays:


Query Assistant

Enter the start time for this integrated query.

● Input Start Time

○ Select Start Time Now

8:00 AM

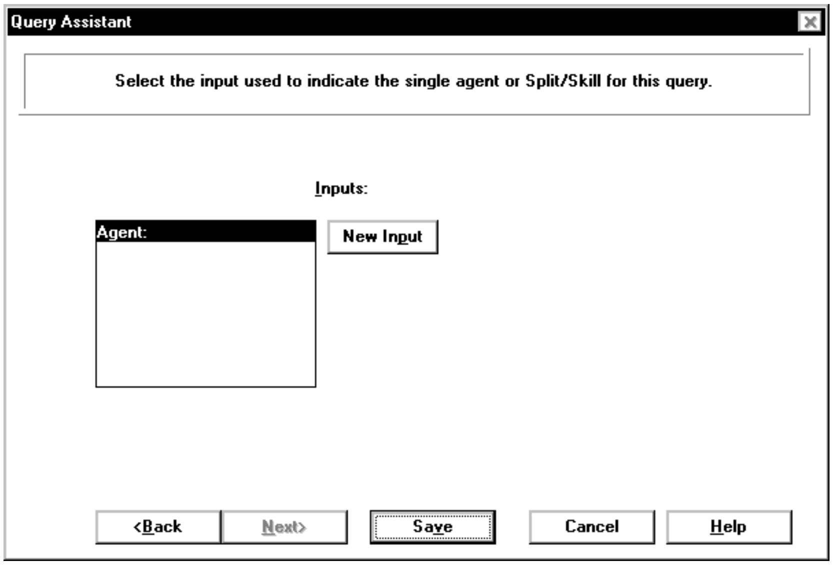
8. Select the **Input Start Time** or **Select Start Time Now** radio button.

   If you select the Select Start Time Now radio button, you need to define the time that the integrated data will always begin accumulating for this report.

   If you select the Input Start Time, a “Start Time” field will be added to the report input window and users can individually define the time that data will begin accumulating for the report.

9. Select the **Next** button.

The Query Assistant “Select the input used to indicate the xxx for this query” window displays:



Select the input used to indicate the single agent or Split/Skill for this query.

On this window, you can choose the input item that will be used for the query.

10. Highlight the input(s) you would like to use as criteria for the query. You can create a new input by selecting the **New Input** button, which takes you to the **Edit Inputs** assistant.

Note Only the inputs that apply to the table you selected for this query will appear.

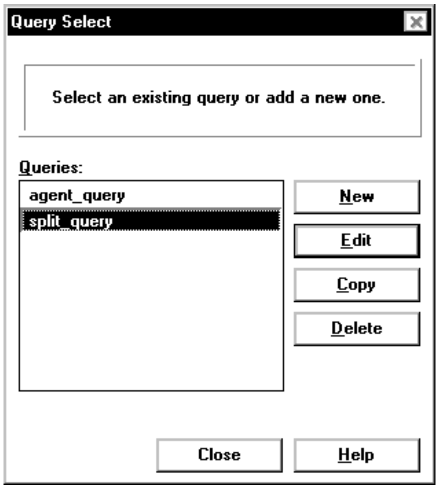
11. Select the **Save** button.

Copying a Query

To copy an existing query, complete the following steps from the Report Designer Design Mode:

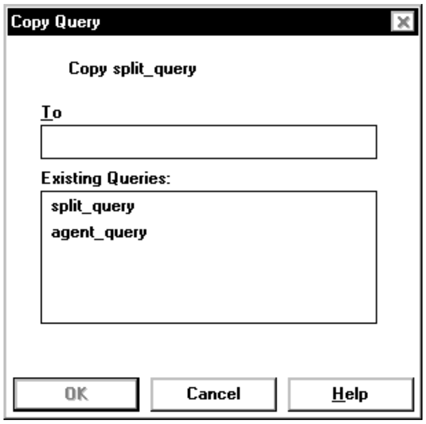
1. Select **Query** from the **Edit** menu.

   The Query Select window displays:


Query Select
Select an existing query or add a new one.
Queries:
agent_query
split_query
New
Edit
Copy
Delete
Close
Help

2. In the **Queries** box, highlight the name of the query you would like to copy.
3. Select the **Copy** button.

The Copy Query window displays:



Copy split_query

split_query
agent_query

4. In the **To** text box, type the name you would like to assign to the copied query.
5. Select the **OK** button.

   The query is copied to the new name and the Query Select window displays, including the new query in the **Queries** list.

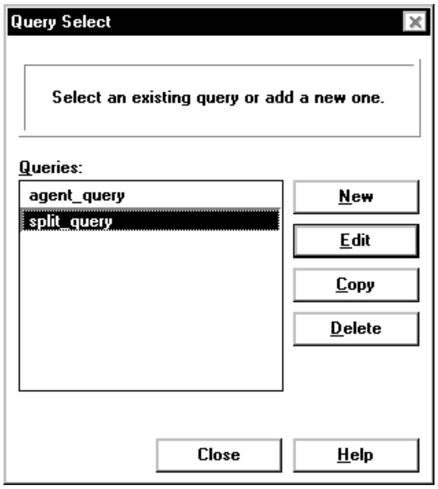
Deleting a Query

To delete an existing query, complete the following steps from the Report Designer Design Mode:

Caution If you delete a query that is used in the report, the report will not run.

1. Select **Query** from the **Edit** menu.

   The Query Select window displays:



Query Select

Select an existing query or add a new one.

2. In the **Queries** box, highlight the name of the query you would like to delete.
3. Select the **Delete** button.

   A message confirming the delete displays.
4. Select **OK** to delete the query.

7

Insert | Chart

Introduction

Once you have defined queries (see the **Edit | Queries** chapter) to be used for a report, you can use those queries to add a chart to your report using the Chart Assistant, which is accessed by selecting **Chart** from the **Insert** menu.

This chapter includes the following sections:

- Inserting a chart on the report
- Using the Chart Assistant “Select the query and data items you wish to plot on the chart” window (Steps 2 through 4)
- Using the Chart Assistant “Specify a chart type” window (Steps 5 through 9)
- Using the Chart Assistant “Make category and series selections” window (Steps 10 - 15).

Note There are two things to keep in mind when inserting charts onto the report:

- When you insert a chart on a report, the chart is shown with sample data to help you visualize how the chart will appear when you run the report.
- Each item is initially inserted in the upper left hand corner of the report. You will need to drag-and-drop the chart to the location at which you would like it to display on the report

Note If you would like to edit a chart, select the chart and then choose **Chart** from the **Format** menu.

Inserting a Chart on a Report

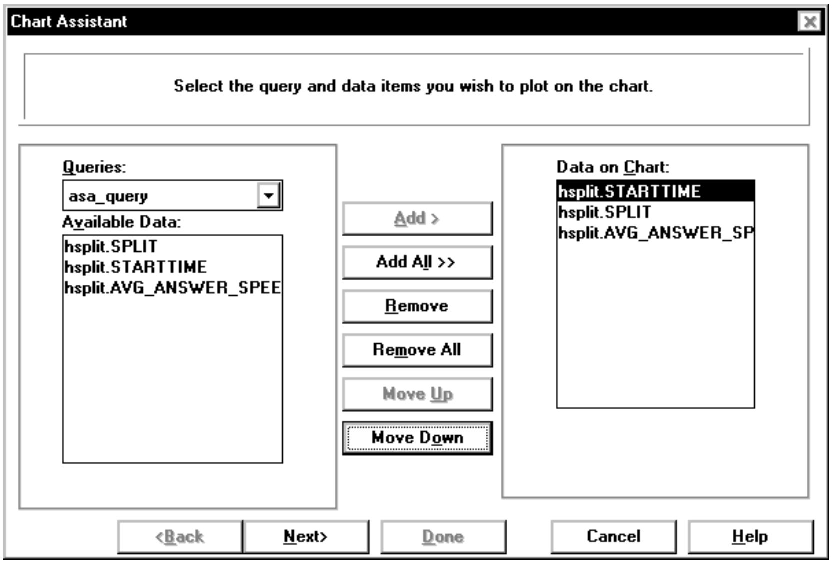
Note If the report includes both a chart and a grid, you need to place the chart above the grid on the report. The reason for this is that, if the grid spans multiple pages when printed and the chart is below the grid on the report, then the grid will print on top of the chart.

Note Do not position any fields or text on top of the chart because the chart will display on top of the field / text and the field / text will not be visible.

To insert a chart in your report, complete the following steps:

1. Select **Chart** from the **Insert** menu.

   The first window of the Chart Assistant displays:



Select the query and data items you wish to plot on the chart.

Queries: asa_query

Available Data:
hsplit.SPLIT
hsplit.STARTTIME
hsplit.AVG_ANSWER_SPEE

Data on Chart:
hsplit.STARTTIME
hsplit.SPLIT
hsplit.AVG_ANSWER_SP

2. From the **Queries** drop-down list, select the query from which you want to take data for the chart. Note that any queries that have been created, but still include errors are grayed-out.

The **Available Data** box is populated with the data that was previously defined for the query.

3. Use the **Add**, **Add All**, **Remove**, and **Remove All** buttons to add and remove items from the **Available Data** box to the **Data on Chart** box.

   Use the **Move Up** and **Move Down** buttons to arrange the items in the order in which you would like them displayed on the chart.

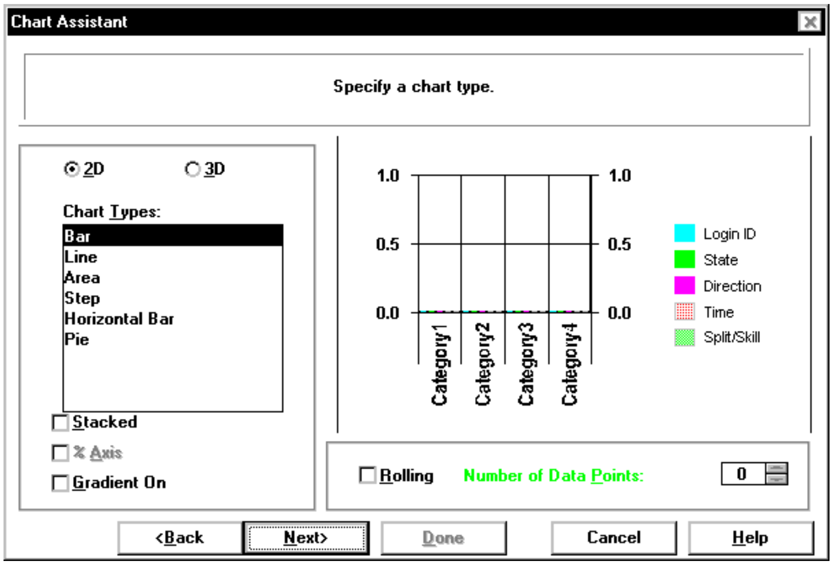
   Items that are added to the **Data on Chart** box will be shown in the chart you are creating.

   The maximum number of columns that can be included on a chart is 16.

   If you are creating a chart that will use categories and series as controls on the axis, you need to make sure that the first item listed on the Data on Chart box is the item that you want to use as the series for the chart.

4. Select the **Next** button.

   The “Specify a chart type” window of the Chart Assistant displays:



Specify a chart type.

● 2D ○ 3D

Chart Types: Bar

☐ Stacked

☐ % Axis

☐ Gradient On

☐ Rolling

Number of Data Points: 0

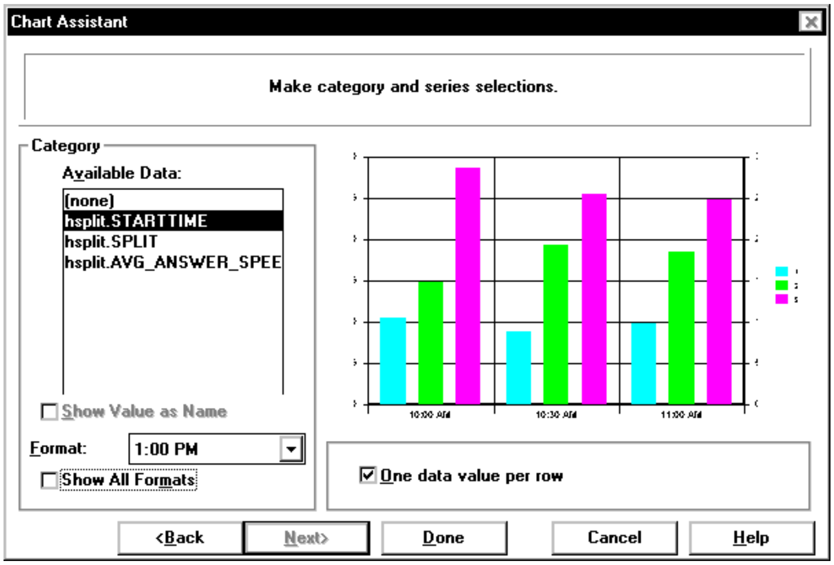
Chart Assistant
Chart Types:
Bar
Line
Area
Step
Horizontal Bar
Pie
1.0
0.5
0.0
Category1
Category2
Category3
Category4
Login ID
State
Direction
Time
Split/Skill
<Back
Next>
Done
Cancel
Help

Note Any of the options you select in the following steps can be changed at any time after you insert the chart on the report by selecting the **Format | Chart** menu item.

5. Select the **2D** radio button if you would like the chart to display in two dimensional format.

   Select the **3D** radio button if you would like the chart to display in three dimensional format.
6. Select which type of chart you would like to display from the **Chart Types** box. If you are not sure what each type of chart will look like, you can highlight the type and an example of the chart displays on the right-hand side of the window.
7. Select the **Stacked**, **% Axis**, and **Gradient** check boxes, as appropriate. Note that you must select Stacked if you want to select % Axis.
8. Select the **Rolling** check box if you want the real-time chart report to scroll through the refreshes as they occur. If you select the Rolling check box, you need to define the Number of Data Points (refreshes) that will be included on the chart.
9. Select the **Next** button.

The “Make category and series selections” window displays:



Make category and series selections.

Available Data:
(none)
hsplit.STARTTIME
hsplit.SPLIT
hsplit.AVG_ANSWER_SPEE

☐ Show Value as Name

Format: 1:00 PM

☐ Show All Formats

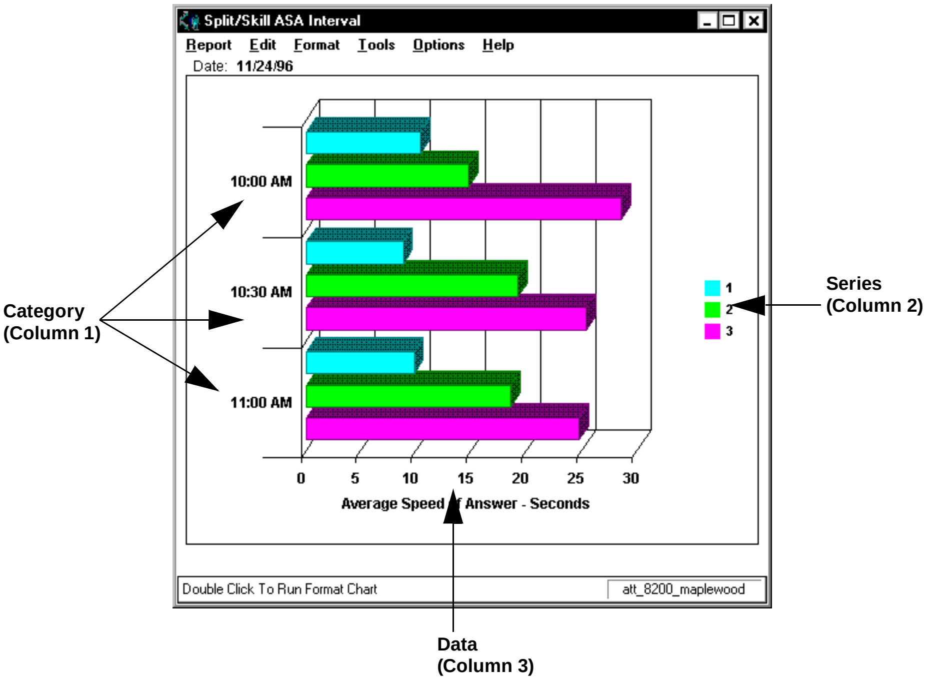
☑ One data value per row

This window is where you define how the data will be displayed on the axes of the chart

There are three columns used to define the category and series for the chart. The information gathered by each column is as follows:

- Column 1 — Category (can be “none”)
- Column 2 — Series (usually Split)
- Column 3 — Data

In the following example, the Category (Column 1) is the Time that was selected on the input window, the Series are the Splits that were selected on the input window, and the Data is the data that was retrieved from the *CentreVu* CMS database for those splits / skills on the specified date for the specified time period.


Split/Skill ASA Interval
Report Edit Format Tools Options Help
Date: 11/24/96
10:00 AM
10:30 AM
11:00 AM
0
5
10
15
20
25
30
Average Speed of Answer - Seconds
1
2
3
Double Click To Run Format Chart
att_8200_maplewood
Category (Column 1)
Series (Column 2)
Data (Column 3)

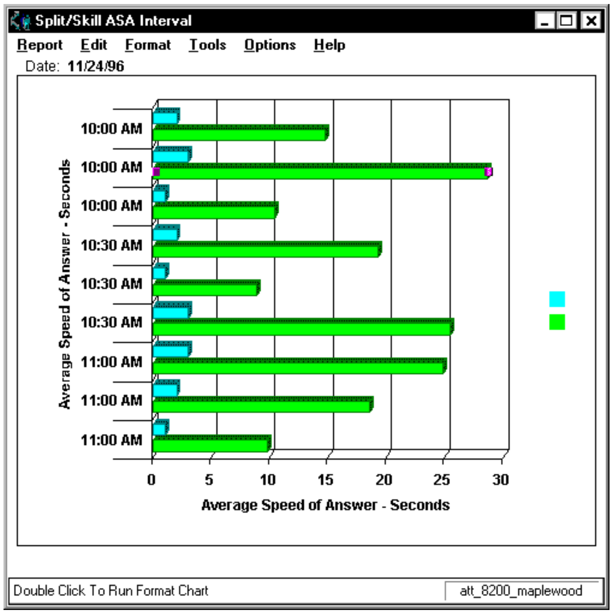
10. In the Category **Available Data** box, select the database item that you would like to use as the category for the chart. The Category is usually "none" for real-time charts, or a time database item for historical charts. As you select from the list of available items, the currently selected item moves to the top of the Available Data list and the example on the right side of the window reflects what the chart might look like with that item selected as the chart Category.

11. Select the **Show Value as Name** check box if you would like to show the selected category as a Dictionary name. Note that this check box is only available when the selected category is an item that can be defined in the Dictionary.

12. Select the **Format** in which the category will display. Use the drop-down list to select for the applicable formats for the selected category. If you would like to view all of the available formats for all types of data, select the **Show All Formats** check box.

13. Select the **One Data Value per Row** check box to show one line of data when multiple rows of data are retrieved in the query. When One Data Value per Row is selected, the first item listed in the Category Available Items box is the item that is used for the chart category.

    The previous example showed a report with One Data Value per Row selected. Below is an example of the same report, using the same Category item (STARTTIME), without One Data Value per Row selected.


Split/Skill ASA Interval
Report
Edit
Format
Tools
Options
Help
10:00 AM
10:00 AM
10:00 AM
10:30 AM
10:30 AM
10:30 AM
11:00 AM
11:00 AM
11:00 AM
Average Speed of Answer - Seconds
0
5
10
15
20
25
30
Average Speed of Answer - Seconds

Date: 11/24/96

Double Click To Run Format Chart

att_8200_maplewood

In the first example, you can see that the report shows one "row" of data for the interval beginning at 10:00 AM, one "row" of data that includes information for each split/skill for the interval beginning at 10:30 AM, and one "row" of data for the interval beginning at 11:00 AM. In the second example, There is a "row" of data shown for **each** split/skill for each interval.

14. Select the **Done** button.

8

Insert | Field

Introduction

The time or date when a report is run is not stored in any database table. CMS, if requested, displays information from the start time specified by the user (for integrated and historical data).Similarly, CMS knows what the currently selected ACD is when you run a report and can display the current ACD name or number on the report.

The Field Assistant (accessed by selecting **Field** from the **Insert** menu) allows you to insert fields in a designer report to display the report's run-time, run-date, current ACD, data, and / or any of the fields that were required in the report input window.

See the following sections for instructions on adding any of the available types of fields to the report.

- Using the Field Assistant “Select a field type” window
- Inserting an ACD field on the report
- Inserting a Data Item field on the report, including Using the Field Assistant “Select a query and associated data item for this field” window
- Inserting an Input Value field on the report, including using the Field Assistant “Select an input for your field” window.

- Inserting a Start Time field on the report
- Inserting a Time Report Run field on the report.

Note Each item is initially inserted in the upper left hand corner of the report. You will need to drag-and-drop the field to the location at which you would like it to display on the report

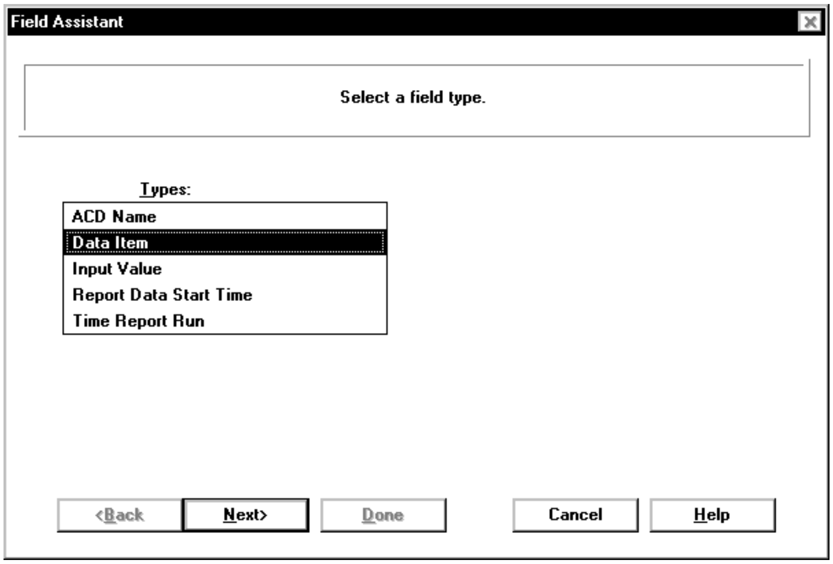
Note If you would like to edit a field, select the field and then choose **Field** from the **Format** menu.

Using the Field Assistant “Select a field type” window

To use this window, complete the following steps:

1. Select **Field** from the **Insert** menu.

   The Field Assistant “Select a field type” window opens.


Field Assistant
Select a field type.
Types:
ACD Name
Data Item
Input Value
Report Data Start Time
Time Report Run
<Back
Next>
Done
Cancel
Help

2. Select an item from the **Types** list.
3. If you highlighted **ACD Name**, **Report Data Start Time**, or **Time Report Run**, skip to Step 4.

   If you highlighted **Data Item**, then select the **Next** button. Go to the Field Assistant “Select a query and associated data item for this field” window, which appears when you select Data Item from the Types list.

   If you highlighted Input **Value**, then select the **Next** button. Go to the Field Assistant “Select an input for your field” window, which appears when you select a Input Value from the Types list.
4. Select the **Done** button.

   The field is inserted in the upper left-hand corner of the report.

Inserting an ACD Name Field on the Report

Note Do not position the field on top of any grids or charts because the grid / chart will display on top of the field and the field will not be visible.

To insert the name of the ACD for which the report was run, complete the following steps:

1. Select **Field** from the **Insert** menu.

   The Field Assistant wizard opens.

2. Highlight **ACD Name** in the **Types** box.
3. Select the **Done** button.

   The ACD name field is placed in the upper left-hand corner of the report.

4. Click on the item and drag-and-drop it to the location at which you would like it displayed in the report.

Inserting Data Item Fields on the Report

Note Do not position the field on top of any grids or charts because the grid / chart will display on top of the field and the field will not be visible.

Note Before you can insert a data item on a report, the data item must be used in a query that is associated with this report.

To insert data item fields on the report, complete the following steps:

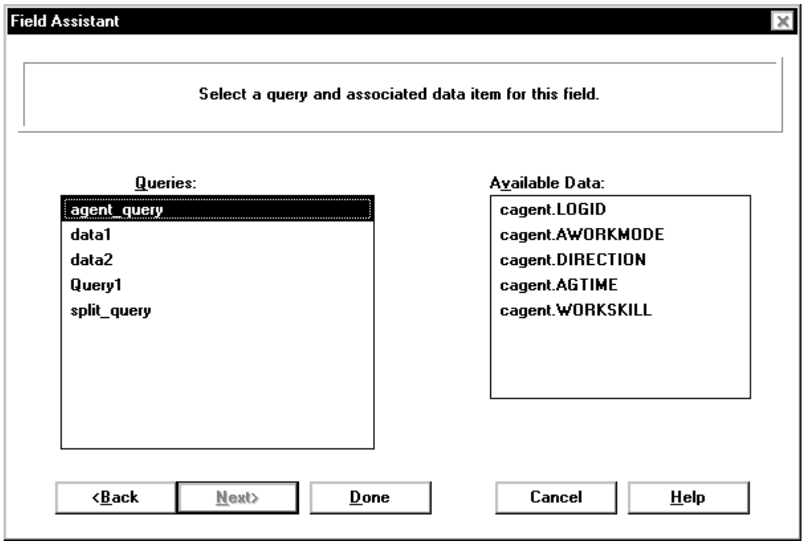
1. Select **Field** from the **Insert** menu.

   The Field Assistant wizard opens.

2. Highlight **Data Items** in the **Types** box.

3. Select the **Next** button.

   The “Select a query and associated data item for this field” window displays.



Field Assistant

Select a query and associated data item for this field.

Queries:

- agent_query
- data1
- data2
- Query1
- split_query

Available Data:

- cagent.LOGID
- cagent.AWORKMODE
- cagent.DIRECTION
- cagent.AGTIME
- cagent.WORKSKILL

4. Highlight the name of the query from which you would like to select the data item.
5. The available data items for the selected query display in the **Available Data** box.
6. Highlight the data item that you want to display on the report.
7. Select the **Done** button.

   The Data Item field is placed in the upper left-hand corner of the report.
8. Click on the item and drag-and-drop it to the location at which you would like it displayed in the report.

Inserting Input Value Fields on the Report

Note Do not position the field on top of any grids or charts because the grid / chart will display on top of the field and the field will not be visible.

To insert input value fields on the report, complete the following steps:

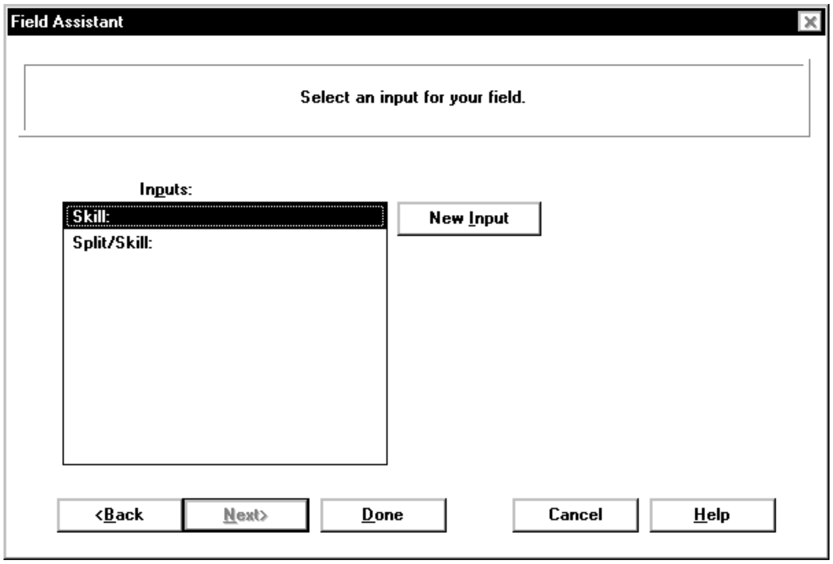
1. Select **Field** from the **Insert** menu.

   The Field Assistant wizard opens.

2. Highlight **Input Value** in the **Types** box.

3. Select the **Next** button.

   The “Select an input for your field” window displays.



Field Assistant

Select an input for your field.

Inputs:

Skill:

Split/Skill:

4. Highlight the name of the input that you would like to show on the report

   OR

Create a new input by selecting the **New Input** button. The Edit Inputs wizard opens. For information on creating inputs for a report, see the **Edit | Inputs** chapter of this book.

5. Select the **Done** button.

   The Input Value field is placed in the upper left-hand corner of the report.

6. Click on the item and drag-and-drop it to the location at which you would like it displayed in the report.

Inserting Report Data Start Time Field on the Report

Note Do not position the field on top of any grids or charts because the grid / chart will display on top of the field and the field will not be visible.

Note This type of field applies only to integrated reports.

To insert the initial start time (the time at which data began accumulating) for an integrated report, complete the following steps:

1. Select **Field** from the **Insert** menu.

   The Field Assistant wizard opens.

2. Highlight **Report Data Start Time** in the **Types** box.
3. Select the **Done** button.

   The Report Data Start Time field is placed in the upper left-hand corner of the report.

4. Click on the item and drag-and-drop it to the location at which you would like it displayed in the report.

Inserting Time Report Run Field on the Report

Note Do not position the field on top of any grids or charts because the grid / chart will display on top of the field and the field will not be visible.

To insert on the report the time at which the report was run, complete the following steps:

1. Select **Field** from the **Insert** menu.

   The Field Assistant wizard opens.

2. Highlight **Time Report Run** in the **Types** box.

3. Select the **Done** button.

   The Time Report Run field is placed in the upper left-hand corner of the report.

4. Click on the item and drag-and-drop it to the location at which you would like it displayed in the report.

9

Insert | Grid

Introduction

Once you have defined queries (see the **Edit | Queries** chapter) to be used for a report, you can use those queries to add a grid to the report using the Grid Assistant, which is accessed by selecting **Grid** from the **Insert** menu.

This chapter teaches you to use the **Insert | Grid** menu option. The sections of the chapter are:

- Inserting a grid on the report
- Using the Grid Assistant “Select a query and associated database items for the grid” window (Steps 2 through 4)
- Using the Grid Assistant “Select a grid layout” window (Steps 5 through 9)
- Using the Grid Assistant “Select an existing query for the Summary line on your gird, or create a new one” window (Steps 10 through 11).

Note Each item is initially inserted in the upper left hand corner of the report. You will need to drag-and-drop the grid to the location at which you would like it to display on the report

Note If you would like to edit a grid, select the grid and then choose **Grid** from the **Format** menu.

Inserting a Grid on the Report

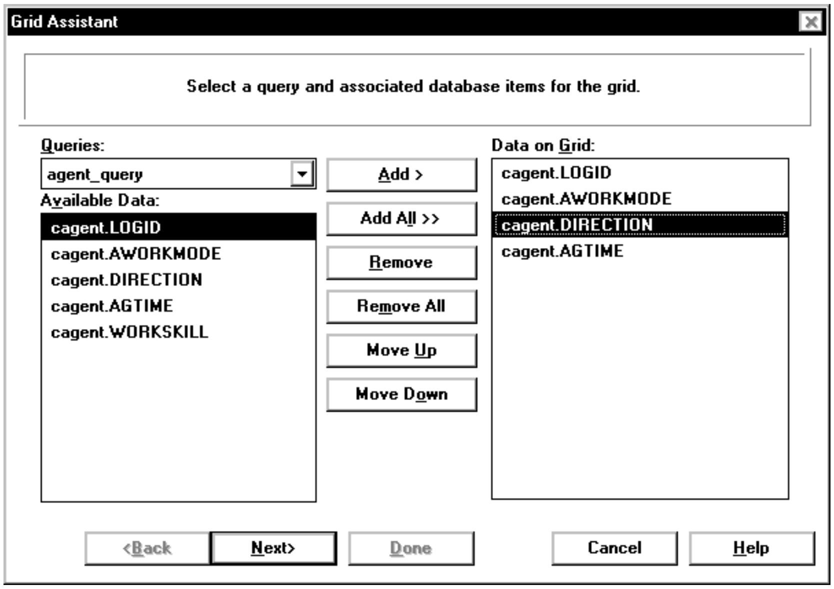
Note If the report includes both a chart and a grid, you need to place the chart above the grid on the report. The reason for this is that, if the grid spans multiple pages when printed and the chart is below the grid on the report, then the grid will print on top of the chart.

Note Do not position text and fields on top of the grid because the grid will display on top of the text/field and the text/field will not be visible.

To insert a grid on a report, complete these steps:

1. Select **Grid** from the **Insert** menu.

   The “Select a query and associated database items for the grid” window of the Grid Assistant displays:



Select a query and associated database items for the grid.

Queries: agent_query

Available Data:
- cagent.LOGID
- cagent.AWORKMODE
- cagent.DIRECTION
- cagent.AGTIME
- cagent.WORKSKILL

Data on Grid:
- cagent.LOGID
- cagent.AWORKMODE
- cagent.DIRECTION
- cagent.AGTIME

2. From the **Queries** drop-down list, select the query from which you want to take data for the grid. Note that any queries that have been created, but still include errors are greyed-out.

The Available Data box is populated with the data that was previously defined for the query.

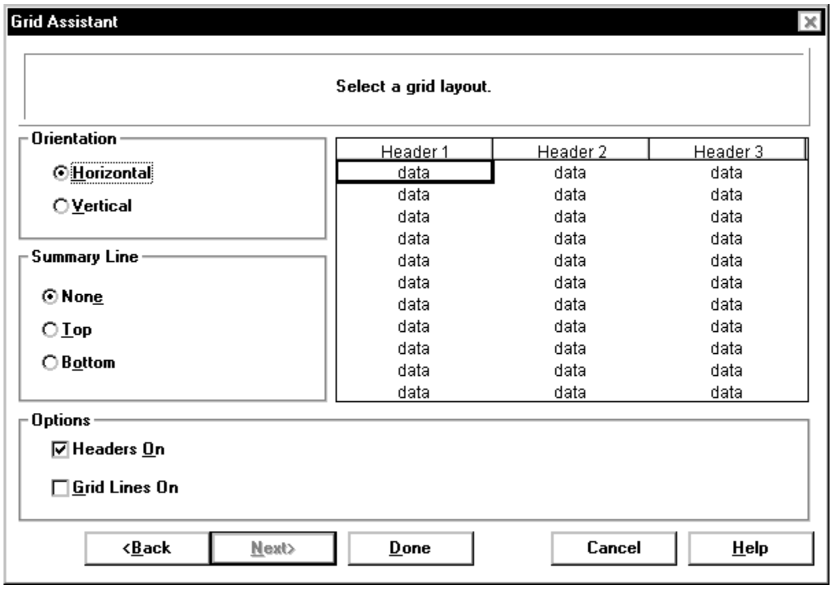
3. Use the **Add**, **Add All**, **Remove**, and **Remove All** buttons to add and remove items from the **Available Data** box to the **Data on Grid** box.

   Use the **Move Up** and **Move Down** buttons to place the data items shown in the **Data on Grid** box in the order in which you want them to appear on the grid.

   Items that are added to the Data on Grid box will be shown in the grid you are creating.

4. Select the **Next** button.

   The “Select a grid layout” window displays.



Grid Assistant

Select a grid layout.

Orientation

● Horizontal
○ Vertical

Summary Line

● None
○ Top
○ Bottom

Header 1	Header 2	Header 3
data	data	data
data	data	data
data	data	data
data	data	data
data	data	data
data	data	data
data	data	data
data	data	data
data	data	data
data	data	data
data	data	data

Options

☑ Headers On
☐ Grid Lines On

Note Any of the options you select in Steps 5 through 10 can be changed after you have inserted the grid on the report by selecting the **Format | Grid** menu item.

5. Define the **Orientation** of the grid by selecting either the **Horizontal** or the **Vertical** radio button.

6. Add a **Summary** line to the grid by selecting the **Top** radio button to place the Totals line at the top of the grid (as standard CMS reports do) or the **Bottom** radio button to place the Totals line at the bottom of the grid. Select the **None** radio button if you do not want to include a Totals line on this grid.

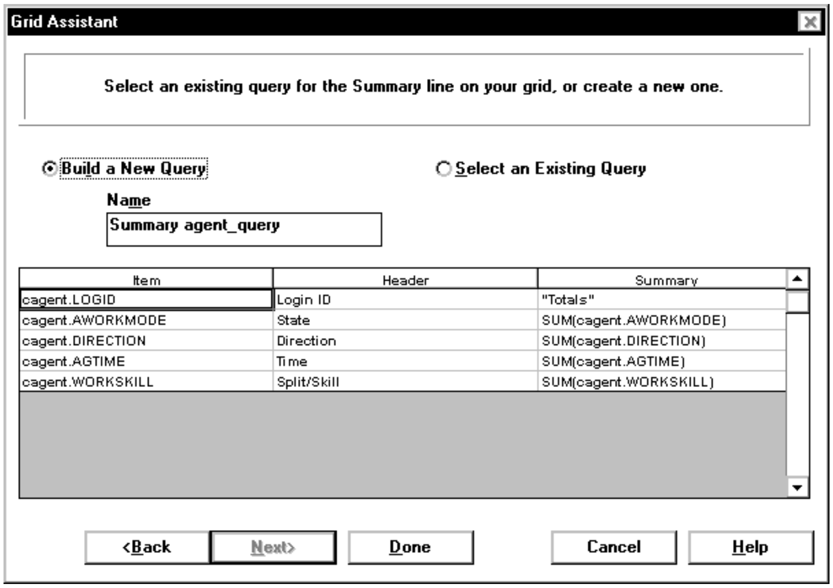
7. Select the **Headers On** check box if you would like to include column headers on the grid.

8. Select the **Grid Lines On** check box if you would like the grid to include lines between the columns and rows.

9. If you elected to include **no** Summary line on the grid, select the **Done** button. The Grid Assistant closes and the grid is placed on the report template.

   If you elected to include a Summary line on the grid, select the **Next** button.

The “Select an existing query for the Summary line on your grid, or create a new one” window displays.



Select an existing query for the Summary line on your grid, or create a new one.

● Build a New Query ○ Select an Existing Query

Name: Summary agent_query

Item	Header	Summary
cagent.LOGID	Login ID	"Totals"
cagent.AWORKMODE	State	SUM(cagent.AWORKMODE)
cagent.DIRECTION	Direction	SUM(cagent.DIRECTION)
cagent.AGTIME	Time	SUM(cagent.AGTIME)
cagent.WORKSKILL	Split/Skill	SUM(cagent.WORKSKILL)

10. If you would like to create a new query for the summary line on this grid, complete the following steps:

    a. Select the **Build a New Query** radio button.

    b. Type a name for the summary query in the **Name** field.

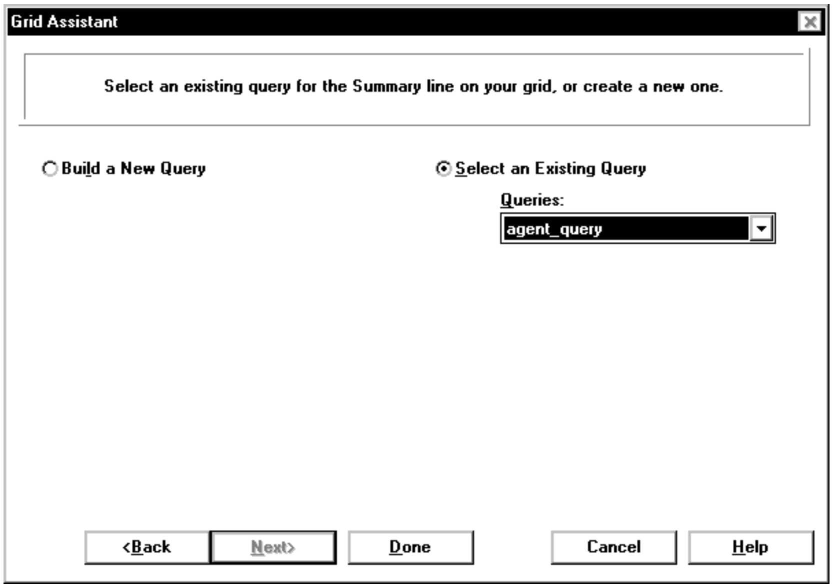
    c. Edit the table to include the database items and summary information that you feel is appropriate for this summary query.

    d. Select the **Done** button.

    If you would like to use an existing query for the summary line on this grid, complete the following steps:

    a. Select the **Select an Existing Query** radio button.

The “Select an Existing query for the Summary line on your grid, or create a new one” window for the existing query selection displays.



Grid Assistant
Select an existing query for the Summary line on your grid, or create a new one.
○ Build a New Query
● Select an Existing Query
Queries:
agent_query
<Back
Next>
Done
Cancel
Help

b. Select the name of one of the existing queries from the drop-down **Queries** list.

11. Select the **Done** button.

10

Insert | Text

Introduction

The Report Designer allows you to include text strings (with no associated data) on your report. You will use the **Text** option from the **Insert** menu to add items such as the report name to your designer reports.

This chapter teaches you to use the Insert | Text menu option.

Note Each item is initially inserted in the upper left hand corner of the report. You will need to drag-and-drop the text to the location at which you would like it to display on the report

Note If you would like to edit text, select the text and then choose **Text** from the **Format** menu.

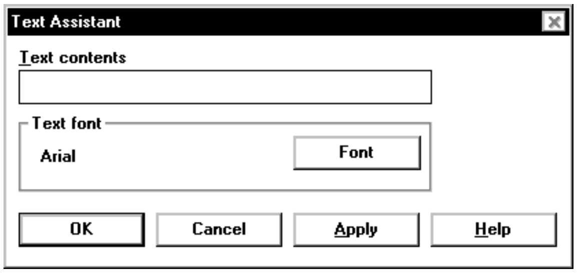
Inserting Text on the Report

Note Do not position the text on top of any grids or charts because the grid / chart will display on top of the text and the text will not be visible.

To insert a text string on a report, complete these steps:

1. Select **Text** from the **Insert** menu.

   The Text Assistant displays:

   Text font
   Arial

2. Type the text that you want to appear on the report in the **Text contents** field.

3. If you want to select a specific font for the text, select the **Font** button.

   If you want to leave the font set to the default, go to Step 6.

   The Font selector window, which is a standard *Windows* window, displays.

4. Select the **Font**, **Style**, **Point size**, **Effects**, and **Script** that will apply to the text string you are creating.

5. Select the **OK** button.

   The Font selector window closes.

6. On the Text Assistant window, select the **OK** button to insert the text string and close the window.

   OR

Select the **Apply** button to apply the changes you have made and keep the window open.

The text is inserted, by default, in the upper left-hand corner of the Design Mode window. You can use the cut, copy, or drag-and-drop method, as outlined in Chapter 4, to move the text to the appropriate location on the report.

11

Format | Chart

Introduction

The Report Designer allows you to format report charts after they have been inserted on the report. You will use the **Chart** option from the **Format** menu to edit charts on your designer reports.

This chapter teaches you to use the **Format | Chart** menu option. The sections of this chapter are:

Formatting a Chart in a Report

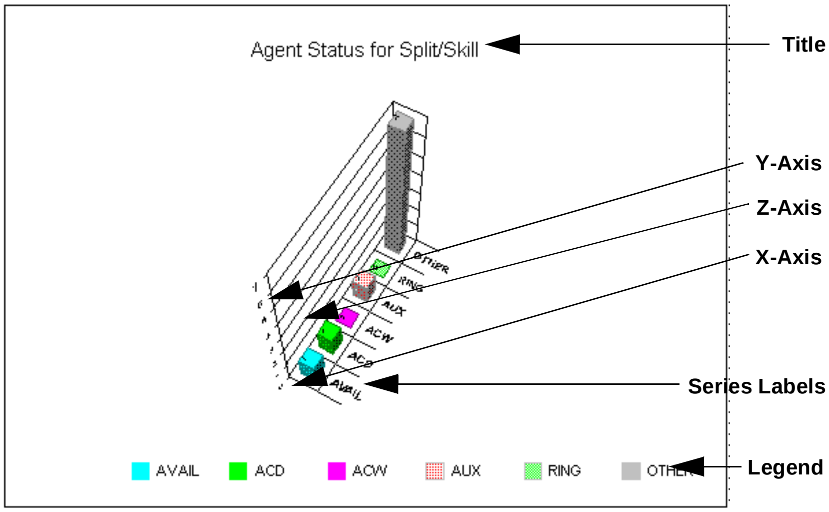
- General Tab
- Axis Tab
- Data Tab
- Data Labels Tab
- Fonts Tab
- Series Labels Tab
- Legend Tab
- Title Tab
- Type Tab
- 3D Effects Tab.

Formatting a Chart in a Report

Note The changes you make to a report's format affect only your view of the report. The changes do not affect how other CMS users see the report unless you are in Design Mode.

Selecting **Chart** from the **Format** menu opens the Chart Format Options window. The Chart Format Options window gives you access to the General, Axis, Data, Data Labels, Fonts, Series Labels, Legend, Title, Type, and 3D Effects tabs for formatting charts on reports.

Charts provide a graphical representation of data. Values or data points are displayed in formats such as bars, lines, filled areas, and pie charts. These data points are grouped into series that are identified with unique colors. In many chart types, one data point from each series is grouped together by category across an axis. A chart can also have a title and a legend. Categories are plotted along the x-axis, values are plotted along the y-axis. A two-dimensional chart shows series next to each other, while a three-dimensional chart plots series along the z-axis.



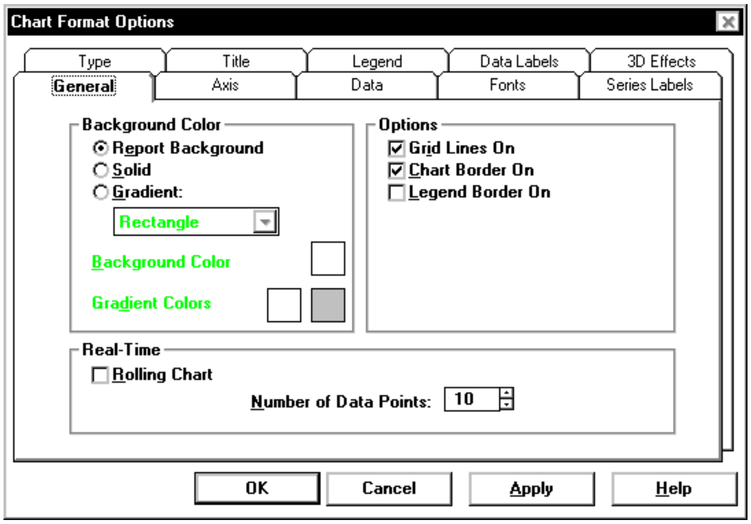
If the report you are designing includes a chart, you can format how the chart is displayed and what is displayed on the chart. The formatting is done in the Chart Format Options window, which is accessed by:

- Double-clicking on a chart in the report,
- Selecting **Chart** from the **Format** menu, or
- Selecting **Format Chart** from the right mouse button pop-up menu.

The following sections describe each of the tabs.

General Tab

The General tab allows you to specify several general options that apply to the chart.



Background Color
● Report Background
○ Solid
○ Gradient:
Rectangle
Background Color
Gradient Colors

Options
☑ Grid Lines On
☑ Chart Border On
☐ Legend Border On

Real-Time
☐ Rolling Chart
Number of Data Points: 10

General Tab Options

The following chart parameters can be changed:

- **Background Color** — You can specify whether the backdrop of the chart is a solid color or whether it is displayed as a gradient, a smooth transition from one color to another. The gradient transition can be one of the following: **Horizontal**, **Vertical**, **Rectangle**, or **Oval**. The quality of the gradient effect will vary depending on the video card installed in the PC, or the capabilities of the printer for printed reports.
- **Options** — Select the check boxes, as appropriate, to include or grid lines, chart borders, and legend borders on the report.
- **Real-Time** — If the chart is part of a real-time report and is a rolling chart, you can specify the number of data points to be displayed in the chart. Permitted values are 2 through 100, with 10 being the default. A

rolling chart is a line chart that is initially displayed with no data points. For each refresh of the report, a data point is added. As data points are added, the chart "rolls" from left to right. When enough refreshes have occurred that the chart is displaying the number of specified data points, at the next refresh, the oldest data point is dropped from the display and the newest data point is displayed.

Using the General Tab

To use the General tab, complete the following steps:

1. In the **Background Color** box, select the Report Background, Solid, or Gradient radio button.
    - If you select **Report Background**, the background of the report will default to the color you set on the Options Report Colors tab which is accessed from the Controller Tools menu.
    - If you select **Solid**, you can set the color of the report background by clicking on the square next to the Background Color option.
    - If you select **Gradient**, the report background will combine the two colors you select in the squares to the right of the Gradient Colors option.

    You can select the type of gradient that will be used from the drop-down list below the Gradient option. The available types are Horizontal, Vertical, Rectangle, and Oval.
2. In the **Options** box, select the check boxes, as appropriate.
    - Select **Grid Lines On** to include the lines between rows and columns on any grid that appears on the chart.
    - Select **Chart Border On** to include a border around the chart.
    - Select **Legend Border On** to include a border around the chart legend.
3. If the report you are designing is a real-time report, or if this is a real-time component of an integrated report, you can elect to make the chart a rolling chart. To do this, select the **Rolling Chart** check box and then

define the Number of Data Points that you would like displayed on the chart. Permitted values for the number of data points are 2 through 100.

4. Select the **Apply** button to make the changes and keep the Chart Format Options window open.

   Select the **OK** button to make the changes and close the Chart Format Options window.

Axis Tab

The Axis tab allows you to specify the title that will display on each axis of the chart report.

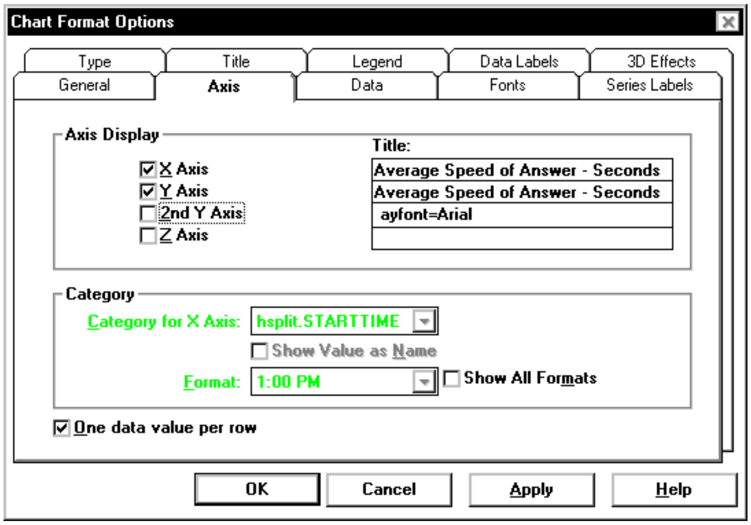


Chart Format Options
Type
Title
Legend
Data Labels
3D Effects
General
Axis
Data
Fonts
Series Labels
OK
Cancel
Apply
Help

Axis Display

☑ X Axis
☑ Y Axis
☐ 2nd Y Axis
☐ Z Axis

Title:

Average Speed of Answer - Seconds
Average Speed of Answer - Seconds
ayfont=Arial

Category

Category for X Axis: hsplit.STARTTIME
☐ Show Value as Name
Format: 1:00 PM
☐ Show All Formats

☑ One data value per row

Axis Tab Options

The following chart parameters can be changed:

- **Axis Display** — makes each of the axes visible or invisible. The choices are X Axis, Y Axis, 2nd Y Axis, and Z Axis.

  The 2nd Y Axis is only available for bar charts. Selecting this check box will display the y-axis information on the right-hand side of the bar chart (in contrast to the standard y-axis display on the left-hand side of the chart).

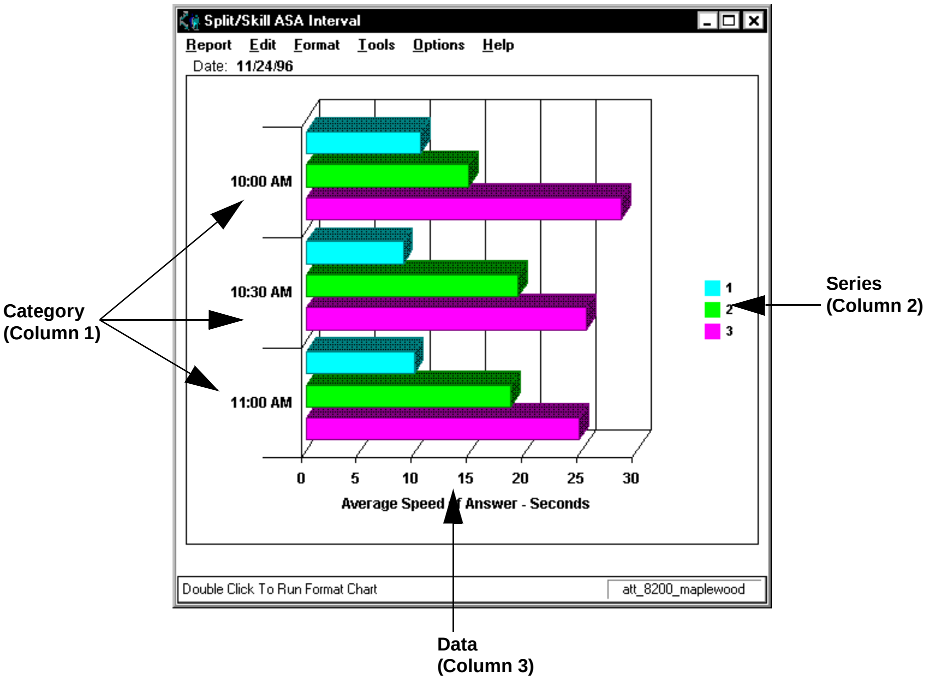
  The Z Axis is only available for 3D bar charts. Selecting this check box will make the chart display with a z-axis, making it appear 3-dimensional.

- **Category** — select the category (database item) that will be used as the x-axis on the chart. You can use the drop-down menu to select any of the database items you included in the query for this chart.
  - — **Category for X-Axis:** (same as the Available Items box in the Insert Query Chart Assistant), select the database item that you would like to use as the category for the chart. The Category is usually “none” for real-time charts, or a time database item for historical charts.
  - — **Show Value as Name:** shows the selected category as a Dictionary name.
  - — **Format:** use the drop-down list to select for the applicable formats for the selected category. If you would like to view all of the available formats for all types of data, select the **Show All Formats** check box.

There are three columns used to define the category and series for the chart. The information gathered by each column is as follows:

- Column 1 — Category (can be “none”)
- Column 2 — Series (usually Split)
- Column 3 — Data

In the following example, the Category (Column 1) is the Time that was selected on the input window, the Series are the Splits that were selected on the input window, and the Data is the data that was retrieved from the *CentreVu* CMS database for those splits / skills on the specified date for the specified time period.

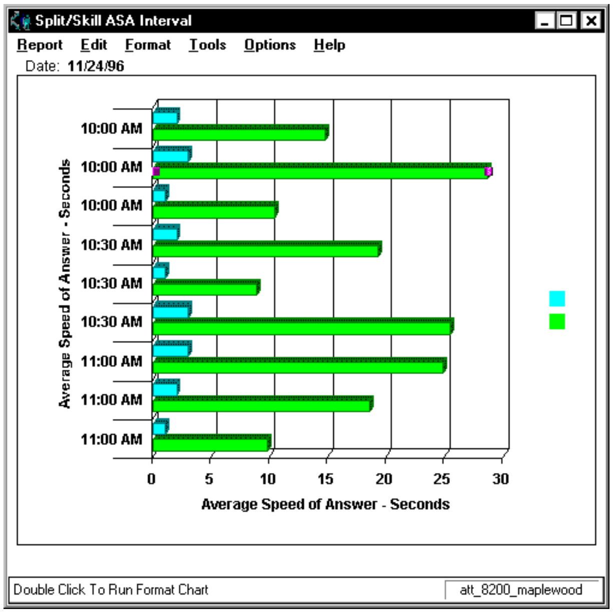

Split/Skill ASA Interval
Report Edit Format Tools Options Help
10:00 AM
10:30 AM
11:00 AM
0
5
10
15
20
25
30
Average Speed of Answer - Seconds
1
2
3
att_8200_maplewood
Category
(Column 1)
Series
(Column 2)
Data
(Column 3)

Date: 11/24/96

Double Click To Run Format Chart

- **One data value per row** — shows one line of data when multiple rows of data are retrieved in the query. When One Data Value per Row is selected, the first item listed in the Category for X-Axis drop-down list is the item that is used for the chart category.

  The previous example showed a report with One Data Value per Row selected. Below is an example of the same report, using the same Category item (STARTTIME), without One Data Value per Row selected.


Split/Skill ASA Interval
Report
Edit
Format
Tools
Options
Help
10:00 AM
10:00 AM
10:00 AM
10:30 AM
10:30 AM
10:30 AM
11:00 AM
11:00 AM
11:00 AM
0
5
10
15
20
25
30
Average Speed of Answer - Seconds
Average Speed of Answer - Seconds
att_8200_maplewood

Date: 11/24/96

Double Click To Run Format Chart

In the first example, you can see that the report shows one “row” of data for the interval beginning at 10:00 AM, one “row” of data that includes information for each split/skill for the interval beginning at 10:30 AM, and one “row” of data for the interval beginning at 11:00 AM. In the second example, There is a “row” of data shown for **each** split/skill for each interval.

Using the Axis Tab

To use the Axis tab, complete the following steps:

1. Depending on the type of chart (bar, line, area, step, clustered bar, horizontal bar, or pie, as selected on the **Type** tab) you are formatting, select the appropriate Axis check box.
2. Type the **Title** you would like assigned to axis in the appropriate text box.
3. In the **Category for X-Axis** box (same as the Available Items box in the Insert Query Chart Assistant), select the database item that you would like to use as the category for the chart. The Category is usually "none" for real-time charts, or a time database item for historical charts.
4. Select the **Show Value as Name** check box if you would like to show the selected category as a Dictionary name. Note that this check box is only available when the selected category is an item that can be defined in the Dictionary.
5. Select the **Format** in which the category will display. Use the drop-down list to select for the applicable formats for the selected category. If you would like to view all of the available formats for all types of data, select the **Show All Formats** check box.
6. Select the **One Data Value per Row** check box to show one line of data when multiple rows of data are retrieved in the query. When One Data Value per Row is selected, the first item listed in the Category for X-Axis drop-down list is the item that is used for the chart category.
7. Select the **Apply** button to make the changes and keep the Chart Format Options window open.

   Select the **OK** button to make the changes and close the Chart Format Options window.

Data Tab

The Data tab lets you add and remove data items to be used in the chart. The available data items are the data items that are specified in the query that this chart uses.

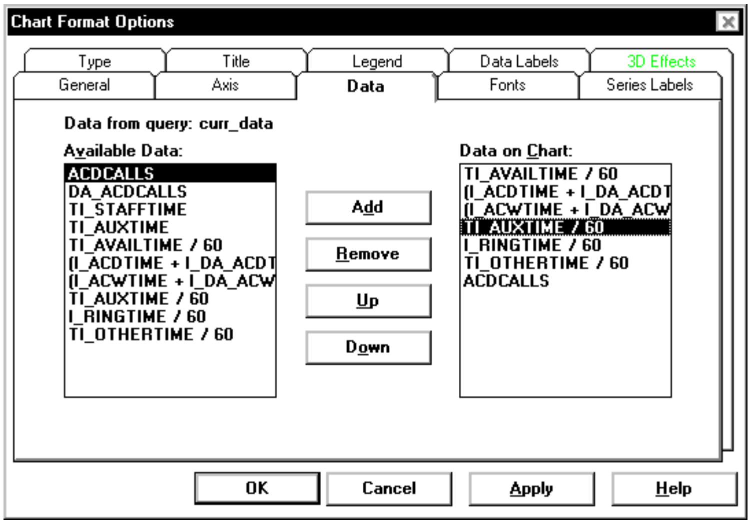


Chart Format Options
Type
Title
Legend
Data Labels
3D Effects
General
Axis
Data
Fonts
Series Labels
Add
Remove
Up
Down
OK
Cancel
Apply
Help

Data from query: curr_data

Available Data:
ACDCALLS
DA_ACDCALLS
TI_STAFFTIME
TI_AUXTIME
TI_AVAILTIME / 60
(I_ACDTIME + I_DA_ACDT
(I_ACWTIME + I_DA_ACW
TI_AUXTIME / 60
I_RINGTIME / 60
TI_OTHERTIME / 60

Data on Chart:
TI_AVAILTIME / 60
(I_ACDTIME + I_DA_ACDT
(I_ACWTIME + I_DA_ACW
TI_AUXTIME / 60
I_RINGTIME / 60
TI_OTHERTIME / 60
ACDCALLS

Data Tab Options

The following chart parameters can be changed:

- **Available Data** — Lists all of the data items that are available, based on the query that is being used, for the chart or grid.
- **Data on Chart** — Displays the data items that are currently used in the chart.

Using the Data Tab

To use the Data tab window, complete these steps:

1. To add data items to the chart, select an item from the **Available Data** list and click the **Add** button.
2. To remove data items from the chart, select an item from the **Data on Chart** list and click the **Delete** button.
3. To rearrange the order in which items appear on the chart, select and item on the **Data on Chart** list and use the **Up** and **Down** buttons to move the item to the appropriate place on the list.
4. Select the **Apply** button to make the changes and keep the Chart Format Options window open.

   Select the **OK** button to make the changes and close the Chart Format Options window.

Data Labels Tab

The Data Labels tab allows you to define where the labels of each data point on the chart will appear and to define how the labels will be displayed.

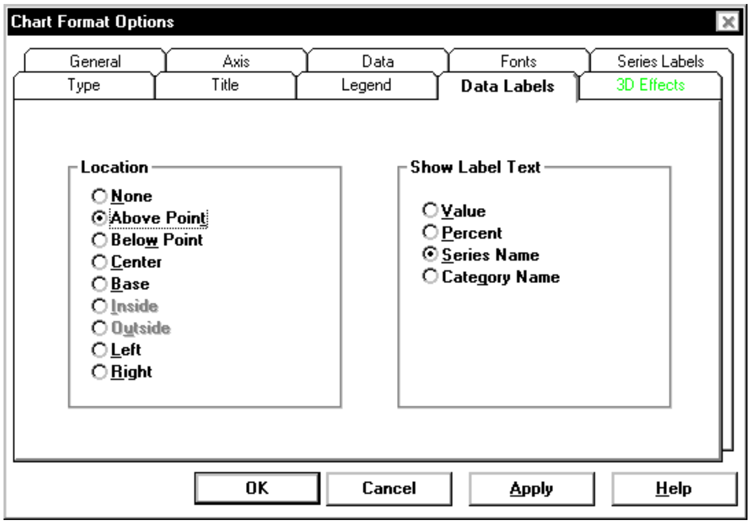


Chart Format Options
General
Axis
Data
Fonts
Series Labels
Type
Title
Legend
Data Labels
3D Effects
OK
Cancel
Apply
Help

Location
- ○ None
- ● Above Point
- ○ Below Point
- ○ Center
- ○ Base
- ○ Inside
- ○ Outside
- ○ Left
- ○ Right

Show Label Text
- ○ Value
- ○ Percent
- ● Series Name
- ○ Category Name

Data Labels Tab Options

The following parameters can be specified:

- **None** — No labels displayed.
- **Above Point** — The label is displayed above the data point. This location is valid only for bar, line, area, and step charts.
- **Below Point** — The label is displayed below the data point. This location is valid only for bar, line, area, and step charts.
- **Center** — The label is displayed centered on the data point. This location is valid only for bar, line, area, and step charts.
- **Base** — The label is displayed along the category axis, directly beneath the data point. This location is valid only for bar, line, area, and step charts.

- **Inside** — The label is displayed inside a pie slice. This location is valid only for pie charts.
- **Outside** — The label is displayed outside a pie slice. This location is valid only for pie charts.
- **Left** — The label is displayed to the left of the related data point.
- **Right** — The label is displayed to the right of the related data point.

If data point labels are displayed, you can specify that they include one of the following:

- **Value** — The value of the data point appears in the label.
- **Percent** — The value of the data point appears in the label as a percentage.
- **Series Name** — The series name is used to label the data point.
- **Category Name** — The category name is used to label the data point.

Note The position of data point labels can affect the readability of the chart. The label text may overlap in some situations, making it difficult or impossible to read the labels.

Using the Data Labels Tab

To use the Data Labels tab, complete the following steps:

1. In the **Location** box, select the radio button next to the option (None, Above Point, Below Point, Center, Base, Inside, Outside) that corresponds with the location in which you would like the data point labels to display on the chart.
2. In the **Show Label Text** box, select the radio button next to the option (Value, Percent, Series Name, Category Name) that corresponds with how you would like the data point labels to display on the chart.
3. Select the **Apply** button to make the changes and keep the Chart Format Options window open.

   Select the **OK** button to make the changes and close the Chart Format Options window.

Fonts Tab

The Chart Format Options Fonts tab allows you to edit the fonts of the title, data point labels, legend, axes and series labels on the chart report.

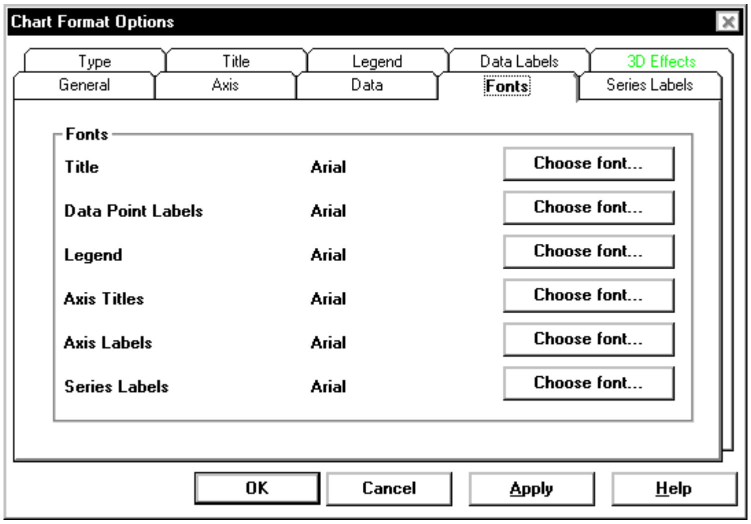


Chart Format Options
Type
Title
Legend
Data Labels
3D Effects
General
Axis
Data
Fonts
Series Labels
Choose font...
OK
Cancel
Apply
Help

Fonts

Title	Arial
Data Point Labels	Arial
Legend	Arial
Axis Titles	Arial
Axis Labels	Arial
Series Labels	Arial

Fonts Tab Options

- **Fonts** — Lists all of the available report items for which you can edit the fonts.
- **Choose Font** — takes you to the Font selector window, where you can edit the font size and style for each type of text.

Using the Fonts Tab

To change the fonts, complete the following steps:

1. Select the **Choose font** button next to the report item for which you would like to change the font.
2. The **Font** window, which is a standard *Windows* window, displays.
3. Select the **Font**, **Font style**, **Size**, **Effects**, **Color**, and **Script** which you want assigned to the selected text.
4. Select the **OK** button.
5. The Chart Format Options window displays.
6. Select the **Apply** button to make the changes and keep the Chart Format Options window open.

   Select the **OK** button to make the changes and close the Chart Format Options window.

Legend Tab

The Legend tab allows you to control the location of the chart legend.

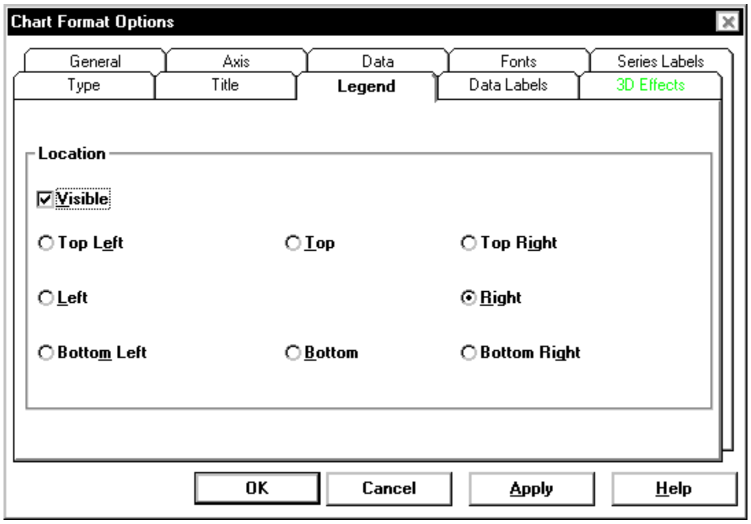


Chart Format Options
General
Axis
Data
Fonts
Series Labels
Type
Title
Legend
Data Labels
3D Effects
OK
Cancel
Apply
Help

Location

☑ Visible

○ Top Left ○ Top ○ Top Right

○ Left ● Right

○ Bottom Left ○ Bottom ○ Bottom Right

Legend Tab Options

The available options on the Legend tab are as follows:

- **Visible** check box — allows you to display or not display report legends.
- **Location** of legend — if you elect to have report legends visible, you can select where the legend displays. The available options are Top left, Top (center), Top right, Left, Right, Bottom left, Bottom (center), and Bottom right.

Note Since legends take up space, the drawn chart will be smaller if you have selected Visible. To increase the size of the chart, do not select the Visible option or maximize the report window.

Using the Legend Tab

To use the Legend tab, complete the following steps:

1. Select the **Visible** check box to make the legend of the chart appear on the report.
2. Select the **Location** (Top Left, Top, Top Right, Left, Right, Bottom Left, Bottom, or Bottom Right) in which you would like the legend to appear on the chart.
3. Select the **Apply** button to make the changes and keep the Chart Format Options window open.

   Select the **OK** button to make the changes and close the Chart Format Options window.

Series Labels Tab

The Chart Format Options Series Labels tab is where you can edit the labels (headings) that are assigned to each data item that is used in a chart.

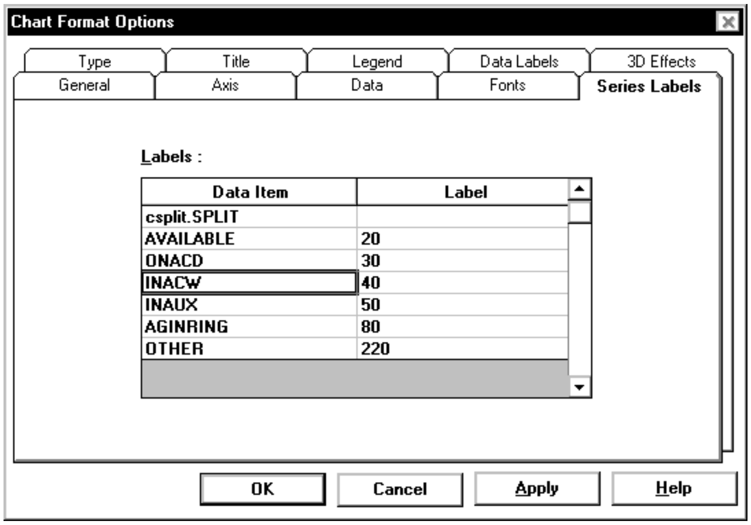


Chart Format Options
Type
Title
Legend
Data Labels
3D Effects
General
Axis
Data
Fonts
Series Labels
OK
Cancel
Apply
Help

Labels :

Data Item	Label
csplit.SPLIT	
AVAILABLE	20
ONACD	30
INACW	40
INAUX	50
AGINRING	80
OTHER	220

Series Labels Tab Options

- **Labels table** — Shows the labels that are currently used in the chart. To edit the text, place the cursor in the Label column and type the appropriate information.

Using the Series Labels Tab

To use the Series Labels tab, complete the following steps:

1. Place the cursor in the table cell that contains the label (heading) you would like to modify.
2. Type the new name or edit the existing name.
3. Select the **Apply** button to make the changes and keep the Chart Format Options window open.

   Select the **OK** button to make the changes and close the Chart Format Options window.

Title Tab

The Title tab allows you to control the location of the chart title.

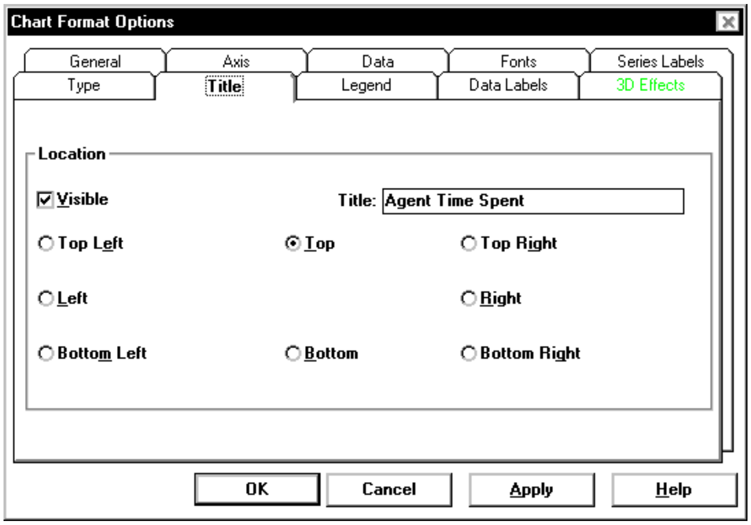


Chart Format Options
General
Axis
Data
Fonts
Series Labels
Type
Title
Legend
Data Labels
3D Effects
OK
Cancel
Apply
Help

Location

☑ Visible   Title: Agent Time Spent

○ Top Left   ● Top   ○ Top Right

○ Left   ○ Right

○ Bottom Left   ○ Bottom   ○ Bottom Right

Title Tab Options

The available options on the Title tab are as follows:

- **Visible** check box — allows you to display or not display report titles.
- **Location** of title — if you elect to have report titles visible, you can select where the titles display. The available options are Top left, Top (center), Top right, Left, Right, Bottom left, Bottom (center), and Bottom right.

Note Since the title takes up space, the drawn chart will be smaller if you have selected Visible. To increase the size of the chart, do not select the Visible option or maximize the report window.

Using the Title Tab

To use the Title tab, complete the following steps:

1. Select the **Visible** check box to make the title of the chart appear on the report.
2. In the **Title** text box, edit the content of the chart title.
3. Select the **Location** (Top Left, Top, Top Right, Left, Right, Bottom Left, Bottom, or Bottom Right) in which you would like the title to appear on the chart.
4. Select the **Apply** button to make the changes and keep the Chart Format Options window open.

   Select the **OK** button to make the changes and close the Chart Format Options window.

Type Tab

The Type tab lets you change the chart type.

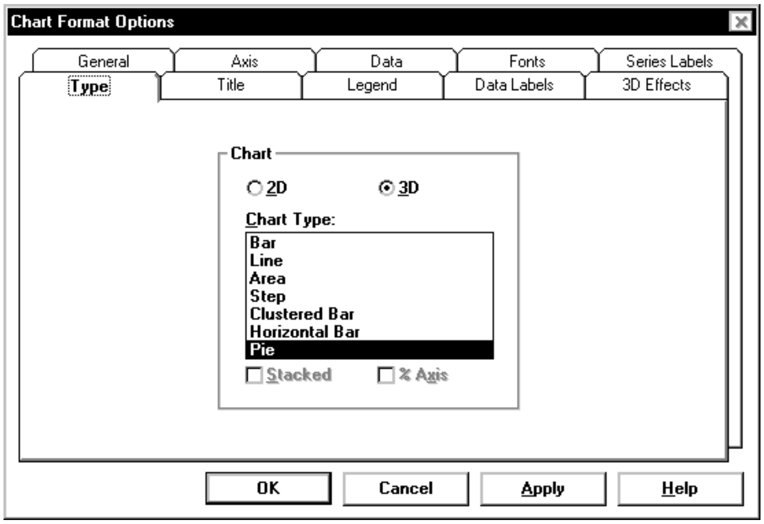


Chart Format Options
General
Axis
Data
Fonts
Series Labels
Type
Title
Legend
Data Labels
3D Effects
OK
Cancel
Apply
Help

Chart

○ 2D ● 3D

Chart Type:

- Bar
- Line
- Area
- Step
- Clustered Bar
- Horizontal Bar
- Pie

☐ Stacked ☐ % Axis

Type Tab Options

The available options on the Type tab are:

- **2D** and **3D —** Changes the chart between 2-dimensional and 3-dimensional views. 2D charts update faster than 3D charts, so if the drawing speed seems too slow, you may want to display charts as 2D.
- **Chart Type —** Specifies how the data is presented. You choose a chart type from the list. The types of charts available vary slightly depending on whether a 2D or 3D chart has been selected. All possible chart types are listed here:
  - — Bar Chart (2D and 3D).
  - — Line Chart (2D and 3D).
  - — Area Chart (2D and 3D).
  - — Step Chart (2D and 3D).

  - Horizontal Bar Chart (2D and 3D).
  - Clustered Bar Chart (3D only).
  - Pie Chart (2D and 3D).
- **Stacked** check box — Causes the data for all series to be stacked rather than shown separately. This check box is disabled for pie charts.
- **% Axis** check box — causes the value axis (y-axis) to be displayed as percentages rather than as actual data values. This can be combined with the stacked check box to produce a percentage stacked chart.

Using the Type Tab

To use the Type tab, complete the following steps:

1. Select the **2D** or **3D** radio button, based on whether you would like the report to display two-dimensionally or three-dimensionally.
2. Select the **Chart Type**.

   The available types for two-dimensional charts are Bar, Line, Area, Step, Horizontal Bar, and Pie.

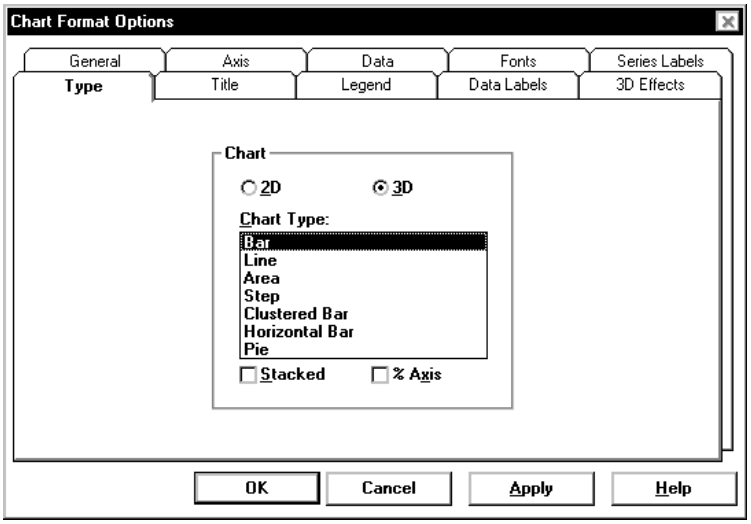
   The available types for three-dimensional charts are Bar, Line, Area, Step, Clustered Bar, Horizontal Bar, and Pie.
3. For any type of report, other than Pie, you can select the **Stacked** check box to display all series together rather than separately.

   If you select the Stacked check box, you can also select the **% Axis** check box, which causes the y-axis to be displayed as percentages rather than as data values.
4. Select the **Apply** button to make the changes and keep the Chart Format Options window open.

   Select the **OK** button to make the changes and close the Chart Format Options window.

3D Effects Tab

The 3D Effects tab allows you to control the 3D appearance of the chart. If the current chart is a 2D chart, this tab is disabled.



Chart

○ 2D ● 3D

Chart Type:

- Bar
- Line
- Area
- Step
- Clustered Bar
- Horizontal Bar
- Pie

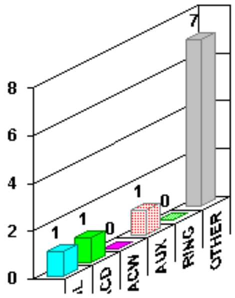
☐ Stacked ☐ % Axis

3D Effects Tab Options

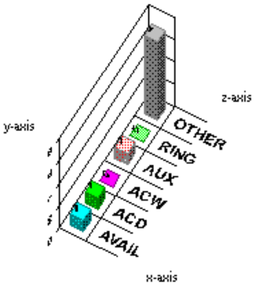
The following parameters can be changed:

- **Elevation** — This is a number from 0 through 90 degrees, and describes the relative height from which a chart is viewed. An elevation of 90 looks directly down on the top of the chart, while an elevation of 0 looks directly at the side of the chart. The example charts throughout this document use an elevation of 30 degrees.
- **Rotation** — This is a number from -360 through 360 degrees, and specifies the angle that the chart is turned relative to the viewing position. The example charts throughout this document use a rotation of 60 degrees. Rotation does not apply to 3D pie charts.
- **Projection** — This selects one of three mathematical algorithms used to give a 3D appearance on a 2D sheet of paper or computer screen. The following values can be chosen:

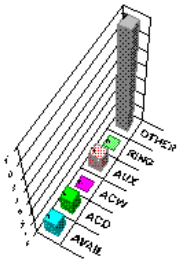
— **Oblique**: The chart has depth but the X-Y plane does not change when the chart is rotated or elevated.



— **Orthogonal**: Perspective is not applied to the chart, resulting in less of a 3D effect. The advantage of using this type of projection is that vertical lines remain vertical, making some charts easier to read.



— **Perspective**: This provides the most realistic 3D appearance. Objects farther away from you converge toward a vanishing point.



- **Viewing Distance** — This is a number from 50 through 1000 that represents the distance from which the chart is viewed as a percentage of the depth of the chart.
- **Width to Height** — This is a number from 5 through 2000 that represents the percentage of the chart's height that is used to draw the chart's width.
- **Depth to Height** — This is a number from 5 through 2000 that represents the percentage of the chart's height that is used to draw the chart's depth.

Using the 3D Effects Tab

To use the 3D Effects tab, complete the following steps:

1. Change the degree of **Elevation** (top to bottom) of the chart by typing a new number in the Elevation box.
2. Change the degree of **Rotation** of the chart by typing a new number in the Rotation box.
3. Change the type of **Projection** used for the chart by selecting a type from the Projection drop-down list.
4. Edit the ratios of width to height and depth to height, as appropriate.
5. Select the **Apply** button to make the changes and keep the Chart Format Options window open.

   Select the **OK** button to make the changes and close the Chart Format Options window.

12

Format | Grid

Introduction

The Report Designer allows you to format report grids after they have been inserted on the report. You will use the **Grid** option from the **Format** menu to edit grids on your designer reports.

This chapter teaches you to use the **Format | Grid** menu option. The sections of this chapter are:

- Formatting a Grid in a Report
- General Tab
- Data Tab
- Fonts Tab
- Format Tab
- Headers Tab
- Sort Tab
- Summary Tab.

Note If this grid includes an integrated query, then the Summary tab will not display.

Formatting a Grid in a Report

Note The changes you make to a report's format affect only your view of the report. The changes do not affect how other Supervisor users see the report.

If you are in a report containing a grid (table), you can format how the grid is displayed and what is displayed on the grid. The formatting is done in the Grid Format Options window, which is accessed by:

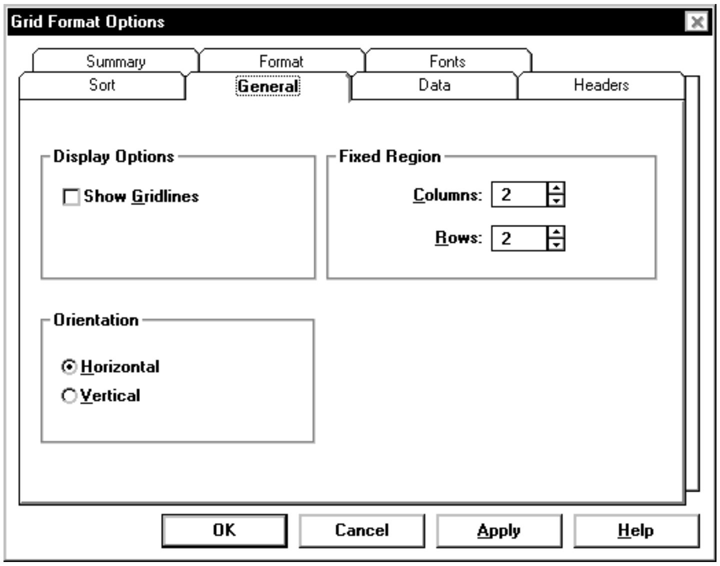
- Double-clicking on a column heading in the report, or
- Selecting **Format Grid** or **Sort by** from the **Format** menu list or the right mouse button pop-up menu.
  - If you select **Format Grid**, the Grid Format Options window displays with the General tab active.
  - If you select **Sort by**, the Grid Format Options window displays with the Sort tab active.

The Grid Format Options window allows you to make layout changes to a grid. All changes made are saved as part of the report view when you save the report.

The following sections describe the Grid Format Options tabs.

General Tab

The General tab allows you to make format changes to a grid.


Grid Format Options
Summary
Format
Fonts
Sort
General
Data
Headers
Display Options
Fixed Region
Orientation
OK
Cancel
Apply
Help

☐ Show Gridlines

Columns: 2

Rows: 2

● Horizontal

○ Vertical

General Tab Options

The following grid parameters can be changed:

- **Show Gridlines** — This specifies whether or not grid lines are to be shown in the grid.
- **Fixed Columns** — This specifies the number of columns from the left of the grid that are fixed in place and do not scroll. Valid values are in the range of 0 through 99. You can use the spin boxes can to select a valid value or type the value in.
- **Fixed Rows** —This specifies the number of rows from the top of the grid that are fixed in place and do not scroll. Valid values are in the range of 0 through 99. You can use the spin boxes to select a valid value or type the value in.

- **Orientation** —
  - **Horizontal** — Builds the grid with the column names across the top of the grid, so that the grid reads left to right.
  - **Vertical** — Builds the grid with the column names down the left-hand side of the grid, so that the grid reads top to bottom.

Using the General Tab

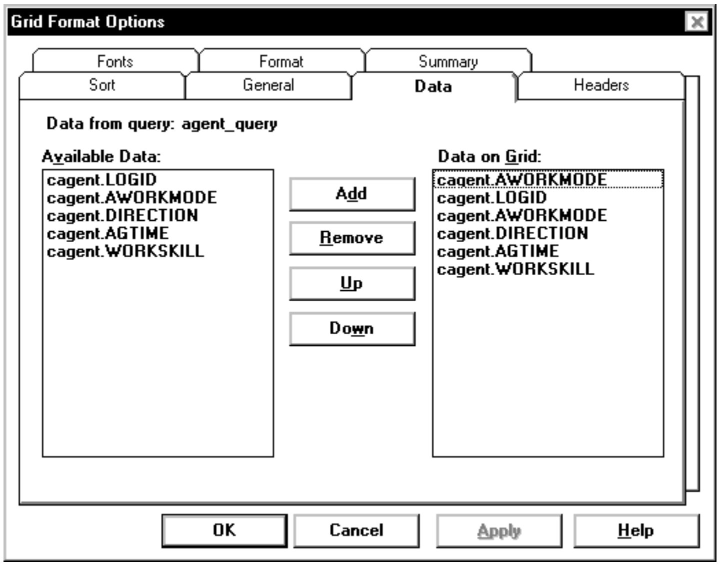
To use the General tab, complete the following steps:

1. Select the **Show Gridlines** check box if you want the grid to include lines between the columns and rows.
2. In the **Fixed Region** box, define the number of Columns on the grid that will not scroll. You can type the appropriate number or use the up and down arrows to select a valid number.
3. In the **Fixed Region** box, define the number of Rows on the grid that will not scroll. You can type the appropriate number or use the up and down arrows to select a valid number.
4. In the **Orientation** box, select the Horizontal radio button if you would like the grid to display with the column names across the top of the grid. Select the Vertical radio button if you would like the grid to display with the column names down the left-hand side of the grid.
5. Select the **Apply** button to make the changes and keep the Grid Format Options window open.

   Select the **OK** button to make the changes and close the Grid Format Options window.

Data Tab

Use the Grid Format Data tab to add data items to, remove data items from, and reorganize the order of data items on the currently selected grid.


Grid Format Options
Fonts
Format
Summary
Sort
General
Data
Headers
Add
Remove
Up
Down
OK
Cancel
Apply
Help

Data from query: agent_query

Available Data:

cagent.LOGID
cagent.AWORKMODE
cagent.DIRECTION
cagent.AGTIME
cagent.WORKSKILL

Data on Grid:

cagent.AWORKMODE
cagent.LOGID
cagent.AWORKMODE
cagent.DIRECTION
cagent.AGTIME
cagent.WORKSKILL

Data Tab Options

- **Available Data** — Lists all of the data items that are available, based on the query that is being used, for the chart or grid.
- **Data on Grid** — Displays the data items that are currently used in the grid.

Using the Data Tab

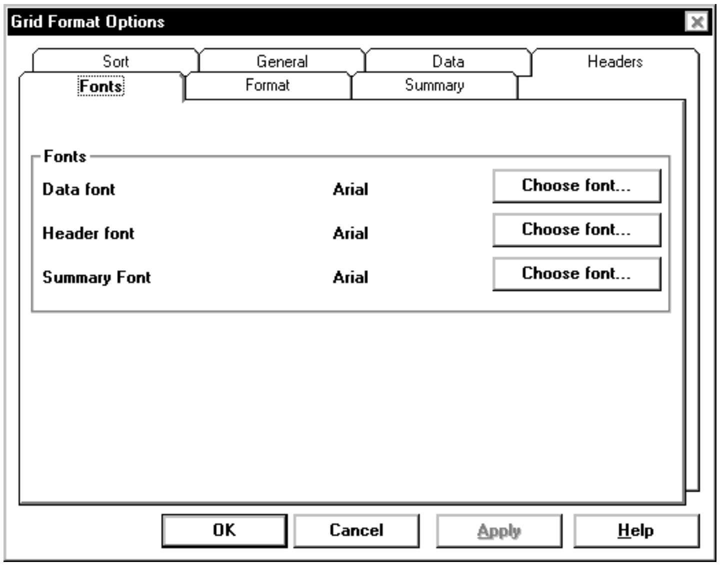
To use the Data tab window, complete these steps:

1. To add data items to the grid, select an item from the **Available Data** list and click the Add button.
2. To remove data items from the grid, select an item from the **Data on Grid** list and click the **Delete** button.
3. To rearrange the order in which items appear on the grid, select and item on the **Data on Grid** list and use the **Up** and **Down** buttons to move the item to the appropriate place on the list.
4. Select the **Apply** button to make the changes and keep the Grid Format Options window open.

   Select the **OK** button to make the changes and close the Grid Format Options window.

Fonts Tab

The Grid Format Options Fonts tab allows you to edit the fonts of the data, headers, and summary information on the grid report.


Grid Format Options
Sort
General
Data
Headers
Fonts
Format
Summary
Choose font...
Choose font...
Choose font...
OK
Cancel
Apply
Help

Fonts

Data font	Arial
Header font	Arial
Summary Font	Arial

Fonts Tab Options

- **Fonts** — Lists all of the available report items for which you can edit the fonts.
- **Choose Font** — takes you to the Font selector window, where you can edit the font size and style for each type of text.

Using the Fonts Tab

To change the fonts, complete the following steps:

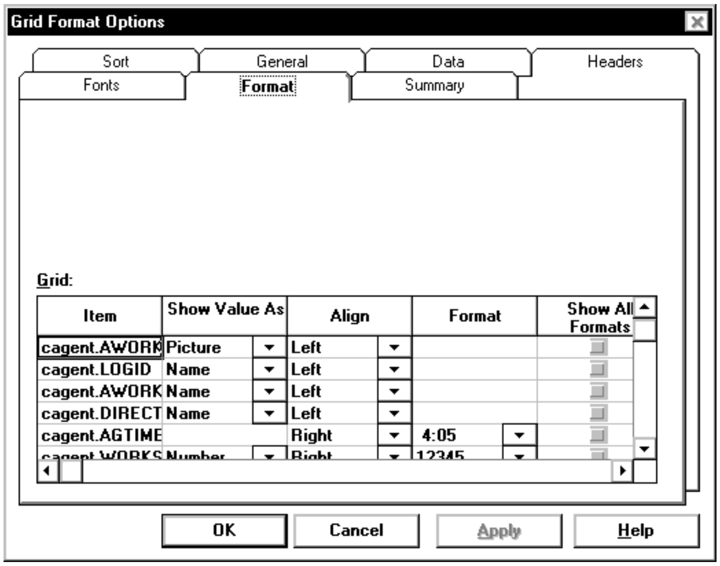
1. Select the **Choose font** button next to the report item for which you would like to change the font.
2. The **Font** window, which is a standard *Windows* window, displays.
3. Select the **Font**, **Font style**, **Size**, **Effects**, **Color**, and **Script** which you want assigned to the selected text.
4. Select the **OK** button.

   The Grid Format Options window displays.
5. Select the **Apply** button to make the changes and keep the Grid Format Options window open.

   Select the **OK** button to make the changes and close the Grid Format Options window.

Format Tab

The Grid Format tab allows you to alter the format of each column that is included in the grid. The Database Items that make up the columns of the grid are listed in the Item column of the Grid table. For each Item, you can assign a variety of formatting characteristics.



Grid:

Item	Show Value As	Align	Format	Show All Formats
cagent.AWORK	Picture	Left		☐
cagent.LOGID	Name	Left		☐
cagent.AWORK	Name	Left		☐
cagent.DIRECT	Name	Left		☐
cagent.AGTIME		Right	4:05	☐
cagent.WORKS	Number	Right	12345	☐

Format Tab Options

- **Item** — Shows the database item (and table from which the data is retrieved) that is used for this column of the grid.
- **Show Value As** — Use the drop-down list to select the format in which you would like the value to be displayed. The Show Value As formatting only applies to data types that can be defined in the Dictionary.
- **Align** — Allows you to select the alignment of a field or column in a grid. Available options for alignment are Left, Right, and Center.

- **Format** — The options available for the format will depend on the type of item you are editing. For instance, a field that displays time will allow you to choose from a variety of time formats. A field that is a number will allow you to choose from a variety of number formats.
- **Show All Formats** — You can select the Show All Formats check box to display the formats that are available for all field types. Note that the selection of this check box is only active during the current use of the Format Grid window. The next time you access the window, the check box will not be selected.
- **Zeros as Blanks** — Select this check box to display cells on the grid that contain zeros as blank. If you do not select the check box, the cells that contain zeros will display zeros.
- **Merge with Next** — Select the check box to merge this column with the column to the right on the grid.

Using the Format Tab

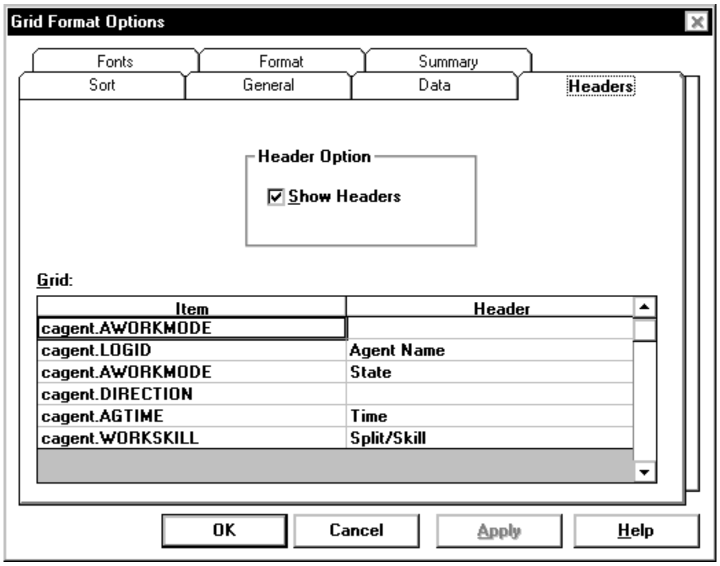
To use the Format tab, complete the following steps:

1. In the **Item** column of the table, select the data item for which you would like to edit the formatting on the grid.
2. In the **Show Value As** column, use the drop-down list to select how you would like to have the data item displayed in the grid. The available values will vary, depending on the data item.
3. In the **Align** column, use the drop-down list to select how you would like the data item to be aligned on the grid. Available values are Left, Right, and Center.
4. In the **Format** column (if available), select the time format or the number format (as appropriate) in which you would like the data item displayed. The available choices reflect the specific data item you are formatting.
5. In the **Show All Formats** column, select the check box if you would like the Format column to display all of the available data formats, regardless of the type of data item that you are working with.

6. In the **Zeros as Blanks** column, select the check box if you would like to display cells on the grid that contain zeros as blank. If you do not select the check box, the cells that contain zeros will display zeros.
7. In the **Merge with Next** column, select the check box to merge this column with the column to the right on the grid.

Headers Tab

The Headers tab allows you to turn grid headers on and off and to edit the text that appears in each column heading of the grid.


Grid Format Options
Fonts
Format
Summary
Sort
General
Data
Headers
Header Option
Grid:
OK
Cancel
Apply
Help

☑ Show Headers

Item	Header
cagent.AWORKMODE	
cagent.LOGID	Agent Name
cagent.AWORKMODE	State
cagent.DIRECTION	
cagent.AGTIME	Time
cagent.WORKSKILL	Split/Skill

Headers Tab Options

- **Header Option** — Select the Show Headers check box if you would like the grid report to include the headers.
- **Grid Header** — This table shows the column headings that are currently used on the report.

Using the Headers Tab

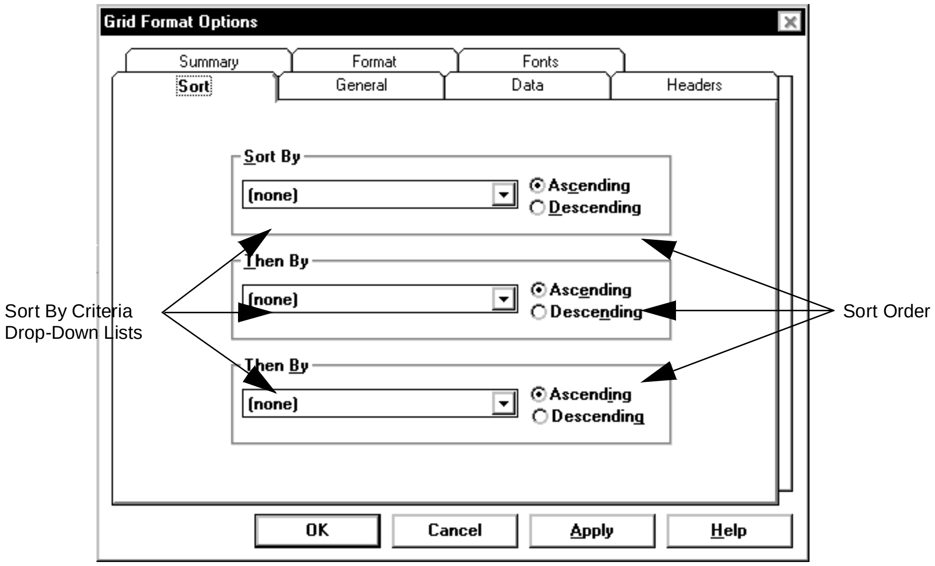
To change the column headings on the grid, complete these steps:

1. Place the cursor in the table cell that contains the heading you would like to modify.
2. Type the new name or edit the existing name.
3. Select the **Apply** button to make the changes and keep the Grid Format Options window open.

   Select the **OK** button to make the changes and close the Grid Format Options window.

Sort Tab

The Sort tab allows you to specify the order in which the information on the real-time grid report is displayed.



Grid Format Options
Summary
Format
Fonts
Sort
General
Data
Headers
Sort By Criteria Drop-Down Lists
Sort Order
OK
Cancel
Apply
Help

Sort By: (none) ● Ascending ○ Descending

Then By: (none) ● Ascending ○ Descending

Then By: (none) ● Ascending ○ Descending

Sort Tab Options

- **Sort by** — When you are setting up display order for a real-time report, specify the sort column (Sort By) and the sort order (Ascending or Descending). The drop-down list for the Sort By lists all of the database table and item names used in the report.

Using the Sort Tab

When you are setting up display order for a real-time or integrated report, specify the sort column (Sort By) and the sort order (Ascending or Descending). The drop-down list for the Sort By lists all of the database table and item names used in the report.

Some examples of sorting are as follows:

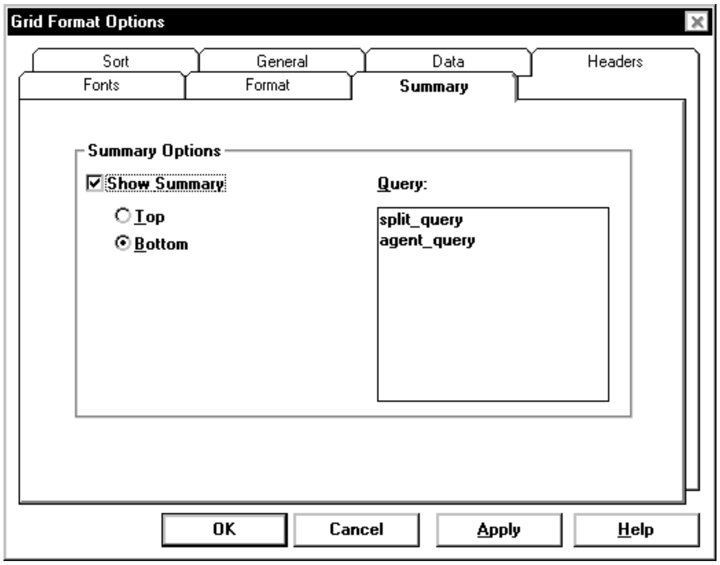
- Viewing a list of agents alphabetically — select “Name” from the first Sort By drop-down list, select Ascending as the sort order, and leave the other two Sort By boxes set to “(none)”.
- Searching for agents who have been in a certain state for too long — select “WORKMODE” from the first Sort By drop-down list, then select “TIME” from the second Sort By drop-down list, and then select Descending as the sort order for the second Sort By.

Note Sorting may cause the report to take longer to refresh. If you wish to speed up the refresh rate, turn off the sort options by selecting “(none)” for all of the Sort By criteria.

Summary Tab

Use the Grid Format Summary tab to include or exclude summary lines from the currently select grid. You can include a summary line for each query that is used in the report.

Note If this grid includes an integrated query, then the Summary tab will not display.


Grid Format Options
Sort
General
Data
Headers
Fonts
Format
Summary
Summary Options
OK
Cancel
Apply
Help

☑ Show Summary

○ Top

● Bottom

Query:

split_query
agent_query

Summary Tab Options

- **Summary Options** — Allows you to include or exclude summary (totals) lines on grid reports.

  Select the check box to include a summary line on the grid, then select the query for which you would like to include a summary.

Using the Summary Tab

To include a summary line, complete the following steps:

1. Select the **Show Summary** check box.
2. Select a query from the **Query** box.
3. Select the **Top** or the **Bottom** radio button, based on where you would like the summary line to be located.
4. Select the **Apply** button to make the changes and keep the Grid Format Options window open.

   Select the **OK** button to make the changes and close the Grid Format Options window.

13

Format | Field

Introduction

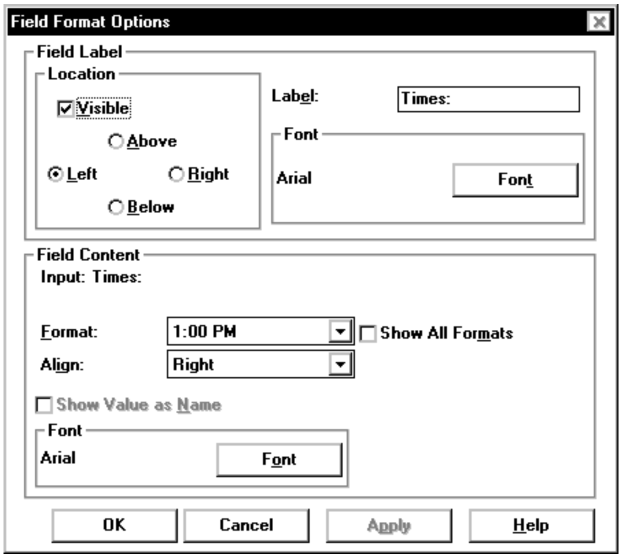
The Report Designer allows you to format report fields after they have been inserted on the report. You will use the **Field** option from the **Format** menu to edit fields on your designer reports.

This chapter teaches you to use the **Format | Field** menu option. The sections of this chapter are:

- Field Format Window Elements
- Using the Field Format Window.

Field Format Window Elements

Selecting **Field** from the **Format** menu opens the Field Format Options window. The Field Format Options window is where you will choose the formats for fields defined in queries.



☑ Visible

○ Above

● Left

○ Right

○ Below

Label: Times:

Arial

Input: Times:

Format: 1:00 PM

☐ Show All Formats

Align: Right

☐ Show Value as Name

Arial

The Field Format window includes the following options:

- **Field Label Location box** —
  - — **Visible check box** — allows you to display or not display report legends.
  - — **Location of legend** — if you elect to have report legends visible, you can select where the legend displays. The available options are Top left, Top (center), Top right, Left, Right, Bottom left, Bottom (center), and Bottom right.
- **Label box** — Type a brief description of the field. For instance, for a field that displays the name of the split/skill for which the report was run, you might label the field “Split/Skill”.

- **Font box** — Opens the Font window, which allows you to change the Font, Font style, Size, Effects, Color, or Script box, or the OK, Cancel, or Help button to access quick definitions of the window elements.
- **Field Content Format box** — Shows the query and the database item that this field is associated with.
- **Align box** — Allows you to select the alignment of a field or column in a grid. Available options for alignment are Left, Right, and Center.
- **Format** — Use the drop-down list to select the format in which you would like the value to be displayed.
- **Show Value as Name —** Shows the field as name.
- **Font box** — Opens the Font window, which allows you to change the Font, Font style, Size, Effects, Color, or Script box.

Note Under field content, Effects and Color are not available.

Using the Field Format Options Window

To format a field on your report, complete the following steps:

1. Select the field on the report.
2. Select **Field** from the **Format** menu.

   The Field Format Options window displays. This window allows you to create a label (heading) for the field and to edit the format of the field itself.

3. To create or change a **label** (heading) for the field, complete the following steps in the Field Label box:
   a. Select the **Visible** check box.
   b. Select the **Location** (Above, Below, Left, or Right) at which you would like the label to appear in relation to the field by selecting the appropriate radio button.
   c. In the **Label** field, type the word(s) that you would like the label to display.
   d. To change the font of the label, select the **Font** button to access the Font window.
4. To edit the format of the **field**, complete the following steps in the **Field Content** box:
   a. Select the format in which the field will display from the **Format** drop-down list.

      The options available for the field format will depend on the type of field you are editing. For instance, field that displays time will allow you to choose from a variety of time formats. A field that is a number will allow you to choose from a variety of number formats.

      You can select the Show All Formats check box to display the formats that are available for all field types.

   b. Select the alignment of the field from the **Align** drop-down list.

      The options available for alignment are Left, Right, and Center.

   c. Select the **Show Value as Name** check box if you are editing a field that displays a CMS entity (split/skill, agent, etc.) that can be named in the Dictionary and you would like the Dictionary name for the field to display instead of the number.

   d. To change the font of the field, select the **Font** button to access the Font window.

5. Select **Apply** to apply the changes, but keep the Field Format Options window open for additional changes.

   Select **OK** to apply the font changes and close the Field Format Options window.

14

Format | Text

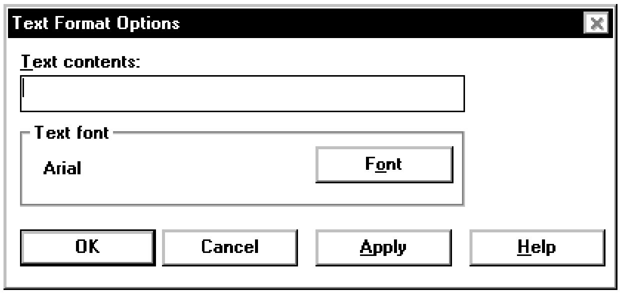
Introduction

The Report Designer allows you to format the font style and size of text that appears on a report. You will use the **Text** option from the **Format** menu to edit text on a report.

This chapter teaches you to use the **Format | Text** menu option.

Text Format Options Window Elements

Selecting **Text** from the **Format** menu when a text item on the report is selected opens the Text Format Options window. The Text Format Options window allows you to change the font display characteristics for the selected text.


Text Format Options
Text contents:
Text font
Arial
Font
OK
Cancel
Apply
Help

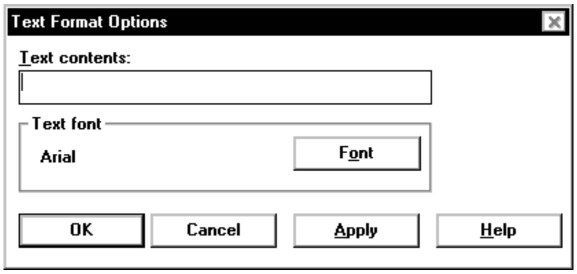
- **Text contents** — Type the word or phrase that you would like to insert on the report in this text box.
- **Text font** — Opens the Font window, which allows you to change the Font, Font style, Size, Effects, Color, or Script box, or the OK, Cancel, or Help button to access quick definitions of the window elements.

Formatting Text on the Report

To format text on a report, complete these steps:

1. Select the text on the report.
2. Select **Text** from the **Format** menu.

   The Insert Text window displays:



3. Select the **Font** button.

   The Font selector window, which is a standard *Windows* window, displays.

4. Select the **Font**, **Style**, **Point size**, **Effects**, and **Script** that will apply to the text string you are editing.
5. Select the **OK** button.

   The Font selector window closes.

6. On the Text Format Options window, select the **OK** button to accept the font changes and close the window.

   Select the **Apply** button to apply the changes you have made and keep the window open.

15

Error Messages

Introduction

This chapter describes the kinds of error messages that Report Designer displays and tells you what to do when error messages appear.

Test design error messages are divided into three categories:

- Phase 1 Error Messages
- Phase 2 Historical Error Messages
- Phase 2 Real-Time Error Messages.

The errors described in this chapter usually are the result of a problem in the query that you are testing.

Phase 1 Error Messages

This section contains Phase 1 error messages. Table 15-2 lists the messages alphabetically, and includes a cause and a recommended solution for each message.

Table 15-2: Phase 1 Error Messages

Message:	**`$<variable name> not defined`**
Cause:	The where clause contains a variable that is not defined.
Solution:	Define the variable using the define input action or remove the variable from the row search criteria.
Message:	**`Cannot mix aggregates and nonaggregates in the select`**
Cause:	You cannot specify both aggregate columns and nonaggregate columns in the same select for real-time reports.
Solution:	Create two identical row search conditions and apply one to the aggregate columns and one to the nonaggregate columns.
Message:	**`Cannot use the SYN function for order by`**
Cause:	You cannot use a synonym to sort the output in the query.
Solution:	Remove the aggregate from the `Order by` field. Use grid sorting to order the item.
Message:	**`CMS system error - Check the error log`**
Cause:	A *CentreVu* CMS system error occurred while the select executed. The error should be recorded in the error log.

Table 15-2: Phase 1 Error Messages (Contd)

Solution:	Check the error in the error log to initiate corrective action. **CAUTION:** If you run a report that merges data from two tables (particularly tables with large amounts of data) into a single field and your **`Select rows where`** statement is not specific enough, you may get this error message. The specific cause may be that the number of selected rows is very large, and *CentreVu* CMS does not have enough space to create temporary files. If this is the case, you should add additional “where” clauses to the row search criteria.
Message:	**`CMS system error - Data collection off`**
Cause:	*CentreVu* CMS cannot test the row search criteria while data collection is off.
Solution:	Turn data collection on and rerun test of report design.
Message:	**`CMS system error - Too much data retrieved - try a more restrictive search`**
Cause:	Too much data was retrieved with the given row search criteria.
Solution:	Add more conditions to the row search criteria so that fewer rows are retrieved.
Message:	**`CMS system error - Updating translations`**
Cause:	*CentreVu* CMS cannot test the row search criteria while *CentreVu* CMS is receiving the set of configuration data from the switch.
Solution:	Wait until configuration data has been sent. Then rerun the test of report design.
Message:	**`keyword AVG invalid in where clause`**
Cause:	You cannot use the keyword AVG in row search criteria.
Solution:	Remove the keyword AVG from the row search criteria.
Message:	**`keyword BETWEEN invalid for real-time`**

Table 15-2: Phase 1 Error Messages (Contd)

Cause:	You cannot use the keyword BETWEEN in row search criteria for a real-time report.
Solution:	Remove the keyword BETWEEN from the row search criteria.
Message:	**`keyword COUNT invalid in where clause`**
Cause:	You cannot use the keyword COUNT in row search criteria.
Solution:	Remove the keyword COUNT from the row search criteria.
Message:	**`keyword MAX invalid in where clause.`**
Cause:	You cannot use the keyword MAX in row search criteria.
Solution:	Remove the keyword MAX from the row search criteria.
Message:	**`keyword MIN invalid in where clause.`**
Cause:	You cannot use the keyword MIN in row search criteria.
Solution:	Remove the keyword MIN from the row search criteria.
Message:	**`keyword SUM invalid in where clause.`**
Cause:	You cannot use the keyword SUM in row search criteria.
Solution:	Remove the keyword SUM from the row search criteria.
Message:	**`keyword SYN invalid in where clause.`**
Cause:	You cannot use the keyword SYN in row search criteria.
Solution:	Remove the keyword SYN from the row search criteria.

Phase 2 Historical Error Codes

This section contains the *INFORMIX*[*] error codes most likely to appear for *CentreVu* CMS historical reports. Each code includes a description of the error and the recommended corrective action.

These errors are reported in the following format:

`INFORMIX error: <error number>`

In addition, a circumflex (^) may appear in the listed Select statement(s) to mark the location of an error.

Note If an error code appears that is not listed in this document, see the *INFORMIX SQL Relational Database Management System Reference Guide* for *INFORMIX* SQL.

Table 15-3: Phase 2 Historical Error Codes

Error	Description/Solution
201	**Description:** A syntax error has occurred. **Solution:** Check that you have not misspelled an RDSQL statement, placed key words out of sequence, or included an *INFORMIX*-SQL reserved word in your query.
202	**Description:** An illegal character has been found in the statement. **Solution:** Remove the illegal character (often a nonprintable control character) and resubmit the statement
203	**Description:** An illegal integer has been found in the statement. **Solution:** Integers must be whole numbers from -2,147483,647 to 2,147,483,647. Check that you have not included a number with a fractional portion or a number outside the acceptable range. Check also that you have not inadvertently entered a letter in place of a number (for example, `125p3` instead of `12503`).

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[*] INFORMIX is a registered trademark of Informix Software, Inc.

Table 15-3: Phase 2 Historical Error Codes (Contd)

Error	Description/Solution
204	**Description:** An illegal floating-point number has been found in the statement. **Solution:** Check that you have not inadvertently entered a letter in place of a number (for example, `125p3` instead of `125.03`).
206	**Description:** The specified table name is not in the database. **Solution:** Check the spelling of the table name in your statement.
217	**Description:** Column *column-name* not found in any table in the query. **Solution:** Correct the spelling of the database item and ensure that the item exists in the database table. Check for the presence of required commas and quotes.
219	**Description:** Wildcard matching may not be used with noncharacter types. **Solution:** Wildcards (*, ?) and characters enclosed in brackets [ ] can be used only with CHAR data types. Check the data type for the offending column.
220	**Description:** There is no FROM clause in the query. **Solution:** Must include a FROM clause in the query. Check that you do not have an illegal character ($, #, &, etc., or a CONTROL character) in the line prior to the FROM keyword.
223	**Description**: Duplicate table name *table-name* in the FROM clause. **Solution:** Remove the redundant table name from the statement or use an alias to rename one of the tables.
228	**Description:** cannot have negative characters. **Solution:** Check that you have not included a negative CHAR data type (for example, `-a` or `-p`) in your statement.

Table 15-3: Phase 2 Historical Error Codes (Contd)

Error	Description/Solution
278	**Description:** Too many ORDER BY columns; maximum is eight. **Solution:** Reduce the number of columns included in the ORDER BY clause to eight or less.
280	**Description:** Total size of ORDER BY columns exceeds 120 bytes. **Solution:** Reduce the number of columns included in the ORDER BY clause so that the total number of characters is less than or equal to 120 (perhaps delete a CHAR column of 30 or more characters).
282	**Description:** Found a quote for which there is no matching quote. **Solution:** Check that all quoted strings are properly terminated with a quote.
284	**Description:** A subquery has not returned exactly one value. **Solution:** Check data for the subquery. Restructure the subquery by adding more components in the WHERE clause so that only one value is returned.
297	**Description:** The SELECT list may not contain a subquery. **Solution:** Remove the subquery from the SELECT list in the statement.
300	**Description:** There are too many GROUP BY columns (maximum is eight). **Solution:** Reduce to eight or less the number of nonaggregate database items that are assigned the same row search ID as that assigned to an aggregate function.
301	**Description:** The total size of the GROUP BY columns exceeds 120 characters.

Table 15-3: Phase 2 Historical Error Codes (Contd)

Error	Description/Solution
	Solution: The total number of characters in all columns listed in the GROUP BY list exceeds 120 characters. Reduce the number of nonaggregate database items that are assigned to a row search ID that is also assigned to an aggregate function.
303	**Description:** Expression mixes columns with aggregates. **Solution:** Restructure your query so that columns and aggregates are not included in the same expression.
309	**Description:** ORDER BY database item must be included in a report field to which the row search ID is assigned. **Solution:** Check that database items included in the ORDER BY clause appear in the report and are assigned to row search ID.
324	**Description:** Ambiguous database item. **Solution:** A database item in your row search criteria exists in more than one table also cited in your row search criteria. Prepend each database item with the appropriate table name.
352	**Description:** Database item not found. **Solution:** Check the spelling of the database item.
367	**Description:** Sums and averages cannot be computed for character columns. **Solution:** Check that you have not included a database item of a string type (VDN, LOGID, etc.) in the aggregate function statement.
522	**Description:** A database item in a field / bar does not exist in the table specified in the field’s row search ID. **Solution:** Check the Select statement that has the error. The database item that does not exist in the table will be marked with a circumflex (^). Change or delete the database item or change the table in the field’s row search ID.

Table 15-3: Phase 2 Historical Error Codes (Contd)

Error	Description/Solution
809	**Description:** RDSQL syntax error has occurred. **Solution:** Check that you have not misspelled an RDSQL statement, placed key words out of sequence, or included an *INFORMIX* SQL reserved word in your query.
1202	**Description:** An attempt was made to divide by zero. **Solution:** Check that you are not attempting to divide a numerical column type by a character column type (for example. `16/Jones`) or that the value of the divisor does not equal zero.
1203	**Description:** Values used in a MATCH must both be type CHARACTER. **Solution:** Check that the values included in your MATCH condition are both CHAR types. Use an alternate comparison condition for nonCHAR types.
1204	**Description:** Invalid year in date. **Solution:** Acceptable years are 0001 to 9999. If two digits are used, RDSQL assumes the year is 19xx. Check the value entered in the date field.
1205	**Description:** Invalid month in date. **Solution:** Months must be represented as the number of the month (1 through 12). Check the value entered in the date field.
1206	**Description:** Invalid day in date. **Solution:** Days must be represented as the number of the day (01 through 31). Check the value entered in the date field.
1226	**Description:** Decimal or money value exceeds maximum precision. **Solution:** Increase the precision of the DECIMAL or MONEY field.

Phase 2 Real-Time Error Codes

This section contains the Real-Time Database Manager error codes. Each code includes a description of the error and a recommended solution.

These errors are reported in the following format:

```
CMS Database Manager error: <error number>
```

In addition, a circumflex (^) appears in the listed Select statement(s) to mark the location of an error.

Table 15-4: Phase 2 Real-Time Error Codes

Error	Description/Solution
1	**Description:** A syntax error has occurred. **Solution:** Check the select for misspelled keywords or keywords that are out of order.
2	**Description:** An illegal character has been found in the select statement. **Solution:** Remove the illegal character (often a nonprintable control character).
3	**Description:** The specified table name is invalid. **Solution:** Check the spelling of the table name and for required commas in the `From tables` field.
4	**Description:** An invalid column has been specified (it is not found in any of the specified tables). **Solution:** Check the spelling of the column names.
5	**Description:** A mixture of aggregates and nonaggregates are being selected, and this is not allowed in real-time reports. (This error code can also mean mismatched types in comparison.)

Table 15-4: Phase 2 Real-Time Error Codes (Contd)

Error	Description/Solution
	Solution: Create two identical row search conditions, and apply one to the aggregate columns and one to the nonaggregate columns.
6	**Description:** Bad column in the order by clause. **Solution:** Check that the column name in the order by clause is spelled correctly and that it is being selected by one of the fields included in this row search.
7	**Description:** Bad index in order by clause. **Solution:** Order by clause has to have a column in the “select” clause or a number that indicates a position of the column in the “select” clause.
8	**Description:** Bad argument given to an aggregate function. For example, you cannot take the SUM or AVG of a character column. **Solution:** Check the arguments for the aggregates and be sure that data type is appropriate.
9	**Description:** In the “Select” of one of the fields associated with this row search, an action is being performed with the wrong data types. For example, you cannot use arithmetic with character fields. **Solution:** Check for these types of errors in the fields associated with the row search.
10	**Description:** Error with subquery. **Solution:** There may be a subquery in the WHERE clause that CMS does not support. Check the subqueries. This typically happens with an Agent Group report (a “select” embedded within a “select”).
11	**Description:** CMS system error. **Solution:** Check the error logs.

Table 15-4: Phase 2 Real-Time Error Codes (Contd)

Error	Description/Solution
12	**Description:** Memory allocation error. **Solution:** Check the error logs.
13	**Description:** Query cannot select more than one table. **Solution:** Check the error logs.

16

How *CentreVu* CMS Stores and Retrieves Data

Introduction

The most important and difficult part of designing a report is defining the data that goes in the report. To define report data, you must first understand how *CentreVu* CMS stores and retrieves data.

This chapter provides the following *CentreVu*™ Call Management System (*CentreVu* CMS) information:

- Standard *CentreVu* CMS reports that cannot be customized
- *CentreVu* CMS database items that are not in any standard reports, but can be used in reports
- How *CentreVu* CMS stores and retrieves data.

How *CentreVu* CMS Stores Data

CentreVu CMS stores data in the *CentreVu* CMS database. The database is divided into 52 different tables. A **table** is an array of columns and rows that stores data for a type of ACD element (split/skill, agent, trunk, trunk group, VDN, vector, call work code, forecasting, agent trace, call records, or exceptions) and for a specific time frame (for the current intrahour interval, for past intrahour intervals, for past day - summarized by day, and so on). Figure 16-2 shows how a small piece of a table (the Current Interval Agent table, in this case) might look in the database.

ACD	LOGID	SPLIT	EXTENSION	WORKMODE*	ACDCALLS	ACDTIME
1	1001	1	3201	1	21	988
1	1002	1	4440	1	19	777
1	1003	1	3002	2	15	400
1	1004	1	3003	2	9	58
1	1005	1	4003	2	11	644
1	**1006**	**1**	**5671**	**4**	**20**	**245**
1	1007	5	7835	3	7	851
1	1008	1	6666	3	18	603
1	1010	1	3241	1	18	203
1	2001	2	7762	4	13	789
1	2002	5	5642	2	14	549
1	2003	2	2221	2	10	402
1	2004	2	2242	4	19	452
1	2005	2	2287	1	21	616
1	2006	2	3982	3	19	569
1	2007	2	6543	2	15	745
1	2008	2	2345	2	9	109
1	2009	5	2022	2	11	367
1	2010	2	4323	4	20	322
1	3001	3	7655	1	7	188
1	3002	3	3425	1	18	704
1	3003	3	4563	1	18	256
1	3004	5	8885	2	13	980
1	3005	3	5544	2	14	589
1	3006	3	3789	2	10	340
1	3007	3	8675	2	19	299
1	3008	6	3009	1	21	688
1	3009	3	4477	2	19	901

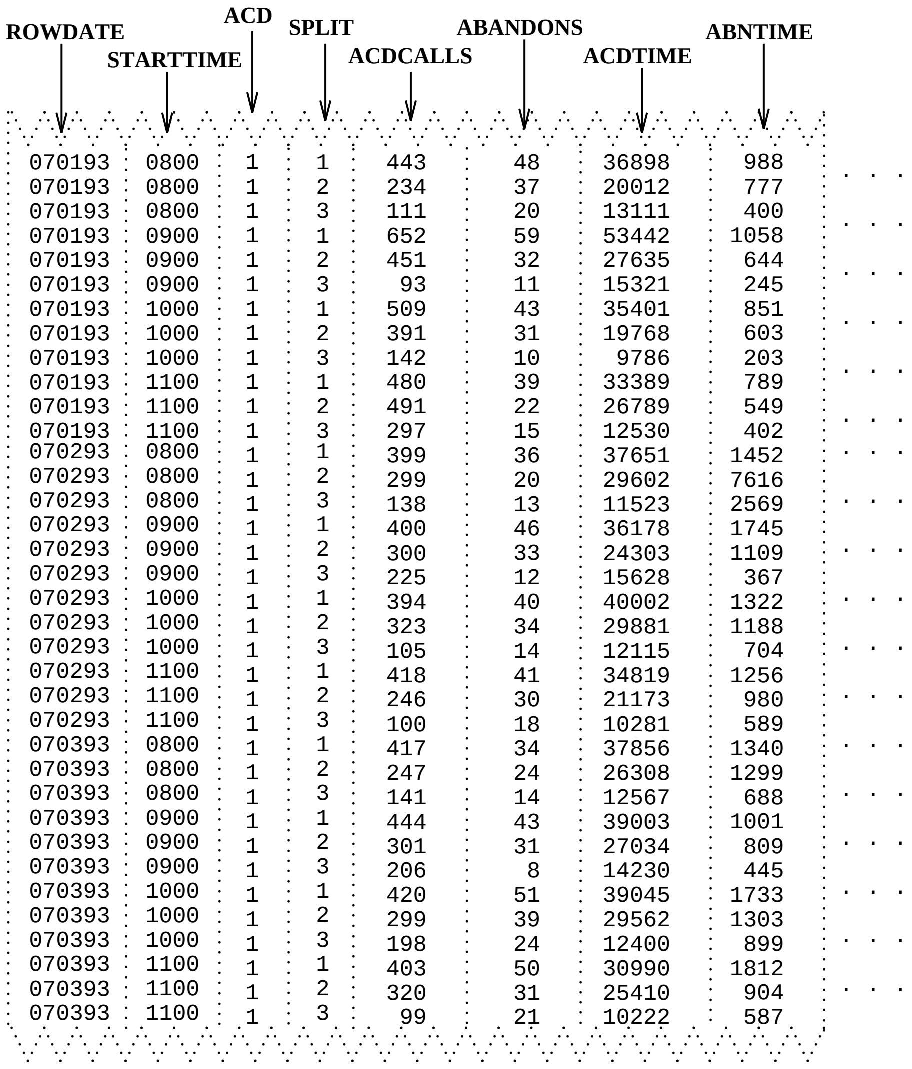
* The numeric values for WORKMODE represent agent states that appear in reports. For example, 1 = AVAIL, 2 = ACD, 3 = ACW, and 4 = AUX.

Figure 16-2: Sample *CentreVu* CMS Table (Current Interval Agent Table)

Note

The example in Figure 16-2 shows data for the current intrahour interval for agents 1001 to 3009. Because data in this table is in real time, data changes second by second. The example represents a snapshot (or the most recent update) of the table.

Figure 16-3 shows how a small piece of the Historical Intrahour Interval Split table looks.



ROWDATE	STARTTIME	ACD	SPLIT	ACDCALLS	ABANDONS	ACDTIME	ABNTIME
070193	0800	1	1	443	48	36898	988
070193	0800	1	2	234	37	20012	777
070193	0800	1	3	111	20	13111	400
070193	0900	1	1	652	59	53442	1058
070193	0900	1	2	451	32	27635	644
070193	0900	1	3	93	11	15321	245
070193	1000	1	1	509	43	35401	851
070193	1000	1	2	391	31	19768	603
070193	1000	1	3	142	10	9786	203
070193	1100	1	1	480	39	33389	789
070193	1100	1	2	491	22	26789	549
070193	1100	1	3	297	15	12530	402
070293	0800	1	1	399	36	37651	1452
070293	0800	1	2	299	20	29602	7616
070293	0800	1	3	138	13	11523	2569
070293	0900	1	1	400	46	36178	1745
070293	0900	1	2	300	33	24303	1109
070293	0900	1	3	225	12	15628	367
070293	1000	1	1	394	40	40002	1322
070293	1000	1	2	323	34	29881	1188
070293	1000	1	3	105	14	12115	704
070293	1100	1	1	418	41	34819	1256
070293	1100	1	2	246	30	21173	980
070293	1100	1	3	100	18	10281	589
070393	0800	1	1	417	34	37856	1340
070393	0800	1	2	247	24	26308	1299
070393	0800	1	3	141	14	12567	688
070393	0900	1	1	444	43	39003	1001
070393	0900	1	2	301	31	27034	809
070393	0900	1	3	206	8	14230	445
070393	1000	1	1	420	51	39045	1733
070393	1000	1	2	299	39	29562	1303
070393	1000	1	3	198	24	12400	899
070393	1100	1	1	403	50	30990	1812
070393	1100	1	2	320	31	25410	904
070393	1100	1	3	99	21	10222	587

Figure 16-3: Sample *CentreVu* CMS Table (Historical Intrahour Interval Split Table)

Note The example in Figure 16-3 shows data from July 1 to July 3, 1993, and simulates data for an ACD that has only three splits, 60-minute intrahour intervals, and activity each day from 8:00 a.m. to 12:00 p.m. only.

The *CentreVu* CMS database uses names to refer to columns of data in a table. These names are called **database items** in *CentreVu* CMS. In Figure 16-2 and Figure 16-3, database items are indicated with arrows pointing to their associated columns. The Current Interval Agent and Intrahour Interval Split tables actually contain many more columns (and hence many more database items) than are shown in the figures. For a complete listing of database items, see Appendix A, “Database Items and Calculations,” in the *CentreVu* ™ *CMS R3V5 Reports* (585-215-821) document.

Each **row** in a table contains data that is related by the value(s) of one or more of the columns. In Figure 16-2, each row in the Current Interval Agent table contains data related by agent login ID. If you look at the row for login ID 1006 (displayed in bold), you see that the agent is logged into Split 1 on extension 5671 and is currently in AUX work mode. In addition, up to this point in the current interval, the agent has had:

- 20 ACD calls `(ACDCALLS)`
- 245 seconds of ACD talk time `(ACDTIME)`.

A column that causes the values in a row to be related is called an **index**. An index stores data sequentially and adds structure for the storage of data in the other columns. For each value in an index column, the remaining values in the corresponding row are related to that value. Thus, in Figure 16-2, the LOGID database item is an index.

In Figure 16-3, each row in the Intrahour Interval Split table contains data related by date, interval, and split. If you look at the row for Split 1 for the 10 o'clock interval on July 1, 1993 (displayed in bold), you see that Split 1 had:

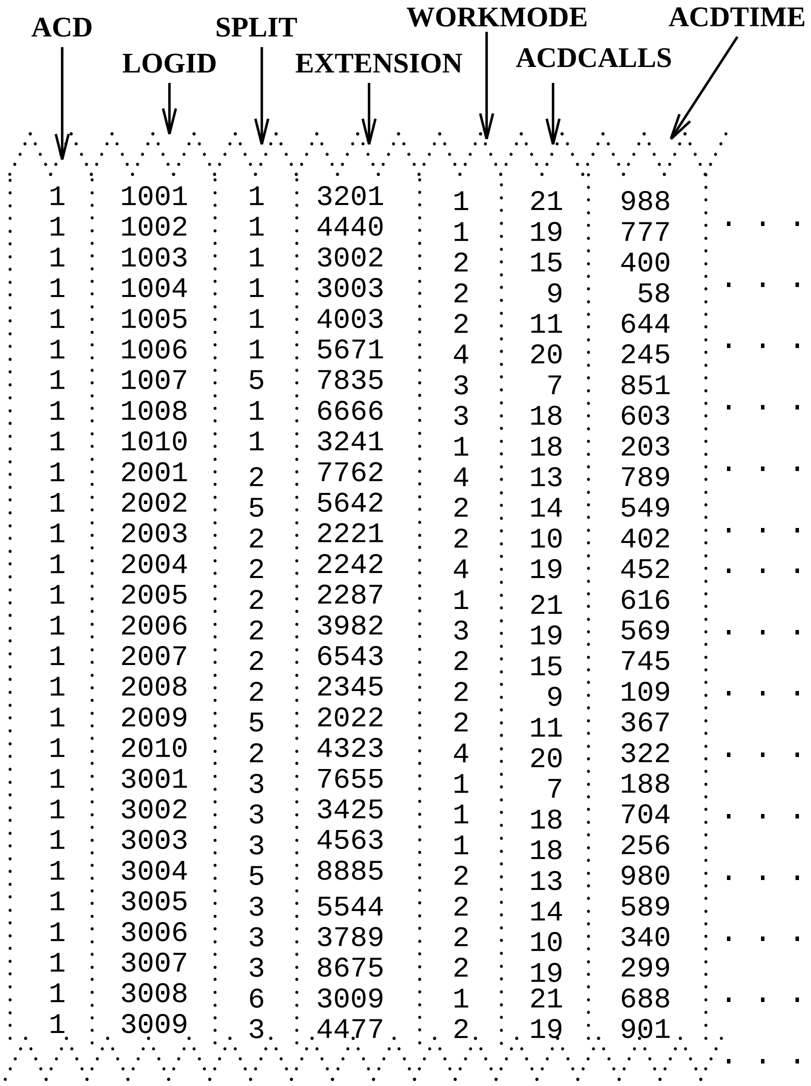
- 509 ACD calls `(ACDCALLS)`
- 43 abandoned calls `(ABANDONS)`
- 35,401 cumulative seconds of ACD talk time for all ACD calls `(ACDTIME)`
- 851 cumulative seconds of wait time for all calls that abandoned before being answered `(ABNTIME)`.

How *CentreVu* CMS Retrieves Data

CentreVu CMS retrieves data from the database based on three types of information you supply when you design a report:

- The name of the table
- The database items in the table
- The rows of data in the table.

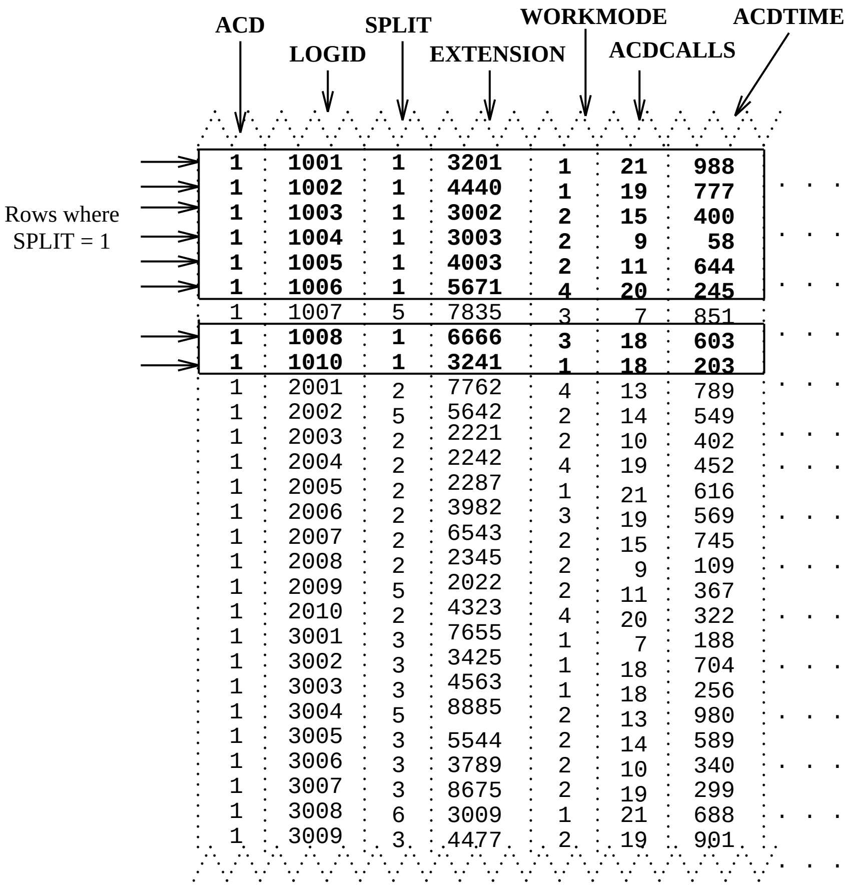
To tell *CentreVu* CMS how to retrieve data, you must tell *CentreVu* CMS to access the appropriate database table. Then, for each report field, you assign the appropriate database items. When you run the report, *CentreVu* CMS will find, in the table, the columns of data associated with the database items.



ACD	LOGID	SPLIT	EXTENSION	WORKMODE	ACDCALLS	ACDTIME
1	1001	1	3201	1	21	988
1	1002	1	4440	1	19	777
1	1003	1	3002	2	15	400
1	1004	1	3003	2	9	58
1	1005	1	4003	2	11	644
1	1006	1	5671	4	20	245
1	1007	5	7835	3	7	851
1	1008	1	6666	3	18	603
1	1010	1	3241	1	18	203
1	2001	2	7762	4	13	789
1	2002	5	5642	2	14	549
1	2003	2	2221	2	10	402
1	2004	2	2242	4	19	452
1	2005	2	2287	1	21	616
1	2006	2	3982	3	19	569
1	2007	2	6543	2	15	745
1	2008	2	2345	2	9	109
1	2009	5	2022	2	11	367
1	2010	2	4323	4	20	322
1	3001	3	7655	1	7	188
1	3002	3	3425	1	18	704
1	3003	3	4563	1	18	256
1	3004	5	8885	2	13	980
1	3005	3	5544	2	14	589
1	3006	3	3789	2	10	340
1	3007	3	8675	2	19	299
1	3008	6	3009	1	21	688
1	3009	3	4477	2	19	901

Figure 16-4: Sample 1 of Selection of Database Item

Next, you identify the appropriate rows that supply data. If you want agents in Split 1, you must tell *CentreVu* CMS to find rows that have the value 1 for the `SPLIT` database item. When you run the report, *CentreVu* CMS finds the appropriate rows of data in the `cagent` table (see rows with arrows in Figure 16-5).


Rows where SPLIT = 1

ACD	LOGID	SPLIT	EXTENSION	WORKMODE	ACDCALLS	ACDTIME
1	**1001**	**1**	**3201**	**1**	**21**	**988**
1	**1002**	**1**	**4440**	**1**	**19**	**777**
1	**1003**	**1**	**3002**	**2**	**15**	**400**
1	**1004**	**1**	**3003**	**2**	**9**	**58**
1	**1005**	**1**	**4003**	**2**	**11**	**644**
1	**1006**	**1**	**5671**	**4**	**20**	**245**
1	1007	5	7835	3	7	851
1	**1008**	**1**	**6666**	**3**	**18**	**603**
1	**1010**	**1**	**3241**	**1**	**18**	**203**
1	2001	2	7762	4	13	789
1	2002	5	5642	2	14	549
1	2003	2	2221	2	10	402
1	2004	2	2242	4	19	452
1	2005	2	2287	1	21	616
1	2006	2	3982	3	19	569
1	2007	2	6543	2	15	745
1	2008	2	2345	2	9	109
1	2009	5	2022	2	11	367
1	2010	2	4323	4	20	322
1	3001	3	7655	1	7	188
1	3002	3	3425	1	18	704
1	3003	3	4563	1	18	256
1	3004	5	8885	2	13	980
1	3005	3	5544	2	14	589
1	3006	3	3789	2	10	340
1	3007	3	8675	2	19	299
1	3008	6	3009	1	21	688
1	3009	3	4477	2	19	901

Figure 16-5: Sample 1 of Selection of Table Rows

The data that *CentreVu* CMS reports is the data found in the intersection of the selected database items and rows. Therefore, the report shows data as shown in Figure 16-6:

```
Split: 1

             Current   ACD    ACD     Average
Agent ID:     State   Calls   Time   Talk Time
   1001      AVAIL     21      988     47:00
   1002      AVAIL     19      777     40:09
   1003       ACD      15      400     26:07
   1004       ACD       9       58      6:44
   1005       ACD      11      644     58:54
   1006       AUX      20      245     12:25
   1008       ACW      18      603     33:50
   1010      AVAIL     18      203     11:28
```

Figure 16-6: Sample Report 1

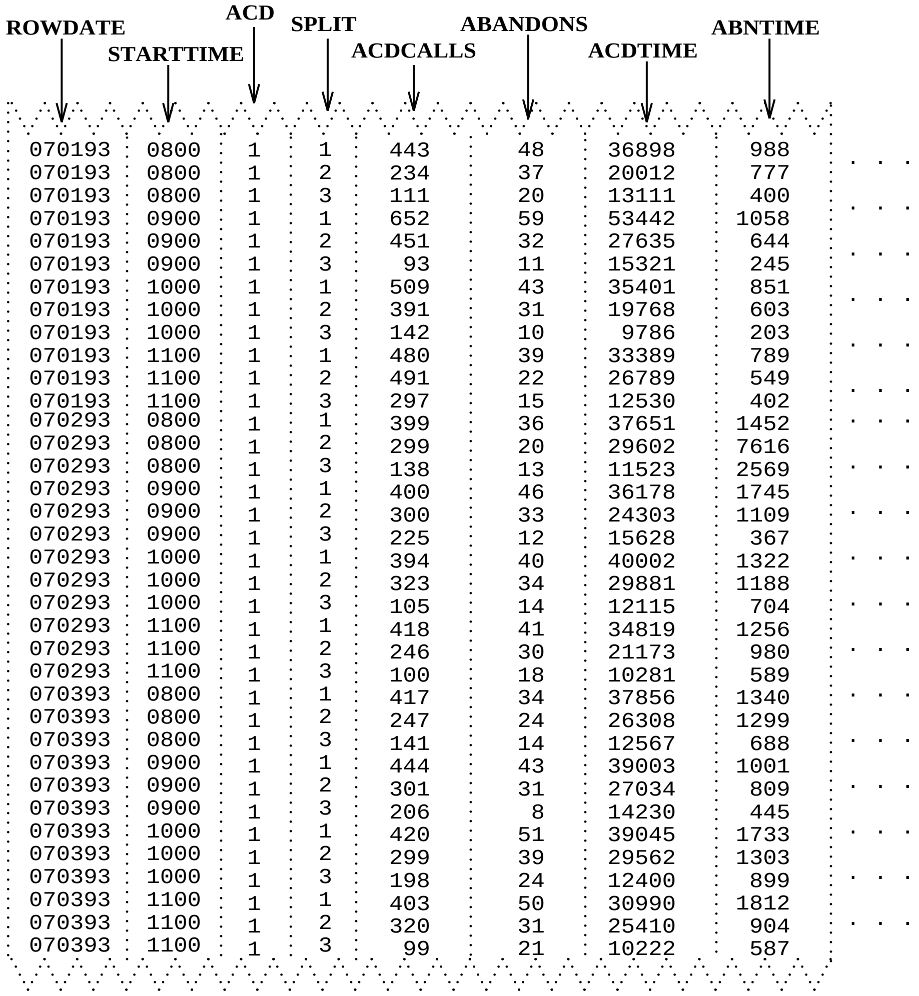
Note Actually, when you design a report, you normally set up the row selection so that the users running the report can choose the rows in the report's input window. For example, to run the report in Figure 16-6, you would set up the row selection so users would fill out a Report Input window that asked them for a Split number.

As mentioned earlier, *CentreVu* CMS uses indexes to create a structure for storing data. Similarly, *CentreVu* CMS uses these indexes to search for data. Indexes allow *CentreVu* CMS to find data much faster than if data were stored more randomly. Therefore, when you design a report, the rows of data for the report should be defined on the basis of index values.

Note The indexes for each standard table are fixed and cannot be changed, deleted or added to. However, if you define a custom table in the *CentreVu* CMS database via *INFORMIX*[a] SQL, you can define any indexes desired for that new table. See the “SQL Query Basics” chapter for instructions on creating new database tables.

[a] INFORMIX is a registered trademark of Informix Software, Inc.

As another example of how *CentreVu* CMS retrieves report data, if you want a custom intrahour interval split report that lists, by intrahour interval, data for a split in a single day, then you must tell *CentreVu* CMS to access the `hsplit` (Historical Intrahour Interval Split) table. You must then assign the appropriate database items to the fields. When you run the report, *CentreVu* CMS finds the columns of data associated with the database items in the `hsplit` table (see Figure 16-7).



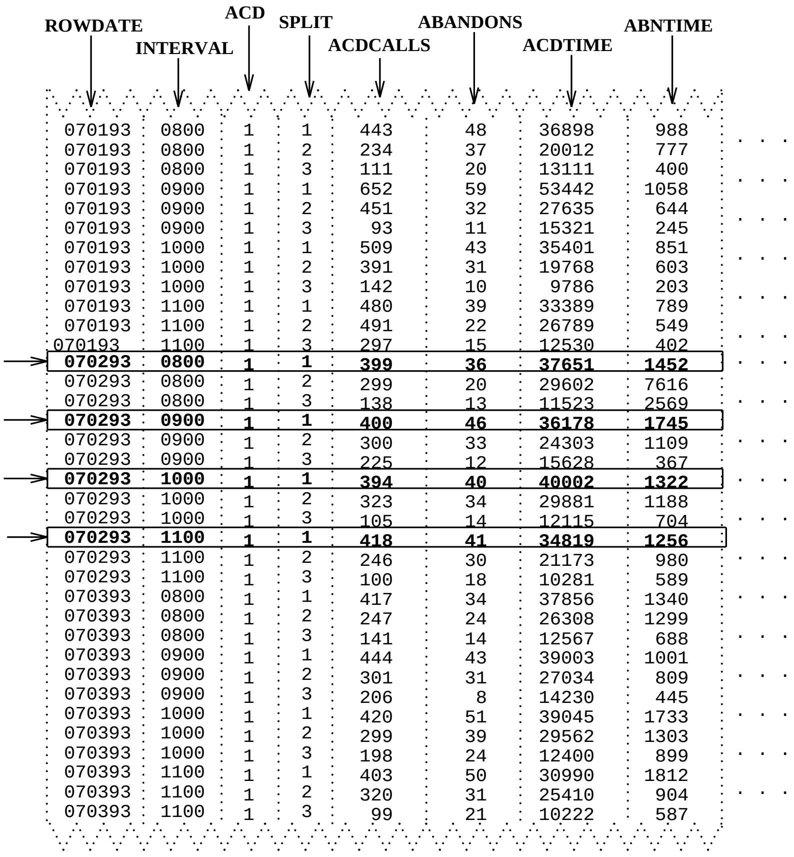
ROWDATE	STARTTIME	ACD	SPLIT	ACDCALLS	ABANDONS	ACDTIME	ABNTIME
070193	0800	1	1	443	48	36898	988
070193	0800	1	2	234	37	20012	777
070193	0800	1	3	111	20	13111	400
070193	0900	1	1	652	59	53442	1058
070193	0900	1	2	451	32	27635	644
070193	0900	1	3	93	11	15321	245
070193	1000	1	1	509	43	35401	851
070193	1000	1	2	391	31	19768	603
070193	1000	1	3	142	10	9786	203
070193	1100	1	1	480	39	33389	789
070193	1100	1	2	491	22	26789	549
070193	1100	1	3	297	15	12530	402
070293	0800	1	1	399	36	37651	1452
070293	0800	1	2	299	20	29602	7616
070293	0800	1	3	138	13	11523	2569
070293	0900	1	1	400	46	36178	1745
070293	0900	1	2	300	33	24303	1109
070293	0900	1	3	225	12	15628	367
070293	1000	1	1	394	40	40002	1322
070293	1000	1	2	323	34	29881	1188
070293	1000	1	3	105	14	12115	704
070293	1100	1	1	418	41	34819	1256
070293	1100	1	2	246	30	21173	980
070293	1100	1	3	100	18	10281	589
070393	0800	1	1	417	34	37856	1340
070393	0800	1	2	247	24	26308	1299
070393	0800	1	3	141	14	12567	688
070393	0900	1	1	444	43	39003	1001
070393	0900	1	2	301	31	27034	809
070393	0900	1	3	206	8	14230	445
070393	1000	1	1	420	51	39045	1733
070393	1000	1	2	299	39	29562	1303
070393	1000	1	3	198	24	12400	899
070393	1100	1	1	403	50	30990	1812
070393	1100	1	2	320	31	25410	904
070393	1100	1	3	99	21	10222	587

Figure 16-7: Sample 2 of Database Item Selection

Next, you must identify the appropriate rows that supply data. You might want data for the following:

- Split 1, which means you must identify rows that have the value 1 for the `SPLIT` database item.
- The date 07/02/93, which means you must identify rows with the value 070293 for the `ROWDATE` database item.
- The intrahour intervals 8:00 a.m. to 11:00 a.m., which means you must identify rows with the values 0800 through 1100 for the one database item.

CentreVu CMS then finds the appropriate rows of data (see the boxed rows in Figure 16-8).



ROWDATE	INTERVAL	ACD	SPLIT	ACDCALLS	ABANDONS	ACDTIME	ABNTIME
070193	0800	1	1	443	48	36898	988
070193	0800	1	2	234	37	20012	777
070193	0800	1	3	111	20	13111	400
070193	0900	1	1	652	59	53442	1058
070193	0900	1	2	451	32	27635	644
070193	0900	1	3	93	11	15321	245
070193	1000	1	1	509	43	35401	851
070193	1000	1	2	391	31	19768	603
070193	1000	1	3	142	10	9786	203
070193	1100	1	1	480	39	33389	789
070193	1100	1	2	491	22	26789	549
070193	1100	1	3	297	15	12530	402
070293	**0800**	**1**	**1**	**399**	**36**	**37651**	**1452**
070293	0800	1	2	299	20	29602	7616
070293	0800	1	3	138	13	11523	2569
070293	**0900**	**1**	**1**	**400**	**46**	**36178**	**1745**
070293	0900	1	2	300	33	24303	1109
070293	0900	1	3	225	12	15628	367
070293	**1000**	**1**	**1**	**394**	**40**	**40002**	**1322**
070293	1000	1	2	323	34	29881	1188
070293	1000	1	3	105	14	12115	704
070293	**1100**	**1**	**1**	**418**	**41**	**34819**	**1256**
070293	1100	1	2	246	30	21173	980
070293	1100	1	3	100	18	10281	589
070393	0800	1	1	417	34	37856	1340
070393	0800	1	2	247	24	26308	1299
070393	0800	1	3	141	14	12567	688
070393	0900	1	1	444	43	39003	1001
070393	0900	1	2	301	31	27034	809
070393	0900	1	3	206	8	14230	445
070393	1000	1	1	420	51	39045	1733
070393	1000	1	2	299	39	29562	1303
070393	1000	1	3	198	24	12400	899
070393	1100	1	1	403	50	30990	1812
070393	1100	1	2	320	31	25410	904
070393	1100	1	3	99	21	10222	587

Rows where SPLIT = 1, ROWDATE = 07/02/93, and STARTTIME from 08:00 to 11:00am.

Figure 16-8: Sample 2 of Selection of Table Rows

The data that *CentreVu* CMS reports is the data found in the intersection of the selected database items and columns. Thus, the report shows data as follows:

```
Split: 1
 Date: 07/02/93

             ACD
Interval    Calls    Abandons
-----------------------------
 08:00am     399         36
 09:00am     400         46
 10:00am     394         40
 11:00am     418         41
```

Figure 16-9: Sample Report 2

Defining data is the central task of creating and designing a report. However, you must do many other tasks to create a report.

17

SQL Query and CMS Database Table Basics

Introduction

The CMS is a relational database that is made of a series of database tables. The tables are made up of rows of database items and columns of data. CMS reports retrieve data from the database tables and format the data into readable grids, charts, and fields.

Reports use SQL (Structured Query Language) queries to retrieve specific data from the database tables. You can create and edit queries using the Edit | Queries feature of the Report Designer. This chapter gives you information about SQL queries, concentrating on the use of WHERE clauses. For extensive information on SQL, please refer to your *INFORMIX* documentation.

The sections in this chapter are:

- SQL Query Basics
- CMS Database Table Basics
- Creating a Custom Data Table
- Modifying a Table

About SQL Queries

Reports use SQL (Structured Query Language) queries to retrieve specific data from the database tables. You can create and edit queries using the Edit | Queries feature of the Report Designer. This section gives you information about SQL queries, concentrating on the use of WHERE clauses. For extensive information on SQL, please refer to your *INFORMIX* documentation.

SQL queries use WHERE clauses to define the rows and columns of data to retrieve from the database tables. The following paragraphs give you information on how to create and use where clauses in your queries.

Basic WHERE Clause

A basic clause has the following format:

`Expression Relational_Operator Value`

The **`Expression`** can be a database item or calculation. The **`Value`** is a whole number. Relational operators available for a WHERE clause are as follows:

=	equal to
< > or !=	not equal to
>	greater than
>=	greater than or equal to
<	less than
<=	less than or equal to

As an example of a basic WHERE clause, if you are creating a real-time report using data from the Current Interval Split table and you have three report fields for the report:

`Split:` (the `SPLIT` database item)

`ACD Calls:` (the `ACDCALLS` database item)

`Average Talk Time:` (the calculation **`ACDTIME/ACDCALLS`**)

Then the WHERE clause might be:

`Select rows where SPLIT = 5`

When you run the report, *CentreVu* CMS finds the row in the table (Figure 17-10) for Split 5 and fills in the report fields with data from that row (in bold in the figure).

SPLIT	ACDCALLS	ABANDONS	ACDTIME	ABNTIME
1	443	48	36898	988
2	234	37	20012	777
3	111	20	13111	400
4	652	59	53442	1058
5	**451**	**32**	**27635**	**644**
6	93	11	15321	245
7	509	43	35401	851
8	391	31	19768	603
9	142	10	9786	203
10	480	39	33389	789

Figure 17-10: Sample Current Interval Split Table

Thus, the report fields show the following data:

`Split: 5`

`ACD Calls: 451`

`Average Talk Time: 61 (the result of` **`27635/451`**`)`

Note This example of row search criteria would also include the selection of an ACD. See “WHERE Clause for Selecting Rows from an ACD” later in this section.

WHERE Clause with Variable

The previous examples create **hard coded** row search conditions. That is, when you run the report, *CentreVu* CMS always searches for the values you entered in the WHERE clause. However, instead of a hard coded value, you can enter a variable name in a clause. A **variable name** tells *CentreVu* CMS to search for whatever value(s) you or another user choose when you run the report. You must define a variable on the Define Input window before using it in a WHERE clause. The variable name then links a report input field to the WHERE clause that uses the value(s) entered.

Multiple WHERE Clauses

To put two or more clauses in a statement, use **and** or **or**. Use **and** to define two or more clauses where *CentreVu* CMS finds only rows that meet all conditions. For example, the following statement searches for rows where splits had an average speed of answer greater than 30 seconds **and** abandons greater than 100.

Select rows where: ANSTIME/ACDCALLS > 30 and ABANDONS > 100

Use **or** to define two conditions where *CentreVu* CMS finds rows that meet either condition but not necessarily both. For example, the following statement searches for rows where splits had too many abandoned calls or too many extension-out calls.

Select rows where: ABANDONS>15 or AUXOUTCALLS+ACWOUTCALLS>7

WHERE Clause with a Range/List Variable

If a variable name, as defined in the Define Input window, has been assigned the Multi-Value option, your WHERE clause **must** use the equals sign (=) with the variable name. In addition, if a variable name has the Multi-Value option, the WHERE clause for that variable name should appear in the `Select rows where` field before any WHERE clause that does not have a Multi-Value variable.

Caution If a variable name has the Multi-Value option and the WHERE clause for that variable name appears in the `Select rows where` field after a WHERE clause that does not have a Multi-Value variable, the report will not show accurate data when you run it.

WHERE Clause for Selecting Rows from an ACD

In your WHERE statement, Report Designer always includes a clause to select the ACD (**`ACD = $acd`**)

If you use this default clause, you do not need to define the variable in the Define Input window because CMS understands **`$acd`** to be the current ACD. However, if you wish, you can define a different variable name for the **`ACD`** database item so the user can specify the desired ACD(s) when ordering the report (such as in Multi-ACD reports). You can also hardcode the ACD in a WHERE clause, as in the following example.

```
Select rows where: ACD = 1
```

WHERE Clause for Excluding Rows of Data

If you want to **exclude** Split 5 from the report, but include all other splits, you might enter a WHERE clause as follows:

```
Select rows where: SPLIT != 5
```
or
```
Select rows where: SPLIT <> 5
```

CMS Database Table Basics

The CMS database is a relational database that is made of a series of database tables. The tables are made up of rows of database items and columns of data. CMS reports retrieve data from the database tables and format the data into readable grids, charts, and fields.

This section teaches you about CMS database items and calculations, which are names given to commonly used combinations of database items. The section also includes a list of all of the available database tables in the CMS.

The following section teaches you to create and edit CMS database tables using *INFORMIX*.

For more information on the CMS database tables and definitions of the database items in each table, see Appendix A, “Database Items and Calculations” in the *CentreVu CMS Reports* (585-215-821) document.The *CentreVu* CMS database table names are:

Table 17-5: Real-Time Table Names

Name	Data Stored
csplit	Split / Skill data for the current interval.
psplit	Split / Skill data for the previous interval.
cagent	Agent data for the current interval.
pagent	Agent data for the previous interval.
ctkgrp	Trunk group data for the current interval.
ptkgrp	Trunk group data for the previous interval.
ctrunk	Trunk data for the current interval.
ptrunk	Trunk data for the previous interval.
cvector	Vector data for the current interval.
pvector	Vector data for the previous interval.
cvdn	VDN data for the current interval.
pvdn	VDN data for the previous interval.
ccwc	Call Work Code (CWC) data for the current interval.

Table 17-5: Real-Time Table Names (Contd)

Name	Data Stored
pcwc	CWC data for the previous interval.

Table 17-6: Historical Table Names

Name	Data Stored
hsplit	Split/Skill data for each intrahour interval.
dsplit	Split/Skill data summarized by day.
wsplit	Split/Skill data summarized by week.
msplit	Split/Skill data summarized by month.
hagent	Agent data for each intrahour interval.
dagent	Agent data summarized by day.
wagent	Agent data summarized by week.
magent	Agent data summarized by month
htkgrp	Trunk group data for each intrahour interval.
dtkgrp	Trunk group data summarized by day.
wtkgrp	Trunk group data summarized by week.
mtkgrp	Trunk group data summarized by month.
htrunk	Trunk data for intrahour interval.
dtrunk	Trunk data summarized by day.
wtrunk	Trunk data summarized by week.
mtrunk	Trunk data summarized by month.
hvector	Vector data for each intrahour interval.
dvector	Vector data summarized by day.
wvector	Vector data summarized by week.
mvector	Vector data summarized by month.
hvdn	VDN data for each intrahour interval.

Table 17-6: Historical Table Names (Contd)

Name	Data Stored
dvdn	VDN data summarized by day.
wvdn	VDN data summarized by week.
mvdn	VDN data summarized by month.
hcwc	CWC data for each intrahour interval.
dcwc	CWC data summarized by day.
wcwc	CWC data summarized by week.
mcwc	CWC data summarized by month.
call_rec	Call record data.
agex	Agent exceptions.
spex	Split exceptions
tgex	Trunk group exceptions.
vecex	Vector exceptions.
vdnex	VDN exceptions.
linkex	Link down exceptions.
mctex	Malicious call trace exceptions.
f_cday	Forecast current day configuration data by split/skill.
f_cdayrep	Current day forecast data by split/skill.
haglog	Agent login/logout.
ag_actv	Agent trace.
call_rec	Call records.

Database Items

A database item is the name of a column of data in a table, either standard or custom. When you enter a database item, you must always add the name of a table and a period (.) as a prefix if more than on table is included in the query. The format is <table name>.<database item>.

Examples:

```
dsplit.ACDCALLS
hagent.STARTTIME
ctkgrp.NUMINUSE
```

Standard Database Items

Standard database items are listed in the Dictionary subsystem as having all upper-case letters (as in the preceding examples).

A standard database item can store:

- Identifiers (for example, **`SPLIT`**, **`VDN`**, **`LOGID`**, and so on)
- Timed data (for example, **`ACDTIME`**, **`ABANTIME`**, **`AUXOUTIME`**, and so on)
- Event counts (for example, **`ACDCALLS`**, **`INTERFLOWCALLS`**, ABNCALLS, and so on)
- **For real-time and agent trace reports**, current state data (for example, **`WORKMODE`**, **`DURATION`**, **`NUMINUSE`**, and so on).

See the “Database Items and Calculations” appendix in the *CentreVu CMS and Supervisor Reports* book for a description of database tables and items including the exceptions, forecast, and login/logout tables.

Note Standard database items are often shared by more than one table. For example, **`ABNCALLS`** can identify a column in the Current Interval Split, Daily Split, or Intrahour Agent tables (or many other tables).

CentreVu CMS can determine the exact database item only when it is identified with a table.

Custom Database Items

You must enter a custom database item, with the custom table name as a prefix, exactly as you defined it in the Dictionary subsystem. The data identified by a custom database item depends entirely on the data you entered for the item in the custom table.

Note When you create a custom database table, as described in this chapter, keep in mind that all custom database table names need to begin with the "c_" prefix. If you do not name the tables with the c_, they will not automatically be backed up and they will not show up in the Query Assistant.

Constants

A constant is the name of a fixed numerical value (whole number or decimal) that you define in the Dictionary subsystem. Constant names can be up to 20 characters long. A constant could represent a per-minute usage rate for trunks, a daily or hourly wage rate, or a service objective (like number of abandons, number of ACD calls, or percent within service level). A constant could also represent an average for the estimated dollar loss of an abandoned call, which could then be used to calculate daily loss of revenue due to abandoned calls. No standard constants exist in *CentreVu* CMS when it is first installed. Therefore, you must define every constant you want to use.

Using constants makes sense only if you have a fixed value that you want to use under one or both of the following conditions:

- The constant is a value that you will use in a number of different custom reports (for example, an average wage rate).
- You would not be able to remember the numerical value, but could remember a name assigned to the value (for example, for the $9.00 hourly wage rate for an agent called Smith, you could have a constant called **`Smithwage`**.)

Note The *CentreVu* CMS real-time database only allows whole numbers in queries. If you need a value to be a decimal (for example, 9.5), use whole numbers and division to arrive at the correct number (so, in order to have 9.5 in a query, you would use 19/2 as the query entry).

Calculations

A calculation is a combination of database items and arithmetic operators. You can also include constants in a calculation. The arithmetic operators are:

+	add
-	subtract
*	multiply
/	divide
( )	perform first

Some examples of calculations are:

```
dsplit.ACDCALLS/dsplit.ACDTIME
hagent.AUXOUTTIME+hagent.ACWOUTTIME
100*((cagent.I_ACDTIME+cagent.I_ACWTIME)/
cagent.I_STAFFTIME)
```

Arithmetic operations are generally performed in order from left to right. However, multiplication and division operations are performed before addition and subtraction operations, unless the addition or subtraction operations are enclosed in parentheses. Operations in parentheses are always performed first. If more than one set of parentheses is used, the operation in the set farthest to the left is performed first. If one set of parentheses is inside of another set, the operation of the inner set is performed first.

Calculation names

A calculation name is a name, as defined in the Dictionary subsystem, that can substitute for the actual calculation. The calculation name can be a standard name (used in standard reports) or a name you define. You cannot append a table name to a calculation name. Therefore, you must specify a table name in the `Table for calculations` field.

A calculation name normally reflects the purpose of the calculation. As a result, entering a name is an easier, more meaningful way to define data for a report field. More importantly, if you use a calculation name in many custom reports and later decide to change the calculation, you can simply make your changes once in the Dictionary subsystem. *CentreVu*

CMS then applies those changes to every report that uses the calculation name.

For example, if there are several different custom split reports, and in each report, a field uses the standard calculation name <PERCENT_ACD_TIME>. <PERCENT_ACD_TIME> represents the calculation 100*((I_ACDTIME+I_ACWTIME) / I_STAFFTIME). This calculation, when assigned to the Intrahour Split table, finds the percentage of time a split's agents spent on ACD calls while logged in. The calculation includes talk time (**`I_ACDTIME`**) and after-call-work time (**`I_ACWTIME`**). If you no longer wish to include after-call-work time in the calculation, then you can change the calculation in the Dictionary subsystem such that <PERCENT_ACD_TIME> represents 100*(I_ACDTIME / I_STAFFTIME). Any custom report that uses the calculation name PERCENT_ACD_TIME reflects the new calculation.

Caution **If you change the calculation for a standard calculation name, the change affects any standard report, as well as any custom report, that uses that calculation name.**

Caution You **should not** add table names to your custom calculations in the Dictionary subsystem. Doing so makes the assigned calculation name less flexible for use in custom reports. Also, if you append table names to the Dictionary calculation and then also assign a table name to the calculation name in the Field window, the report will fail.

Data from More Than One Table

A calculation can merge data from more than one table in a report field.

For example, you may want the percentage of a split's ACD calls that an agent handled in a day. Thus, you can enter a calculation that merges data from the Daily Agent and Daily Split tables, as in the following example.

```
dagent.ACDCALLS/dsplit.ACDCALLS
```

When you merge data from two tables, you must define your row search conditions in a special way.

Note You cannot use calculation names for a field in which you merge data from two tables.

Creating a Custom Data Table

The section of the *CentreVu*™ Call Management System (*CentreVu* CMS) database that stores historical ACD data uses the *INFORMIX* *-SQL Relational Database Management System. All historical ACD data available for use in custom reports is stored in tables in the *CentreVu* CMS database. You can access *INFORMIX* and the *CentreVu* CMS database to build your own data tables to contain financial information, schedule information, product or service information, or any other type of information you want. You can then design historical custom reports to display the data, with or without ACD data.

Note Instructions on the use of *INFORMIX* SQL appear in this document as a convenience. These instructions are not intended as a substitute for the *INFORMIX* documentation. Except where noted, the standard rules of *INFORMIX* SQL apply, as documented in the *INFORMIX-SQL Relational Database Management System User Guide* for *INFORMIX* SQL Version 4.10. This document is delivered with your *CentreVu* CMS software and documents.

Caution *CentreVu* CMS does not automatically check the database for disk space used by data in custom tables. As a result, you can inadvertently fill up your disk with custom data. When this happens, you can lose or damage custom data and ACD data. Therefore, if you create custom data tables, be careful to check the amount of disk space available regularly. See the *CentreVu*™ *CMS R3V5 Administration (*585-215-820) document for more information on disk storage.

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* INFORMIX is a registered trademark of Informix Software, Inc.

Caution If you back up data using the Maintenance — Backup Data window, you will save the data stored in custom *INFORMIX* tables, but you will not save the custom table definitions (table names, column names, data types, and so on) **unless the custom tables were named with the "c_" prefix**. As a result, if you lose the custom table definitions because of a disk crash, power hit, or some other reason, you cannot restore these table definitions via the Backup Data window nor can you restore custom data saved via the Backup Data window.

Therefore, you should periodically back up data using the *UNIX* [a] system. Then, if you lose *INFORMIX* table definitions and / or custom data, you can restore the table definitions via *UNIX*, and then, if necessary, restore the custom data. See the *CentreVu* ™ *CMS R3V5 Administration (*585-215-820) document for procedures on backing up data via the *UNIX* system.

[a] UNIX is a registered trademark of Novell, Inc.

Note The *CentreVu* CMS supports only the following *INFORMIX* data types:

- SQLSMFLOAT
- SQLFLOAT
- SQLMONEY
- SQLDECIMAL
- SQLSMINT
- SQLINT
- SQLSERIAL
- SQLDATE
- SQLCHAR
- SQLNULL.

To define a custom database table, complete the steps defined in the following sections.

Step 1: Access the *CentreVu* CMS Database in *INFORMIX*

Note In order to perform these procedures, you must have purchased the *INFORMIX* SQL software.

To access the *INFORMIX* SQL software, you need to log into the CMS using *CentreVu* Terminal.

To access the *CentreVu* CMS database in *INFORMIX*, use the following steps:

1a.	Press the Commands SLK.	→	*The Commands submenu appears.*
1b.	Select the `UNIX` option.	→	*All windows and menus disappear, and the* ***UNIX*** *prompt appears.*
1c.	At the `$` prompt, type the following command: **`DBPATH=/cms/db/inf.`** Press the Return key. Type **`export DBPATH.`** Press the Return key.	→	*The* ***UNIX*** *prompt reappears.*
1d.	At the `$` prompt, type the following pathname: **`/usr/informix/bin/isql.`** Press the Return key.	→	*The* ***INFORMIX*** *logo appears, followed by the* ***INFORMIX*** *Main Menu.*

Step 2: Build the Table

In *INFORMIX*, you can select menu items in one of two ways:

- Use the arrow keys (→ or ←) to move the cursor to the menu option. Then, press **Return**.
- Type the first character of the menu option.

Note To escape from a step and go back to the previous step, press the Delete key on your keyboard.

2a.	At the *INFORMIX* Main Menu, select `Table`.	→	The Select Database screen appears.
2b.	Type **`cms`**, and press **Return**.	→	The Table menu appears.
2c.	Select `Create`.	→	*The Create Table screen appears.*
2d.	Type a name of up to 18 characters for the table you are building. The table name **must** begin with c_ (a lower-case "c" and underscore). For example, type **`c_workcode`**. Press the **Return** key.	→	The Create Table menu appears with a highlighted box beneath "Column Name."
2e.	Select `Add`.	→	The Add Name screen appears.

2f.	Type a name of up to 18 characters for the column you are adding. If desired, you can use names of standard *CentreVu* CMS database items **only if** you enter the name in lowercase letters in the Dictionary subsystem. The Dictionary: Custom Items window accepts only lowercase letters for custom item names that are the same as standard database items. Press the Return key.	→ The Add Type screen appears.

The available data types are:

Char	Character (CHAR) columns store any combination of letters, numbers, and symbols.
Number	Numeric columns store numbers. The numbers stored can be one of the following five types: • **Decimal**. A decimal is a number that contains a decimal point. • **Smallint**. A Smallint column stores integers from -32,767 to +32,767. • **Integer**. An Integer column stores integers from -2,147,483,647 to +2,147,483,647. • **Smallfloat**. A Smallfloat column stores floating point numbers with up to seven significant digits. • **Float**. A Float column stores floating point numbers with up to 14 significant digits.
Serial	Serial columns store a unique sequence number in each row of the table.

Date	Date columns store calendar dates with the format **mm/dd/yy** or **dd/mm/yy**, depending on your *Windows* operating system.
date-Time	The date-Time data type is not supported by CMS. You must type **T** in order to select date-Time. A date-Time column allows you to specify a *database* qualifier of year, month, day, hour, or minute.
Interval	The Interval data type is not supported by CMS. An interval column allows you to specify an *interval* qualifier of year, month, day, hour, or minute.
Money	The Money data type is not supported by CMS. If you data will be dollars and cents, you should use **Decimal**.

2g.	Select the type of data that the field will store.	→	The additional prompts that appear differ depending on your selected data type.
2h.	Complete the definition of the column by responding to the additional prompts that appear. Which prompts appear and what order they appear in depend on the data type you selected The following table lists the possible prompts.	→	When you have responded to all of the prompts for the column, a new highlighted line appears in the table, and the `Add Name` field reappears at the top of the screen.
2i.	Repeat Steps 2f through 2h for each column you want to add.		

Prompt	What to Do
PRECISION	Select either `Smallfloat` or `Float`. `PRECISION` appears for the `Float` type.
INDEX	Enter y if you want to make the column an index. `INDEX` appears for all types except `Serial`. A column with the `Serial` data type automatically becomes an index. Make the column an index only if the column will be used for row searches and the table will contain more than 200 rows of data.
DUPLICATES	Enter **`y`** if you want to allow the column to contain the same value in different rows. For example, if the column were to contain the last names of people, you would probably want to allow multiple entries (because, for example, you might have many different people with the last name of Smith). However, if you were creating a column of social security numbers, then you would enter **`n`** to prevent multiple entries of the same number. `DUPLICATES` appears for all types except `Serial`.
NULLS	Enter **`y`** if you want to allow the column to have rows with no values (versus requiring values). For example, if your table is a list of customer data and the column you are adding is for the customer’s employer, you might want to allow the `NULL` value for the case where the person is unemployed. Enter **`n`** if you want to require a value in each row. `NULLS` appears for all types except `Serial.`

Prompt	What to Do
ADD STARTING NUMBER	Enter the number that *INFORMIX* should use as a starting point for numbering rows. *INFORMIX* identifies the first row in the table with the number you enter. As each new row of data is added to the table, *INFORMIX* assigns that row the next number in the sequence. `ADD STARTING NUMBER` appears only for `Serial`.
NUMERIC	Type the first letter of the numeric you want: **I**nteger, **S**mallint, **D**ecimal, or **F**loat.
LENGTH	Enter the number of digits the column will store for a single piece of data. `LENGTH` appears for `Char` and `Decimal` types
SCALE	Enter the number of digits that should appear to the right of the decimal point. The decimal digits, but not the decimal point, occupy part of the field length you specified in the `LENGTH` field. `SCALE` appears after the `LENGTH` for `Decimal`.

2j.	When you have added all columns, press the **Return** key until the Create Table screen appears.	→ The Create Table menu appears.
2k.	Select `Exit`.	→ The Build-new-table menu appears.

2l.	Select `Build-new-table`.	→	The Table menu reappears. If no errors are found, then your table has been added. If errors are found, then you must go back to the Alter Table screen and correct these errors. You must then repeat steps 2k and 2l until the Table menu reappears.
2m.	Select `Exit` to return to the *INFORMIX* Main Menu.	→	The ***INFORMIX*** Main Menu appears.

Step 3: Add Data to the Table

To help you add data to the table, you must first create a data entry form associated with your table. For more information about forms, see “Creating Your Own Forms” in the *INFORMIX-SQL Relational Database Management System User Guide*. For more information about adding data, see “Entering Data,” in the same document.

3a.	On the Main Menu, select `FORM`.	→	The FORM menu appears.
3b.	Select `GENERATE`.	→	The GENERATE FORM screen appears.
3c.	Enter a name (up to ten characters) for the form associated with your table. (If possible, use the same name as the table you created.) Press **Return**.	→	The CHOOSE TABLE screen appears.
3d.	Enter the name of the table you want to enter data for, and press **Return**.	→	The Table-selection-complete menu appears.
3e.	Select `Table-selection-complete`.	→	The screen form specification was successfully compiled appears when processing of the form is complete, then the FORM menu appears.
3f.	Select `Run`.	→	The RUN FORM window displays the table you selected.
3g.	Press the **Return** key.	→	The PERFORM menu appears.
3h.	Select `Add`.	→	The cursor moves to the first column in the table.

3i.	Enter data for the first column of the table, and press the Return key.	→	The cursor moves to the next column. **NOTE:** If you get an error message, you may have entered data in the wrong format.
3j.	Repeat Step 3i for each column.		
3k.	Press the Esc key to save the row of data.	→	`Row added` appears. The row of data has been added to the table and saved.
3l.	Repeat Steps 3h through 3k for each row of data you want to add.		
3m.	Type `e` (for Exit) three times to exit *INFORMIX*.	→	The ***UNIX*** prompt appears.
3n.	Press Ctrl B.	→	The **CentreVu** CMS windows and menus that were displayed before you accessed ***UNIX*** reappear.

Note To design a report that uses data from the table, you **must** also enter the column names (database items) in the Dictionary: Database Item: Custom Items window.

Caution *CentreVu* CMS does not automatically check the database for disk space used by data in custom tables. As a result, you can inadvertently fill up your disk with custom data. When this happens, you can lose or damage custom data and ACD data. Therefore, if you create custom data tables, be careful to regularly check the amount of disk space available. See the *CentreVu™ CMS R3V5 Administration (*585-215-820) document for more information on disk storage.

Modifying a Table

Use the following steps to add, change, or delete columns in an existing table.

1. On the *INFORMIX* Main Menu, select `Table`. → The Select Database screen appears.
2. Press the **Return** key. → The TABLE menu appears.
3. Select `Alter`. → The ALTER TABLE screen appears. A list of existing tables also appears.
4. Enter the name of the table you want to change, and press **Return**. → The ALTER TABLE menu appears.

Adding a Column to a Table

1. Select `Add` to add a new column. → The ADD NAME screen appears.
2. Complete the fields for the new column.
3. Press the **Del** key when you have finished adding the column(s), and go to Step 3 of "Deleting a Column." → The ALTER TABLE menu appears.

Changing a Column

1. Select `Modify` to change a column. → *The MODIFY NAME screen appears.*

2. Use the arrow keys to select a field to change.

3. Press the Del key when you have finished changing the column(s), and go to Step 3 of "Deleting a Column" in this section. → *The ALTER TABLE menu appears.*

Deleting a Column

1. To delete a column, use the arrow keys to move the cursor to the column. Select `Drop`. → The REMOVE screen appears.

2. Select `YES` to remove the column. → The column disappears, and the ALTER TABLE menu appears.

3. At the ALTER TABLE menu, select `Exit` when you are finished changing the table. → The Build-new-table menu appears.

4. Select `Build-new-table` to save your changes. Select `Discard-new-table` to ignore your changes.

Changing Data in a Table

Use the following steps to add, change, or delete data in an existing table.

1.	On the *INFORMIX* Main Menu, select `Form`.	→	The FORM menu appears.
2.	Select `Run`.	→	The RUN FORM screen and a list of forms appear.
3.	Enter the name of a form, and press **Return**.	→	The PERFORM menu appears.

Adding Rows of Data to a Table

1.	Select `Add` to add rows of data.	→	The table's column fields appear with the cursor in the first field.
2.	Enter data in the fields. Use **Return** or **Tab** to move between fields.		
3.	Press **Esc** when you have added a row of data.	→	The PERFORM menu reappears. The message `Row added` also appears.

Changing Rows of Data in a Table

1.	To change data in a row, display the data you want to change. To do this, select `Query`.	→	The table's column fields appear, with the cursor resting in the first field.
2.	Enter data in a column you want to search on, and press Esc.	→	The column fields fill with data for that row.
3.	Select `Update`, and press the Return key.	→	The Update screen appears.
4.	Use the arrow keys to move the cursor to the data you want to change. Overtype the data, and press Esc.	→	The PERFORM menu reappears. The message `This row has been changed` also appears.

Deleting Rows of Data From a Table

1.	To delete a row of data, repeat Steps 1 and 2 of “Changing Rows of Data in a Table” in this section. Press Esc.	→	The PERFORM menu reappears.
2.	Select `Remove`.	→	The REMOVE ROW screen appears.
3.	Select `YES` to delete the row.	→	The row of data disappears. The message `Row deleted` appears.

A

Database Items and Calculations

General Information

This appendix is written for *CentreVu*™ Call Management System (*CentreVu* CMS) and Supervisor users who need to understand the use of database items and how *CentreVu* CMS calculates amounts for reports. It is also written to help users decide which database items and calculations to use in custom reports.

This appendix describes the *CentreVu* CMS database tables, the items in the database tables, and the standard Dictionary calculations that use the database items.

The appendix is organized as follows:

- How Database Items and Calculations Are Presented
- Terminology
- Database Table Names
- Interactions with Switch Features and Tracking of Switch Capabilities
- Split/Skill Database Items
- Agent Database Items
- Trunk Group Database Items

- Trunk Database Items
- Vector Database Items
- VDN Database Items
- Call Work Codes Database Items
- Agent Login / Logout Database Items
- Agent Trace Database Items
- Call Record Database Items
- Exceptions Historical Database Items
- Agent State and Row Search Values Cross-Reference
- Call Disposition and Row Search Values Cross-Reference
- Standard Dictionary Calculations

How Database Items and Calculations Are Presented

This section outlines how the *CentreVu* CMS database items and calculations are presented later in the appendix.

Database Items

This appendix defines every database item used in *CentreVu* CMS reports.

Database Item Tables

The database items are presented in a table format, according to ACD element (split/skill, agent, vector, VDN, trunk, trunk group, exception, etc.). Below is an example of how the table information is presented:

Table 1: Sample Database Item Table

Database Item	Description	Type
DATABASE ITEM	The definition of the database item is given here. Any additional information, such as other database items that are included in the sum of the database item, or specific switches that the database item applies to, is also listed.	C, A, or S

The following database item tables are included in this appendix:

- Split/Skill
- Agent
- Trunk Group
- Trunk
- Vector
- VDN
- Call Work Codes

- Agent Login/Logout
- Agent Trace
- Current Day Configuration (forecasting)
- Current Day Report (forecasting)
- Call Record
- Exceptions.

Many database items appear in more than one database table. When an item is in more than one table, the definition may or may not be the same from table to table.

Database items that are used in the description of another database item are in boldface type.

The index database items in each table are marked. Indexes add structure to table rows so that *CentreVu* CMS can retrieve data faster. The row search criteria you define for custom reports should be based on indexes whenever possible. For historical custom reports, always include a “where” clause based on the **ROW_DATE** database item.

Each database item contains one of the following types of data:

C =Cumulative data: accumulates throughout the collection interval. Most real-time database items contain cumulative data.

A =Administrative data: administered on the switch or on *CentreVu* CMS. For example, the database item INTRVL in the split/skill real-time table contains the number of minutes in the intrahour interval (15, 30, 60) currently assigned to the specified split/skill on *CentreVu* CMS.

S =Status data: gives the current status (a snapshot of a particular ACD element). For example, the database item INQUEUE in the split/skill real-time table contains the number of split/skill calls currently waiting in queue.

The letter C, A, or S appears in the Type column for each database item.

Cumulative and **Administrative** data items apply to historical and real-time database items. **Status** items apply only to real-time database items.

In addition to the types of data described above, items in the *CentreVu* CMS database can be either call-based or interval-based. Most *CentreVu* CMS database items are call-based. **Call-based data** is committed to the database after a call completes. Therefore, if a call starts and ends in different collection intervals, all of the data is recorded in the interval in which the call and any after call work are completed.

Interval-based data represents the amount of time during a collection interval spent doing a particular activity. Interval-based items are updated throughout the collection interval and timing is restarted at the end of the interval. Most interval-based items start with **I_** or **TI_**. The database items **ALLINUSETIME** (trunk-group tables) and **MBUSYTIME** (trunk and trunk-group tables) are also interval-based.

Interval-based items should only be used to calculate percentages such as percentage of time staffed or in AUX work. Interval-based items should not be used, for example, to calculate average talk time; use call-based items for this type of calculation. Furthermore, because call-based and interval-based items may not track the same events, a calculation should use only one type of item and comparisons of call-based calculations and interval-based calculations may not be relevant or meaningful. For example, the call-based ACD time and interval-based ACD time for an agent will not be equal if the agent handled one or more ACD calls that crossed over interval boundaries.

Note Report data may not add up if the report has a combination of call-based and interval-based items.

Switch Cross-Reference Tables

CentreVu CMS database items apply to specific switches. After each database item table, is a switch cross-reference table. The switch cross-reference tables list each database item by switch release. Below is an example of how the table information is presented:

Table 1-1: Sample Switch Cross-Reference Table

Database Item	G1	System 85	G2.1	G2.2	G3V1	G3V2/ G3V3	G3V4	ECS
DATABASE ITEM	X	X	X	X	X	X	X	X
	Switch releases that this database item applies to are marked with X's.							

Calculations

CentreVu CMS uses calculations of database items in many reports. All standard *CentreVu* CMS Dictionary calculations are listed alphabetically and described at the end of this appendix. You can use standard calculations in custom reports, or you can create new ones. You should never modify standard calculations or the meaning of the data will be changed. Below is an example of how the table information is presented:

Table 2: Sample Standard Dictionary Calculations Table

Calculation Name	Calculation	Description
CALCULATION NAME (as it appears in the *CentreVu* CMS Dictionary)	Mathematical definition of the calculation.	Short description of the calculation.

Terminology

The following terms are often used in the database item descriptions.

Abandoned Call	A call in which the caller hung up before the call was answered or connected. Calls also can be considered abandoned if certain timers in the switch time out. See the explanations of the Wait Answer Supervision Timer (WAST), the Phantom-Abandon Calls, and the Trunk No Answer Timeout (G3V2 and later) (NATO) later in this appendix. These timers are used primarily in locations where the central office trunks lack disconnect supervision. Calls may abandon during many phases of processing, including during vector processing, after being queued to a split/skill, while ringing at an agent or station. The calls that are counted as abandons differ depending on the table. The agent table counts as abandons those split/skill ACD calls that abandoned while ringing at the agent. The split/skill table counts as abandons those calls that abandoned while queued to the split/skill or while ringing at an agent in the split/skill. The VDN table counts as abandons those ACD calls that abandoned while in the VDN, including calls in vector processing not yet queued to a split/skill (for example, calls that abandoned while listening to an announcement), calls queued to one or more splits/skills, calls ringing at agents (ACD calls). The definitions in each table state which abandons are counted in that table.
ACD Call	A call that queued to a split/skill and was answered by an agent in that split/skill or a call that queued as a direct agent call and was answered by the agent to whom it was queued.

After Call Work (ACW)	Work done when the agent is not on a call. There are two types of after call work (ACW): call-related ACW and ACW not associated with a call. An agent enters a call-related ACW state by completing a manual-in call or, on Generic 1 and Generic 3 switches, by pressing the ACW feature button during an automatic-in call, then completing the call. *CentreVu* CMS tracks call-related after call work in the call-based **ACWTIME** item and in the interval-based **I_ACWTIME** item. An agent on a Generic 1 or Generic 3 switch can enter the ACW state without having an associated call by pressing the ACW feature button while available or in the AUX mode. *CentreVu* CMS will track this ACW time in the **I_ACWTIME** item, but not in the **ACWTIME** item. For Generic 1 and Generic 3 switches without the EAS feature, the ACW time not associated with an ACD call will be tracked for the split whose ACW feature button the agent pressed. For Generic 3 with EAS, the ACW time not associated with an ACD call will be tracked for the first skill administered for and successfully logged into by the agent. In Generic 3 Version 3 and later Generic releases, an agent in after call work who reconnects to a held AUXIN or AUXOUT call will return to the after call work mode when the AUXIN / OUT call is terminated. The after call work time accrued following the termination of the AUXIN / OUT call is after call work not associated with an ACD call, thus only counts as I_ACWTIME, not as ACWTIME. For Generic 3 releases prior to Generic 3 Version 3, an agent who reconnected to a held AUXIN or AUXOUT call from the after call work mode returned to the available state upon completion of the call.
Agent	The login ID that staffed the extension. This term is often extended to mean the person who used the id to staff the extension. In all cases, the term agent implies measurement by *CentreVu* CMS.

Agent position (no EAS)	The combination of the agent login ID and the split the agent logged into. Agents logged into multiple splits have multiple positions associated with them. Call data are collected for each agent/split combination separately, so that it is possible to report on the calls handled and time spent by agents in each of the splits they were in. To report on the total work performed by the agent, call data must be summed for the agent over all the splits in which he or she worked.
Agent position (with EAS)	The login ID of the agent, regardless of the number of skills assigned to the agent. Data are still collected for the agent by skill, so the total work for the agent must be summed over all skills in which the agent worked.
Answered Call	The agent's state changes to ACD or DACD. The term answered is used only for split/skill and direct agent ACD calls. (See **Connected** for non-ACD calls.) For manual answer agents, the call is answered when the agent selects the ringing line appearance. For automatic answer agents, the call is answered directly after the zip tone is applied.
Automatic-In Mode (AI)	In this call answering mode, an agent who releases an ACD call receives another ACD call immediately, or if timed ACW is in use, after the timed ACW period expires, if there is a call queued.
AUX Work Mode	A work mode in which agents are engaged in non-ACD work. This may represent a break or lunch, training, mail, team meetings, etc. Extension (non-ACD) calls agents make or receive while available in auto-in or manual-in mode are tracked as AUXOUT or AUXIN calls.
Connected Call	A non-ACD call that rang and did not abandoned at an extension (not a split/skill or direct agent call). The System 85 and Generic 2.1 switches do not notify *CentreVu* CMS when non-ACD calls abandon, so all non-ACD calls that route to an extension are tracked as connected calls for these switch releases. For Generic 1, Generic 3, and Generic 2.2 switches, only calls that routed to an extension are tracked as connected calls.
Default Skill (Generic 2.2 EAS)	Every skill that ends with a “0” is called a “default skill,” since every agent in the skill group is logged into this skill by default. The default skill is the first skill for each skill group.

Direct Agent ACD Call (Generic 3)	A call that queues for a specific agent. Direct agent ACD calls can be generated by an ASAI adjunct (Generic 3) or by calling an agent's login id (Generic 3 switches with EAS), given the proper class of restriction for the caller and for the receiving agent. Direct agent ACD calls are tracked as ACD calls along with split/skill ACD calls in the trunk, trunk group, VDN and vector tables. Direct agent ACD calls are tracked separately from split/skill ACD calls in the agent tables. Direct agent ACD calls are not tracked in the split/skill tables (since they are not split/skill ACD calls).
External Call	Calls made to off-switch destinations. This includes calls to other switches in a DCS network.
Extension Call	Calls originated by agents and non-ACD calls received by agents. For the Generic 2.2 and Generic 3 switches, these include calls an agent makes to set up a conference or a transfer.
Hold	A call placed on hold as a result of the agent pressing the HOLD feature button or the hard hold feature access code, by using the TRANSFER or CONFERENCE feature button or by flashing the switch hook. *CentreVu* CMS tracks calls on hold only for the switch releases that notify *CentreVu* CMS when calls are placed on hold. Releases that notify *CentreVu* CMS are System 85 and Generic 2.1 for split/skill ACD calls placed on hold via the HOLD key or feature access code. Generic 2.2 and Generic 3 switches notify *CentreVu* CMS for all calls.
Manual-In Mode (MI)	A call answering mode in which an agent who releases an ACD call is put into the after call work (ACW) mode and must manually request another ACD call by pushing the MI button.
Nonprimary Split/Skill (G3 Vectoring, G2.2 EAS)	The second and third splits/skills to which the call queues in a VDN are called “non-primary splits/skills.” They are also referred to as secondary and tertiary splits/skills, respectively.
Nonzero (0) Skill (Generic 2.2 EAS)	Any skill that does not end in “0” is called a “nonzero” skill.

Primary Split/Skill (G3 Vectoring, G2.2 EAS)	The first split/skill the call queues to in a VDN is called the "primary" split/skill. If the call leaves vector processing and queues to another split/skill (for example, routes to a split/skill extension, or routes to another VDN), then that new split/skill becomes the primary split/skill. If the call leaves vector processing and does not queue to another split/skill (for example, routes to an extension), then there is no new primary split/skill.
Queued	A split/skill or direct agent call that has been directed to a split/skill. In the case of the Generic 1 and Generic 3 switches, even though the call may never have physically occupied a queue slot on the switch (because it could be delivered immediately to an agent), *CentreVu* CMS is still notified that the call queued to the split/skill.
Secondary Split/Skill (G3 Vectoring, G2.2 EAS)	The second split/skill the call queues to in a VDN is called the secondary split/skill.
Skill Group (Generic 2.2 EAS)	A group of ten skills. Each consecutive ten skills ending with digits 0 through 9 constitute a skill tens group. For example, skills 10-19 form a skill tens group, as do skills 340-349.
Split/Skill ACD Call	A call that queued to a split/skill and was answered by an agent in that split/skill.
Station	An unmeasured extension; that is, an extension that is not currently staffed by an agent or is not a member of an unmeasured split/skill or hunt group.
Tertiary Split/Skill (G3 Vectoring, G2.2 EAS)	The third split/skill the call queues to in a VDN is called the tertiary split/skill.

Top Skill	The agent's top skill is the agent's first-administered, highest-level skill. This concept is the most useful when you have a Generic 3 switch (with EAS) and with agents who are using skill level call handling preference. In this case, the agent's top skill represents the skill for which the agent is most likely to receive a call. Agents for whom a given skill is the top skill are the agents that a skill supervisor can count on to handle calls for the skill. NOTE: This concept is not useful for agents using the greatest need call handling preference or for agents who are not Generic 3 (with EAS) agents. In these cases, the top skill data is still populated. When using the Generic 2.2 (with EAS) switch, the agent's top skill is always the "zero skill." For non-EAS agents, the top "skill" is the split the agent has been logged into the longest.
Zero (0) Skill (Generic 2.2 EAS)	See *Default Skill*.

Database Table Names

To select data for custom reports, you must use the names listed in Table 3 and Table 4. The database items are described in later sections of this appendix.

Table 3: Real-Time Table Names

Name	Data Stored
csplit	Split / Skill data for the current interval.
psplit	Split / Skill data for the previous interval.
cagent	Agent data for the current interval.
pagent	Agent data for the previous interval.
ctkgrp	Trunk group data for the current interval.
ptkgrp	Trunk group data for the previous interval.
ctrunk	Trunk data for the current interval.
ptrunk	Trunk data for the previous interval.
cvector	Vector data for the current interval.
pvector	Vector data for the previous interval.
cvdn	VDN data for the current interval.
pvdn	VDN data for the previous interval.
ccwc	Call Work Code (CWC) data for the current interval.
pcwc	CWC data for the previous interval.

Table 4: Historical Table Names

Name	Data Stored
hsplit	Split/Skill data for each intrahour interval.
dsplit	Split/Skill data summarized by day.
wsplit	Split/Skill data summarized by week.
msplit	Split/Skill data summarized by month.
hagent	Agent data for each intrahour interval.
dagent	Agent data summarized by day.
wagent	Agent data summarized by week.
magent	Agent data summarized by month.
htkgrp	Trunk group data for each intrahour interval.
dtkgrp	Trunk group data summarized by day.
wtkgrp	Trunk group data summarized by week.
mtkgrp	Trunk group data summarized by month.
htrunk	Trunk data for intrahour interval.
dtrunk	Trunk data summarized by day.
wtrunk	Trunk data summarized by week.
mtrunk	Trunk data summarized by month.
hvector	Vector data for each intrahour interval.
dvector	Vector data summarized by day.
wvector	Vector data summarized by week.
mvector	Vector data summarized by month.
hvdn	VDN data for each intrahour interval.
dvdn	VDN data summarized by day.

Table 4: Historical Table Names (Contd)

Name	Data Stored
wvdn	VDN data summarized by week.
mvdn	VDN data summarized by month.
hcwc	CWC data for each intrahour interval.
dcwc	CWC data summarized by day.
wcwc	CWC data summarized by week.
mcwc	CWC data summarized by month.
call_rec	Call record data.
agex	Agent exceptions.
spex	Split exceptions.
tgex	Trunk group exceptions.
vecex	Vector exceptions.
vdnex	VDN exceptions.
linkex	Link down exceptions.
mctex	Malicious call trace exceptions.
f_cday	Forecast current day configuration data by split/skill. (not available through Report Designer)
f_cdayrep	Current day forecast data by split/skill. (not available through Report Designer)
haglog	Agent login and logout information.
ag_actv	Agent activity trace data.

Interactions with Switch Features and Tracking of Switch Capabilities

The following features and switch capabilities have an impact on *CentreVu* CMS database items.

Adjunct-Placed and Adjunct-Routed Calls

For Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature, *CentreVu* CMS tracks outbound calls placed by an adjunct processor or host computer on behalf of an agent and adjunct-routed calls. Database items that start with **O_** track outbound split/skill calls and database items that contain **ADJ** track adjunct-routed calls. Adjunct-placed outbound split/skill calls are also included as part of ACD database items such as **ACDCALLS**, **ACDTIME**, and **ACWTIME**. Inbound split/skill calls can be calculated as **ACDCALLS -O_ACDCALLS**.

Look-Ahead Interflow Calls

For Generic 2.2 and Generic 3 switches, *CentreVu* CMS separately tracks look-ahead interflow calls attempted and completed using database items that start with **LOOK**. Look-ahead interflow calls are a subset of interflow calls.

For System 85 and Generic 2.1 switches, *CentreVu* CMS tracks look-ahead interflow calls as part of interflow calls only. The **LOOK** database items are not available for these switches.

Personal Call Tracking

For the Generic 2.2 and Generic 3 switches, *CentreVu* CMS tracks hold time, transfers and conferences for personal calls (non-ACD or extension calls).

With this feature, *CentreVu* CMS is allowed to separately track AUXIN and AUXOUT time for calls made and received when an agent has an ACD call on hold. These calls are now distinguished from time spent on other AUXIN or AUXOUT calls.

Also for Generic 3 and Generic 2.2 switches, in the VDN tables, connect calls, abandoned calls and their times will be tracked for calls that “route to” an extension. Call pickup calls are tracked as personal calls, even if an ACD call is picked up by an agent in the same split/skill.

Personal Call Tracking offers the following data tracking capabilities:

- Data is available for calls on hold, time for calls on hold, and calls abandoned from hold. Without personal call tracking, time for calls on hold was counted as talk time.
- *CentreVu* CMS split and agent data reflect calls made while another call is on hold.
- When an agent places a call on hold, the agent returns to his or her previous state before the call unless the previous state was AVAIL. If the agent was in the AVAIL state, the agent is placed in the OTHER state until the agent dials a valid number (if the number dialed is invalid, the agent remains in OTHER), reconnects to the held call, or the held call abandons. When the agent reconnects to the held call, the agent returns to the original state for the call.
- Agents do not have a **HOLD** state. Hold time is associated with a call placed on hold. Agent states reflect the current activity of the agent.
- **HOLDTIME** is the time the call spent on hold. **HOLDCALLS** is the number of calls that were placed on hold at least once, and **HOLDABNCALLS** is the number of calls that were abandoned while on hold.
- **I_OTHERTIME** is the time during the collection interval that the agent was doing other work.

  For Generic 3 switches, this includes time while in the Auto-In or Manual-In mode during which the agent put a call on hold and performed no further action, the agent placed a call or activated a feature, or a personal call rang with no further activity.

When an agent dials a valid extension, the agent's state changes to AUXOUT (if the agent was in AUX or OTHER) or to ACWOUT (if the agent was in ACW).

Abandoned Calls

In general, any call that hangs up before an agent or station answers. On Generic 3 switches, any VDN calls (whether ACD calls or not) that route to extensions and are then abandoned are counted as abandoned calls for the VDN. (See Phantom-Abandon Calls.) On System 85 and Generic 2 switches, VDN non-ACD calls that route to extensions and then abandon are counted as connect calls.

Phantom-Abandon Calls

In international areas where central offices do not provide the switch with disconnect supervision, all calls with talk times that are less than an administrable threshold can be counted as abandoned calls. *CentreVu* CMS supports a phantom-abandon call timer that can be administered to count calls with talk times less than 10 seconds as a phantom- abandoned call.

The Phantom-Abandon Call Timer can be set from 1-10 seconds. Any calls whose total talk time or connect time is less than the set number of seconds are pegged as **PHANTOMABNS**, instead of **ACDCALLS**. The abandon time for phantom calls is the time:

- For splits: from the time the call queued until the agent or answering station hangs up.
- For VDNs: from the time the call encountered the VDN until the agent or answering station hangs up.
- For vectors: from the time the call entered the vector until the agent or answering station hangs up.

  When a call leaves a vector via a “route to split” command, the call is not pegged as an outflow, and can be pegged as a phantom- abandon call if the call duration is shorter than the administered phantom-abandon time.

The database item **PHANTOMABNS** records the total number of such calls. Also, these calls are counted as abandoned calls (**ABNCALLS**) rather than answered calls (**ACDCALLS**). The abandon time for these calls is equivalent to the time elapsed when the agent released the call.

When the phantom-abandon call timer is not enabled, short ACD calls are not counted as phantom-abandons, and the values of the **PHANTOMABNS** database items are 0.

Any call that has been put on HOLD, TRANSFERRED, or CONFERENCED is not recorded as a phantom-abandon, even if its duration is less than the setting of the phantom-abandon call timer.

Transferred and Conferenced Calls

With Personal Call Tracking, *CentreVu* CMS tracks transferred and conferenced calls as follows:

- Transferred and conferenced calls are tracked as held calls while the call(s) wait to be transferred or added to a conference.
- When an agent ends a conference call, the agent returns to the call state prior to setting up the conference.
- If an agent is talking, places the ACD call on hold to transfer the call, and then completes the transfer, the agent goes to the AVAIL state (Auto-In) or to the ACW state (Manual-In) following the transfer.
- Transferred or conferenced unmeasured split, trunk group, or VDN calls are now tracked. Prior to Personal Call Tracking, these calls were not tracked.

Audio Difficulty

CentreVu CMS records the trunk associated with audio difficulty for personal calls if the trunk group is measured. Prior to Personal Call Tracking, audio difficulty was restricted to ACD calls.

Direct Agent Calling (G3)

Direct agent calls are tracked separately from other ACD calls in the *CentreVu* CMS database tables. Since direct agent calls are not split / skill calls but are calls to a specific agent, most of the direct agent data are collected in the agent tables in items starting with **DA_** or **I_DA**. Direct agent calls are counted as ACD calls in trunk, trunk group, VDN and vector tables.

Reports can be customized to include direct agent data. In the real-time split / skill table, the number of agents on direct agent calls and the number of agents in ACW associated with direct agent calls are collected, but they are subsets of the number of agents in the **OTHER** agent state; that is, they are doing work but not for the split / skill. Only the **OTHER** value appears on standard real-time reports. The number of direct agent calls queued and ringing appears on the Queue / Agent Summary report.

For Generic 3 switches, a direct agent call can be initiated by an adjunct.

For Generic 3 Version 2 and later Generic 3 switch releases with the EAS feature, a direct agent call can be initiated by dialing the agent’s login number or through the “route to number” vector command. The call is treated like an ACD call and is delivered to the agent before any split / skill ACD calls queue.

Multiple Call Handling (G2, System 85, G3V3)

The Multiple Call Handling feature allows an ACD agent to put a call on hold and push the Auto-In or Manual-In key to take another ACD call. *CentreVu* CMS tracks the hold state as a call state, not an agent state. This means that hold time is counted for each call. For example, an agent who places two calls on hold for 5 minutes to answer a third accrues 10 minutes hold time for the two calls in the space of only 5 minutes on the clock.

For Generic 2.1 and System 85 switches, an agent with ACD calls on hold continues to accrue interval-based talk time. The call-based ACD talk time is stopped while the calls are on hold, until the agent reconnects to one of them.

Forced Multiple Call Handling (G3V4)

The Forced Multiple Call Handling feature in Generic 3 Version 4 switches allow an ACD call to ring at an agent’s voice terminal even if that agent is already talking on an ACD call. In this case, the agent continues to accrue talk time until the agent puts the current call on hold or releases it.

Hold Tracking (G3, G2, System 85)

CentreVu CMS tracks and reports hold state for calls put on hold for Generic 3, Generic 2, and System 85 switches. This means that *CentreVu* CMS is notified when an agent puts a call on hold. For Generic 3 and Generic 2.2 switches, *CentreVu* CMS tracks **all** calls put on hold. For Generic 2.1 and System 85 switches, *CentreVu* CMS tracks **split** ACD calls put on hold.

Ringing (G3, G2, System 85)

CentreVu CMS displays the number of agents with split/skill ACD calls and direct agent calls ringing at their voice terminals. This information is meaningful only if agents' voice terminals are administered to ring rather than receive zip tone. The switch sends a message to *CentreVu* CMS when a call is directed to an agent and alerting begins. Currently, this is only supported on System 85, Generic 2, and Generic 3 switches. If you do not have one of these switches, the ring state columns in standard reports display blanks.

Transfer Tracking

For Generic 3 and Generic 2.2 switches, *CentreVu* CMS tracks all transferred calls made by measured agents. For Generic 2.1 and System 85 switches, transferred calls to a VDN are tracked in the VDN tables. The agent and split/skill reports display these transfers.

Transfers into a split/skill, agent, or VDN are not tracked explicitly (for example, the party initiating the transfer is credited with a transfer, not the party receiving the transfer).

Conference Tracking (G2.2 and G3)

CentreVu CMS tracks conferenced calls for Generic 2.2 and Generic 3 switches. Agents who transfer a call by conferencing and then dropping off are credited with a conference and not a transfer.

Call Pickup

CentreVu CMS tracks ACD calls that are answered by an agent using the Call Pickup feature as AUXIN calls.

Agents in Multiple Splits/Skills

CentreVu CMS requires agents to log into multiple splits/skills using the same login ID for all splits/skills. This allows *CentreVu* CMS to track the agent as a single person and to coordinate the data for that agent.

Real-time reports assume that agents can only be doing one thing at a time. Agents can be in the following states: AVAIL, ACD, ACW, AUX, DACD, DACW, RING, UNKNOWN, OTHER, or UNSTAFFED. When an agent logs into multiple splits/skills, the split/skill number(s) are shown on the report(s) for the states (ACD, DACD, ACW, AVAIL, and RING) associated with the call. For example, if an agent logged into split/skill 1 and split/skill 2 and answered an ACD call for Split/Skill 2, the split/skill number shown in the standard real-time report(s) is “**2.**”

For splits, as long as the agent is not on a call or the agent is in AUX and is available in at least some splits, real-time reports show all the splits in which the agent is available. For skills, the agent cannot be available in some skills and not available in others unless Multiple Call Handling (MCH) is active. The Skill Status report shows all the agent's login skills. If an ACD call is ringing the agent's voice terminal, the real-time report shows the RING state. If a personal call is ringing at the agent's voice terminal, the real-time report shows the OTHER state. No split/skill is shown for the AUX and UNKNOWN states because these states are not split/skill related unless the agent is on a call (AUXIN or AUXOUT) in which case, the split/skill is shown in the report. The agent is shown as being in AUX **only** if the agent is in AUX in **all** splits/skills.

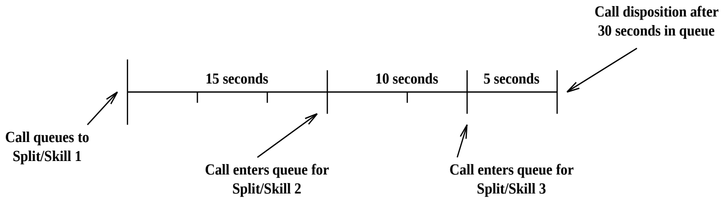
With real-time split/skill reports, if an agent is available in split 1 and in AUX in split 2 and you request the Split/Skill report which displays both splits, the report shows the agent is AVAIL in split 1 and OTHER in split 2.

Multiple-Split/ Skill Queuing (G3)

On a Generic 3 switch, calls can be queued to as many as three splits/skills simultaneously. For the first split/skill to which a call is queued (primary split/skill), *CentreVu* CMS counts an answer, outflow (leaves vector processing or is answered by an agent in another split/skill), or abandon. For the second or third split/skill to which a call is queued, *CentreVu* CMS counts an answer and an inflow if the call is answered in that split/skill. If the call is answered in another split, the call outflows, or the caller abandons, *CentreVu* CMS counts the call as dequeued.

Note If a call rings in a second or third split and then abandons, an inflow and abandon are counted for that split; an outflow or dequeue is counted for the other splits.

In the following Multiple-Split/Skill Queuing example, you see the call queue to split/skill 1 first, then queue to split/skill 2 after 15 seconds. After another 10 seconds, the call enters split/skill 3's queue. The call is now queued to splits/skills 1, 2, and 3 at the same time. See the example for disposition of the call for all three splits if the call was abandoned, was answered, or routed to a VDN.


Call disposition after
30 seconds in queue
15 seconds
10 seconds
5 seconds
Call queues to
Split/Skill 1
Call enters queue for
Split/Skill 2
Call enters queue for
Split/Skill 3

Call Disposition	Split/Skill 1	Split/Skill 2	Split/Skill 3
Abandoned from queue	ABANCALLS ABNTIME = 30	DEQUEUECALLS DEQUETIME = 15	DEQUEUECALLS DEQUETIME = 5
Split/Skill 2 Answered	OUTFLOWCALLS OUTFLOWTIME = 30	ACDCALLS ANSTIME = 15 INFLOWCALLS	DEQUEUECALLS DEQUETIME = 5
Route to VDN	OUTFLOWCALLS OUTFLOWTIME = 30	DEQUEUECALLS DEQUETIME = 15	DEQUEUECALLS DEQUETIME = 5
Abandoned from ringing Split/Skill 2	OUTFLOWCALLS OUTFLOWTIME = 30	ABNCALLS ABNTIME=15	DEQUEUECALLS DEQUETIME = 5

Figure 1-1: Multiple-Split/Skill Queuing Example

Agent State Tracking at Login

CentreVu CMS does not know what state agents are in immediately after they have logged in (or right after the link to the switch has come up) until notified by the switch. The time the agent spent in this state is tracked as **I_OTHERTIME** and **TI_OTHERTIME** and the agent's state is displayed as **OTHER**.

For System 85 and Generic 2 switches, the time between logging in and moving to the AUX state depends on the time it takes for the agent logging in to release the call or go on-hook, completing the login sequence.

For Generic 1 and Generic 3 switches, the time between logging in and moving to the AUX state depends on the time it takes for the agent logging in to release the call or go on-hook or for the switch to time the call out (about 5 to 10 seconds).

Converse Vector Command (G3V2 and later)

The “converse” command integrates Voice Response Units (VRUs) and the Vectoring feature. The “converse” command allows voice-response scripts to be executed while, for example, a call waits in queue. This command also allows data to be passed between the switch and a VRU or from the VRU through the switch to an ASAI adjunct processor.

There is no vector or VDN tracking for this command. If the VRU ports are administered as a measured split/skill, then agent and split/skill tracking is available.

Go To Vector

When a “go to vector” command is executed, an outflow and a “goto call” are counted for the first vector and an inflow is counted for the second vector. The timing and statistics associated with the first vector for that call stop and are started for the second vector. The call remains in the original VDN, however, and tracking in that VDN continues.

Outbound Call Management (OCM)

Outbound call management calls to splits/skills are included as a subset of the ACD call database items (talk time, ringing, ACW, etc.). OCM calls also have their own database items which start with **O_** in the agent, split/skill, trunk and trunk group tables. Inbound split/skill calls can be calculated as **ACDCALLS - O_ACDCALLS**. See the “Adjunct-Placed and Adjunct-Routed Calls” section for more information.

Redirection on No Answer (G3V2 and later)

When a ringing call times out, the call can be requeued to the same split/skill or to a Vector Directory Number (VDN) by the Redirection on No Answer feature (available only on a *DEFINITY* ECS). When redirected to the same split/skill, an outflow and an inflow are counted for the split/skill. Thus, the redirected call appears as two offered calls to the split/skill. The database item **NOANSREDIR** is also incremented. The unique calls offered to the split/skill can then be calculated by subtracting the value of **NOANSREDIR** from **CALLSOFFERED**.

Note This assumes that the split/skill is set up so that normal split/skill calls do not cover back to the same split/skill except through the Redirection on No Answer feature. If they can cover back to the same split/skill, each call that does this is counted as an outflow and inflow to that same split/skill. In this case, **NOANSREDIR** is **not** incremented.

When a ringing call times out and is routed to a VDN (Generic 3 Version 4), an outflow and NOANSREDIR are incremented.

Tracking of Times/Duration

In the trunk, trunk group, and VDN tables, the **TIME** items typically cumulates until the trunk drops at the end of the call, unless the items are queue time or ring time or other similar items.

In the split/skill and vector tables, the **TIME** items typically cumulates until the call leaves the split/skill/vector and the disposition is known (for example, when the call outflows or when the caller starts hearing the forced busy).

Trunk No Answer Timeout (G3V2 and later)

This timer starts when the switch first seizes the trunk and is stopped when answer supervision is sent for the call. If it times out, the call is dropped by the switch and the *CentreVu* CMS counts the call as an abandoned call. (This timer is for switches in countries that lack disconnect supervision for trunks. The assumption is that the caller abandoned long ago.)

Vector Disconnect Timer (G3V2 and later)

The Vector Disconnect Timer is started when a call begins vector processing and stops when the call is routed successfully. This means that the call rings at a destination or the trunk is connected to a destination. In the case of adjunct routing, the timer is stopped at the point at which the call is routed successfully. If the timer times out, the call is dropped by the switch and the *CentreVu* CMS records a forced disconnect for the call.

Wait Answer Supervision Timer (WAST)

This timer is started when a call begins ringing at an agent or station. It is stopped if the call is answered or connected or redirected. Once a redirected call begins ringing, the timer is restarted. In the case of redirection on no answer, if the call cannot be redirected, the WAST is restarted. If the WAST times out, the call is dropped by the switch and the *CentreVu* CMS records an abandon (from ringing) for the call.

Split/Skill Database Items

The Split / Skill database item descriptions (Table 1) apply to real-time and historical items.

The **Relationship(s)** column provides a list of the database item relationships for the Split / Skill Database table.

The **Type** column refers to **Cumulative (C)**, **Administrative (A)**, or **Status (S)** data. Cumulative and Administrative items typically apply to both the current and previous interval real-time table. Status items apply only to the current interval real-time tables.

Real-Time split / skill database items apply to the Current Interval Split / Skill (`csplit`) and Previous Interval Split / Skill (`psplit`) tables. The real-time indexes are **ACD** and **SPLIT**.

Historical split / skill database items apply to the Intrahour Split / Skill (`hsplit`), Daily Split / Skill (`dsplit`), Weekly Split / Skill (`wsplit`), and

Monthly Split/Skill (`msplit`) tables, except as noted. The historical indexes are **SPLIT** and **ROW_DATE**.

Table 5: Split/Skill Database Items

Database Item	Description	Type
ABNCALLS	The number of **CALLSOFFERED** that were abandoned while in queue or ringing for this split/skill. For System 85, Generic 2.1, and Generic 3 Version 1 switches with the Vectoring feature, this also includes calls that were queued to the split/skill and abandoned while listening to a forced disconnect announcement. **NOTE:** When a call abandons while queued to multiple splits/skills and abandons from queue, only the primary split/skill increments **ABNCALLS (c**alls that are ringing an agent and then abandon peg as abandons for the split/skill they were ringing). **This also includes calls with talk times less than the phantom-abandoned call timer value, if it is set.** ABNCALLS = ABNCALLS1 + ABNCALLS2 + ABNCALLS3 + ABNCALLS4 + ABNCALLS5 + ABNCALLS6 + ABNCALLS7 + ABNCALLS8 + ABNCALLS9 + ABNCALLS10 **ABNCALLS** includes **ABNCALLS1-10**, **ABNRINGCALLS**, **O_ABNCALLS**, **PHANTOMABNS**, **SLVLABNS**.	C
ABNCALLS1-10	The number of **ABNCALLS** that were abandoned during the collection interval in each of the service level increments **PERIOD1** through **PERIOD9** (as defined on the ACD Administration: Call Profile window). **ABNCALLS10** counts calls that abandoned after **PERIOD9**. NOTE: If call profiles are not set, then the data gets stored into the first interval (**ABNCALLS1**).	C
ABNRINGCALLS	The number of **ABNCALLS** that abandoned while ringing at an agent position. Available for ring tracking with Generic 2 and Generic 3 switches.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
ABNTIME	The time callers spent waiting in queue and ringing at the agent's voice terminal before abandoning the call. For phantom-abandon calls, this includes the time from when the call queues until the agent releases the call.	C
ACCEPTABLE	The number of **ACDCALLS** answered by an agent within the predefined acceptable service level (**SERVICELEVEL**), as defined on the ACD Administration: Call Profile window.	C
ACD (index)	The ACD number for which data was collected.	A
ACDAUXOUTCALLS	The number of **AUXOUTCALLS** agents in the split/skill made with at least one split/skill ACD call for this split/skill on hold. For agents in multiple skills with multiple call handling (Generic 3 Version 3 switch and later), the call is recorded for the skill of the last ACD call the agent put on hold. **ACDAUXOUTCALLS** includes calls made to transfer or conference the ACD call. Available with Generic 2.2 and Generic 3 switches.	C
ACDCALLS	The number of **CALLSOFFERED** calls that were answered by an agent in the split/skill. ACDCALLS = ACDCALLS1 + ACDCALLS2 + ACDCALLS3 + ACDCALLS4 + ACDCALLS5 + ACDCALLS6 + ACDCALLS7 + ACDCALLS8 + ACDCALLS9 + ACDCALLS10 **ACDCALLS** includes **ACCEPTABLE**, **ACDCALLS1-10**, **BACKUPCALLS**, **CONFERENCE**, **HIGHCALLS**, **HOLDCALLS**, **LOWCALLS**, **MEDCALLS**, **O_ACDCALLS**, **TOPCALLS**, and **TRANSFERRED**.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
ACDCALLS1-10	The number of **ACDCALLS** during the collection interval that were answered in each of the service level increments **PERIOD1** through **PERIOD9** (as defined on the ACD Administration: Call Profile window). **ACDCALLS10** is the number of calls answered after the last increment **PERIOD9**. NOTE: If call profiles are not set, then the data gets stored into the first interval (**ACDCALLS1**).	C
ACDTIME	The talk time of all **ACDCALLS** (does not include **HOLDTIME**, but does include **O_ACDTIME)**.	C
ACWINCALLS	The number of inbound extension calls received by agents while in **ACW** for this split/skill ACD calls or in **ACW** not associated with a call if it is the oldest login.	C
ACWINTIME	The talk time of all **ACWINCALLS**. **ACWINTIME** does not include hold time on Generic 2.2 and Generic 3 switches. It does include time spent on calls received while in ACW not associated with an ACD call.	C
ACWOUTADJCALLS	The number of **ACWOUTCALLS** that were placed by an adjunct on behalf of an agent (keyboard-dialed). If such calls are placed to off-switch destinations, then they are also counted as **ACWOUTOFFCALLS**. Available for outbound calls on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C
ACWOUTCALLS	The number of outbound extension calls made by agents while in **ACW** for this split/skill ACD calls or in **ACW** not associated with a call if it is the oldest login. **ACWOUTCALLS** includes **ACWOUTADJCALLS** and **ACWOUTOFFCALLS**	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
ACWOUTOFFCALLS	The number of **ACWOUTCALLS** that were made to a destination outside the switch. If such calls are placed by an adjunct on behalf of an agent, they are also counted as **ACWOUTADJCALLS**. Available for external calls with Generic 2.2 and Generic 3 switches.	C
ACWOUTOFFTIME	The talk time of all **ACWOUTOFFCALLS** (does not include time on hold). Available for external calls with Generic 2.2 and Generic 3 switches.	C
ACWOUTTIME	The talk time of all **ACWOUTCALLS**. **ACWOUTTIME** does not include hold time on Generic 2.2 and Generic 3 switches. It does include time spent on calls made while in ACW not associated with an ACD call. **ACWOUTTIME** includes **ACWOUTOFFTIME**.	C
ACWTIME	The duration of all after call work associated with **ACDCALLS**. NOTE: **ACWTIME** does not include time spent in ACW not associated with an ACD call (that is, the agent pressed the ACW button while not on an ACD call). However, both **ACWINTIME** and **ACWOUTTIME** do include time spent on calls made or received while in ACW not associated with an ACD call. Therefore, the sum of **ACWINTIME** and **ACWOUTTIME** may be greater than **ACWTIME**. **ACWTIME** includes **ACWINTIME**, **ACWOUTTIME**, and **O_ACWTIME**.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
AGINRING (real-time)	The current number of **POSITIONS** at which split / skill or direct agent calls are ringing (for example, ACD call ringing for this split / skill and are not doing anything else). **NOTE:** When an agent makes or answers a personal call while an ACD call is ringing, that position is no longer counted in **AGINRING** (because the agent is then on an AUXIN / OUT call). Agents talking on ACD calls who receive a forced MCH call (Generic 3 Version 4 switches only) are not counted in **AGINRING (they are counted in ONACD) or OTHER**. Available with Generic 2 and Generic 3 switches for ring tracking.	S
ANSTIME	The time spent by callers in queue or ringing before being answered by an agent.	C
ASA (real-time)	The switch-provided rolling average speed of answer for this split / skill. This value is sent to *CentreVu* CMS whenever it changes on the switch (for example, when a call is answered). EWT and ASA should not be expected to match. ASA gives a historical perspective, while EWT changes constantly to match current conditions such as queue length and staffing changes. Available with Generic 3 Version 4 switches for vectoring feature enhancements.	S
ASSISTS	The number of times the supervisor was called (supervisor assists) by agents on split / skill calls, direct agent ACD calls, or in call-related ACW for this split / skill.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
AUXINCALLS	The number of inbound extension calls received by agents while in AUX (auxiliary work), AVAILABLE, or, for Generic 2.2 and Generic 3 switches, with an ACD or AUXIN / AUXOUT call on hold. **AUXINCALLS** are recorded in the **SPLIT** that is **OLDEST_LOGON** for agents in multiple splits / skills.	C
AUXINTIME	The talk time of all **AUXINCALLS** (does not include hold time on Generic 2.2 and Generic 3 switches).	C
AUXOUTADJCALLS	The number of **AUXOUTCALLS** that were placed by an adjunct on behalf of an agent (keyboard-dialed). If such calls are placed to off-switch destinations, then they are also counted as **AUXOUTOFFCALLS**. Available for outbound calls on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C
AUXOUTCALLS	The number of outbound extension calls made by agents while in AUX (auxiliary work), AVAILABLE, or for Generic 2.2 and Generic 3 switches with an ACD or AUXIN / AUXOUT call on hold. **AUXOUTCALLS** are recorded for the **SPLIT** which is the **OLDEST_LOGON**, unless the agent made the call with an ACD call on hold. In this case, they are recorded for the split / skill of the ACD call. **AUXOUTCALLS** includes **ACDAUXOUTCALLS**, **AUXOUTADJCALLS**, and **AUXOUTOFFCALLS**.	C
AUXOUTOFFCALLS	The number of **AUXOUTCALLS** that were made to a destination outside the switch. If such calls are placed by an adjunct on behalf of an agent, they are also counted as **AUXOUTADJCALLS**. Available for external calls with Generic 2.2 and Generic 3 switches.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
AUXOUTOFFTIME	The talk time of all **AUXOUTOFFCALLS** (does not include hold time). **AUXOUTOFFTIME** is included in **AUXOUTTIME**. Available for external calls on Generic 2.2 and Generic 3 switches.	C
AUXOUTTIME	Talk time of all **AUXOUTCALLS. AUXOUTTIME** does not include hold time on Generic 2.2 and Generic 3 switches. **AUXOUTTIME** includes **AUXOUTOFFTIME**.	C
AVAILABLE (real-time)	The current Number of **POSITIONS** that are available in this split/skill.	S
BACKUPCALLS	The number of **ACDCALLS** that were delivered to this split/skill by a vector command other than “queue to main”. This includes calls delivered by “messaging split/skill”, “check backup”, “route to” split/skill, and “redirect on no answer” vector commands. Calls that are redirected back to the split/skill from ringing by the “redirect on no answer” feature that are subsequently answered by an agent in the split/skill are also counted as backup calls. Available on System 85, Generic 2, and Generic 3 switches with the Vectoring feature.	C
BUSYCALLS	The number of **CALLSOFFERED** calls that were given a busy signal by the switch. This happens when a “busy” vector command is executed while the call is queued to this split/skill (and this is the primary split/skill the call is queued to) or if a call queued to this split/skill forwards to another split/skill whose queue is full. On Generic 3 and later switches, a busy is given because a non-vector controlled split has a full queue, no queue and no available agents, or no agents that are staffed.	C
BUSYTIME	The time callers waited in queue until hearing a busy tone for all **BUSYCALLS**.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
CALLSOFFERED	The number of calls that queued to the split/skill and that completed during the interval. This does NOT include calls on the Generic 1 or Generic 3 switches that could not queue to the split/skill because the queue was full or there was no queue. **CALLSOFFERED** = **ACDCALLS** + **ABNCALLS** + **BUSYCALLS** + **DISCCALLS** + **OUTFLOWCALLS** + **DEQUECALLS** **CALLSOFFERED** includes **ABNCALLS**, **RINGCALLS**, **OTHERCALLS**, and **INFLOWCALLS**	C
CONFERENCE	The number of **ACDCALLS** that were conferenced at least once. Available on Generic 2.2 and Generic 3 switches.	C
DA_ACWINCALLS	The number of inbound extension calls agents answered while in after call work mode for direct agent ACD calls that were queued through this split/skill. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_ACWINTIME	The talk time of inbound extension calls agents answered while in the after call work mode for direct agent ACD calls queued through this split/skill. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_ACWOCALLS	The number of outbound extension calls agents made while in the after call work mode for direct agent call ACD calls queued through this split/skill. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_ACWOTIME	The talk time of outbound extension calls the agent made while in the after call work mode for a direct agent ACD call. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
DA_INACW (real-time)	The current number of **POSITIONS** that are in after call work associated with direct agent calls. This includes agents who are on ACWIN / ACWOUT calls. **DA_INACW** is a subset of **OTHER**. **NOTE:** The total number of agents in after call work = **INACW + DA_INACW**. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	S
DA_INQUEUE (real-time)	The current number of direct agent ACD calls waiting in this split's / skill's queue. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	S
DA_INRING (real-time)	The current number of direct agent ACD calls ringing at an agent's voice terminal that was queued in this split / skill. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	S
DA_OLDESTCALL (real-time)	The length of time that the oldest direct agent ACD call has been waiting in queue and ringing at an agent position. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	S
DA_ONACD (real-time)	The current number of **POSITIONS** that are on direct agent ACD calls. **DA_ONACD** is a subset of **OTHER**. **NOTE:** The total number of agents on split / skill and direct agent ACD calls = **ONACD + DA_ONACD**. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	S

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
DEQUECALLS	The number of calls that queued to this split/skill as a nonprimary split/skill, but whose disposition was recorded in another split/skill (as answered, abandoned, outflowed, busy, or forced disconnect). Requires vectoring for multiple split/skill queueing on a Generic 2.2 switch with EAS or a Generic 3 switch.	C
DEQUETIME	The amount of time **DEQUECALLS** waited in this split/skill queue before dequeuing. Requires vectoring for multiple split/skill queueing on a Generic 2.2 switch with EAS or a Generic 3 switch.	C
DISCCALLS	For Generic 2.2, Generic 3 Version 2, and later Generic 3 switches, this is the number of **CALLSOFFERED** that were disconnected by the switch via the “disconnect” vector command. For the Generic 3 Version 2 and later switch releases, this also includes the number of **CALLSOFFERED** that were disconnected by the switch when the vector disconnect timer expired. For the vectoring feature on System 85, Generic 2.1, and Generic 3 Version 1 switches, this is the number of **CALLSOFFERED** that were given a forced disconnect announcement, then were disconnected by the switch.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
DISCTIME	The time all **DISCCALLS** spent in this split's / skill's queue. For Generic 2.2 and Generic 3 Version 2 switches, this is the time until the trunk drops, in the case where the caller hangs up without listening to the entire announcement. For the Generic 3 Version 2 and later switches, if the call is disconnected due to the expiration of the vector disconnect timer, this is the time until the caller is disconnected by the switch. For the vectoring feature on System 85, Generic 2.1, or Generic 3 Version 1 switches, this is the time until the announcement ends and the caller is disconnected by the switch.	C
EVENT1-9	The number of times each event (stroke count) feature button (feature button 1 to 9) was pressed by agents on split / skill or direct agent ACD calls or in after call work associated with an ACD call for this split / skill. Available with System 85, Generic 2, and Generic 3 switches.	C
EWTHIGH (real-time)	The switch-calculated expected wait time for calls queued at high priority to this split / skill. The expected wait time is an estimate of how long a caller will wait in queue at HIGH priority until being served. Time spent ringing at the agent is not included in this estimate. EWT and ASA should not be expected to match. ASA gives a historical perspective, while EWT changes constantly to match current conditions such as queue length and staffing changes. Available with Generic 3 Version 4 switches for Vectoring enhancements.	S

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
EWTLOW (real-time)	The switch-calculated expected wait time for calls queued at low priority to this split/skill. The expected wait time is an estimate of how long a caller will wait in queue at LOW priority until being served. Time spent ringing at the agent is not included in this estimate. EWT and ASA should not be expected to match. ASA gives a historical perspective, while EWT changes constantly to match current conditions such as queue length and staffing changes. Available with Generic 3 Version 4 switches for Vectoring enhancements.	S
EWTMEDIUM (real-time)	The switch-calculated expected wait time for calls queued at medium priority to this split/skill. The expected wait time is an estimate of how long a caller will wait in queue at MEDIUM priority until being served. Time spent ringing at the agent is not included in this estimate. EWT and ASA should not be expected to match. ASA gives a historical perspective, while EWT changes constantly to match current conditions such as queue length and staffing changes. Available with Generic 3 Version 4 switches for Vectoring enhancements.	S
EWTTOP (real-time)	The switch-calculated expected wait time for calls queued at top priority to this split/skill. The expected wait time is an estimate of how long a caller will wait in queue at TOP priority until being served. Time spent ringing at the agent is not included in this estimate. EWT and ASA should not be expected to match. ASA gives a historical perspective, while EWT changes constantly to match current conditions such as queue length and staffing changes. Available with Generic 3 Version 4 switches for Vectoring enhancements.	S

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
HIGHCALLS	The number of **ACDCALLS** with high priority that were answered by agents in this split/skill (for example, answered calls that were queued to the split/skill with high priority by a “queue to main” or “check backup” vector command. For Generic 3 switches with the Vectoring feature, this includes calls that were queued to a split/skill with priority using the “route to” or “messaging split/skill” vector commands, and calls that queued directly to a split/skill with priority. (Priority in these cases is determined by the class of restriction of the originator, which is an agent, an extension, a trunk group or a VDN.) Available on System 85, Generic 2, and Generic 3 switches with the Vectoring feature.	C
HOLDABNCALLS	The number of times split/skill ACD callers abandoned the call while on hold. Available on System 85, Generic 2, and Generic 3 switches.	C
HOLDCALLS	The number of split/skill ACD calls that were placed on hold at least once. Available on System 85, Generic 2, and Generic 3 switches. **HOLDCALLS** includes **HOLDABNCALLS**.	C
HOLDTIME	The time spent by split/skill ACD callers on hold. Available on System 85, Generic 2, and Generic 3 switches.	C
I_ACDAUXINTIME	The time during the collection interval that **POSITIONS** were talking on AUXIN calls with a split/skill ACD call on hold where **SPLIT** is **OLDEST_LOGON**. Available on Generic 2.2 and Generic 3 switches.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
I_ACDAUX_ OUTTIME	The time during the collection interval that **POSITIONS** spent dialing (Generic 2.2 switches) and talking on AUXOUT calls with a split/skill ACD call for this split/skill on hold. **NOTE:** In a multiple call handling environment with agents in multiple skills, the ACD call for this skill must have been the last ACD call to have been put on hold before the agent made the AUXOUT call. Available on Generic 2.2 and Generic 3 switches.	C
I_ACDOTHERTIME	The time during the collection interval that **POSITIONS** spent in the OTHER state (dialing an outgoing call with a Generic 3 switch, with a ringing extension call with Generic 3 switch, or with calls on hold and with no other state selected) with a split/skill ACD call on hold. Available on Generic 2.2 and Generic 3 switches.	C
I_ACDTIME	Time during the collection interval that **POSITIONS** were on split/skill ACD calls for this split/skill. This includes time on **O_ACDCALLS** as well as on **ACDCALLS**.	C
I_ACWINTIME	The time during the collection interval that **POSITIONS** were in **ACW** for this split/skill, either associated with a split/skill ACD call or not associated with a call, and on inbound extension calls. This does not include time inbound extension calls spent on hold. Available on Generic 2.2 and Generic 3 switches.	C
I_ACWOUTTIME	The time during the collection interval that **POSITIONS** were in **ACW** for this split/skill, either associated with this split/skill ACD call or not associated with a call, and on outbound extension calls. This does not include time outbound extension calls spent on hold. Available on Generic 2.2 and Generic 3 switches.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
I_ACWTIME	The time during the collection interval that **POSITIONS** were in **ACW** for this split/skill, either associated with a split/skill ACD call or not associated with a call. This **I_ACWTIME** includes **I_ACWINTIME** and **I_ACWOUTTIME**.	C
I_ARRIVED	The number of calls that queued to this split/skill during this interval.	C
I_AUXINTIME	The time during the collection interval that **POSITIONS** were in AUX work, AVAILABLE, or, for Generic 2.2 and Generic 3 switches, had an ACD or AUXIN/AUXOUT call on hold and were on inbound extension calls. **I_AUXINTIME** includes **I_ACDAUXINTIME**.	C
I_AUXOUTTIME	The time during the collection interval that **POSITIONS** were in AUX work, AVAILABLE or, for Generic 2.2 and Generic 3 switches, had an ACD or AUXIN/AUXOUT call on hold and were on outbound extension calls. **I_AUXOUTTIME** includes **I_ACDAUX_OUTTIME.**	C
I_AUXTIME	The time during the collection interval that **POSITIONS** were in AUX in this split/skill. **I_AUXTIME** = **I_AUXTIME0** + **I_AUXTIME1** + **I_AUXTIME2** + **I_AUXTIME3** + **I_AUXTIME4** + **I_AUXTIME5** + **I_AUXTIME6** + **I_AUXTIME7** + **I_AUXTIME8** + **I_AUXTIME9** **I_AUXTIME** includes **I_AUXTIME0**... **I_AUXTIME9**, **I_AUXINTIME**, **I_AUXOUTTIME**, and **I_TAUXTIME**.	C
I_AUXTIME0	The time during the collection interval that **POSITIONS** were in **AUX** for reason code 0 in this split/skill. This includes time on extension calls from this AUX state. For switches with AUX reason codes active, this represents time agents spent in “system” AUX. For switches without AUX reason codes active, I_AUXTIME0 is the same as I_AUXTIME.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
I_AUXTIME1-9	Time during the collection interval that POSITIONS were in AUX for each reason code 1-9 in this skill. This includes time on extension calls from each AUX state. Available for the ECS and later switches with EAS.	C
I_AVAILTIME	The time during the collection interval that **POSITIONS** were available for calls from this split/skill. **I_AVAILTIME** includes **I_TAVAILTIME**	C
I_DA_ACDTIME	The time that **POSITIONS** spent talking on direct agent ACD calls queued through this split/skill. **I_DA_ACDTIME** is a subset of **I_OTHERTIME**. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
I_DA_ACWTIME	The time that **POSITIONS** spent in after call work for direct agent **ACD** calls queued through this split/skill. **I_DA_ACWTIME** is a subset of **I_OTHERTIME**. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
I_OTHERTIME	The time during the collection interval that **POSITIONS** were doing other work. For Generic 3 switches, other work includes: while in Auto-In or Manual-In mode, an agent put any call on hold and performed no further action; the agent had a direct agent call ringing, was on a direct agent call or in ACW for a direct agent call; the agent dialed to place a call or activate a feature; or an extension-in call rang at the agent's voice terminal with no other activity. For Generic 2.2, agents were in Auto-in or Manual-in, put a call on hold using the Hold button or switchhook flash and performed no further action. For Generic 2.2 with EAS, Generic 1 and Generic 3 switches, agents were logged into multiple splits/skills and doing work for a split/skill other than this one (with an ACD call ringing, talking on an ACD call, or in ACW for a split/skill other than this one). For Generic 3 switches with EAS and multiple call handling, agents are available in other, multiple call handling skills, but not in this skill. For all switches, **I_OTHERTIME** is collected for the time period after the link to the switch comes up or after the agent logs in and before the *CentreVu* CMS receives notification of the agent's state from the switch. **I_OTHERTIME** includes **I_ACDOTHERTIME**, **I_DA_ACDTIME**, and **I_DA_ACWTIME**.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
I_RINGTIME	The time during the collection interval that agents were in the ringing state for calls to this split / skill. If the agent changes work modes or answers / makes another call instead of answering the ringing call, **I_RINGTIME** will stop accumulating. **RINGTIME** is the time the caller spends ringing and is independent of agent activity. **NOTE:** With forced multiple call handling (Generic 3 Version 4 and later), if an ACD call rings at the agent's voice terminal while the agent is talking on another call, **I_RINGTIME** does not accumulate. Available on Generic 2 and Generic 3 switches for ring tracking.	C
I_STAFFTIME	The time during the collection interval that **POSITIONS** were staffed (logged in). **I_STAFFTIME** = **I_AVAILTIME** + **I_ACDTIME** + **I_ACWTIME** + **I_AUXTIME** + **I_RINGTIME** + **I_OTHERTIME** **I_STAFFTIME** includes **I_ACDTIME**, **I_ACWTIME**, **I_AUXTIME**, **I_AVAILTIME**, **I_OTHERTIME**, and **I_RINGTIME**.	C
I_TAUXTIME	The time top agents in this split / skill were in AUX mode. This includes time on **AUXIN/AUXOUT** calls, received or made without an ACD call on hold. (Time on **AUXIN/AUXOUT** calls with an ACD call on hold is tracked in **I_ACDAUXINTIME** and **I_ACDAUX_OUTTIME**.) Available with a Generic 3 switch with the EAS feature for top skills.	
I_TAVAILTIME	The time top agents in this split / skill were available to receive calls for this split / skill. Available with a Generic 3 switch with the EAS feature for top skills.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
INACW **(real-time)**	The current number of **POSITIONS** that are in after call work for this split/skill. This includes agents on ACWIN/ACWOUT calls as well as agents in ACW not associated with an ACD call. It does not include agents in ACW for direct agent ACD calls. **INACW** includes **ONACWIN** and **ONACWOUT.**	S
INAUX **(real-time)**	The current number of **POSITIONS** that are in auxiliary work for all splits/skills, or on AUXIN/AUXOUT calls. **INAUX** = **INAUX0** + **INAUX1** + **INAUX2** + **INAUX3** + **INAUX4** + **INAUX5** + **INAUX6** + **INAUX7** + **INAUX8** + **INAUX9** **INAUX** includes **INAUX0...INAUX9**, **ONACDAUXOUT**, **ONAUXIN**, and **ONAUXOUT**.	S
INAUX0	The current number of **POSITIONS** that are in auxiliary work with reason code 0 for all splits/skills including agents on AUXIN/AUXOUT calls. Reason code 0 is for “system” AUX work when reason codes are active (ECS with EAS and later EAS). For switches without EAS and for releases prior to the ECS, INAUX0 will be the same as INAUX.	S
INAUX1-9	The current number of POSITIONS that are in auxiliary work with each of the reason codes 1-9 for all splits/skills including agents on AUXIN/AUXOUT calls. Available for the ECS.	S

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
INCOMPLETE	Indicates whether or not data is complete for this collection interval. Data is incomplete whenever the link goes down and whenever tracking is aborted for calls, due to trunk failures (System 85 and Generic 2 switches), the trunk going maintenance busy with a call active (Generic 1 and Generic 3 switches), or protocol failures with data collection active. The value for interval tables indicates whether data is incomplete for the interval (0 = data complete, 1 = data incomplete). The value in the daily, weekly, and monthly tables indicates the number of incomplete intervals in the day, week, or month.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
INFLOWCALLS	The number of calls that were redirected to the split/skill's queue from another queue. For Generic 3 with vectoring and Generic 2.2 with EAS and multiple split/skill queueing, calls answered by an agent in a non-primary split/skill are counted as inflows to that split/skill. Calls that abandon from ringing at an agent's voice terminal in a non-primary split/skill are also counted as inflows to that split/skill. On Generic 3 Version 2 and later switches, calls that ring at an agent's voice terminal and then are requeued to the same split/skill by the Redirection on No Answer feature and are counted as inflows to that split/skill. On Generic 2.2 switches with EAS, calls that queue to the "zero" skill after having been queued to a "nonzero" skill are not counted as inflows to the "zero" skill. Similarly, calls that queue to a "nonzero" skill after having been queued to a "zero" skill are not counted as inflows to the "nonzero" skill. Calls that are queued to one skill group and are subsequently queued to another are not counted as inflows to the subsequent skill group. For Generic 2, System 85 with vectoring, calls that queue to a split and then subsequently queue to a new split by a "queue to main" or "check backup" split vector command and are counted as inflows to the new split. When a call leaves the VDN (for example, by routing to another VDN) or leaves vector processing, (for example, by routing to a split/skill) the next split/skill to which a call queues will not be credited with an inflow.	C
INQUEUE (real-time)	The current number of split/skill ACD calls waiting in queue.	S
INRING (real-time)	The current number of split/skill ACD calls which are ringing at agent positions for this split/skill. Available on Generic 2 and Generic 3 switches for ring tracking.	S

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
INTERFLOWCALLS	The number of **OUTFLOWCALLS** that were redirected to an off-switch destination—a destination outside the switch.	C
INTRVL	The number of minutes in the intrahour interval (15, 30, 60). **INTRVL** applies to intrahour intervals only.	A
LOWCALLS	For switches with vectoring, this is the number of **ACDCALLS** with low priority that were answered by this split / skill. For switches without vectoring, this is the number of **ACDCALLS** with no priority that were answered by this split / skill.	C
MAXINQUEUE	The maximum number of simultaneously calls in this split’s / skill’s queue during the collection interval.	C
MAXOCWTIME	The maximum amount of time that a call, recorded during the collection interval, waited in queue and ringing before an agent answered in this split / skill, the caller abandoned, or the call was redirected, received a busy signal, or was disconnected.	C
MAXSTAFFED	The maximum number of agent **POSITIONS** that were simultaneously staffed during the collection interval. **MAXSTAFFED** includes **MAXTOP**.	C
MAXTOP	Maximum number of top agents that were staffed during the collection interval in this split / skill.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
MEDCALLS	For switches with vectoring, the number of **ACDCALLS** with medium priority that were answered by agents in the split/skill. For example, answered calls that were queued to the split/skill with medium priority by a "queue to main" or "check backup" vector command. For Generic 3 switches with vectoring, **MEDCALLS** includes calls that were queued to a split with no priority using the "route to" or "messaging split" vector commands, calls that queued directly to a non-vector-controlled split with no priority, and calls that intraflowed to a split with no priority. For switches without vectoring, the number of **ACDCALLS** with "yes" priority that were answered by agents in the split/skill.	C
NOANSREDIR	The number of split/skill ACD calls that rang at agent positions in the split/skill and then were automatically redirected back to the split/skill queue or to a VDN by the Redirection on No Answer feature because they were not answered. Redirection On No Answer to a split/skill is available on *DEFINITY* ECS or Generic 3 Version 2 or later switches. Redirection On No Answer to a VDN is only available on *DEFINITY* ECS. **NOTE:** When a call is requeued to the same split/skill using the Redirection on No Answer feature, it is counted as an outflow from the split/skill and an inflow to the same split/skill. This is NOT true for calls that are redirected to a VDN using the Redirection on No Answer feature, rather than redirecting the call back to the same split/skill. Such calls count as outflows from the original split or skill, but do not count as inflows to the next split/skill to which they are queued through the new VDN. It is also counted as a NOANSREDIR call and so can be subtracted out from the outflows and from the inflows to calculate the number of outflows and inflows that were not due to requeuing the call to the same split.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
O_ABNCALLS	The number of **ABNCALLS** that were placed by an adjunct, that is, the number of outbound predictive dialing calls that were abandoned by the far end. Available for outbound calls on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C
O_ACDCALLS	The number of **ACDCALLS** that were placed by an adjunct (outbound predictive dialing). **O_ACDCALLS** includes **DA_ACDCALLS**. Available for outbound calls on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C
O_ACDTIME	The talk time of all **O_ACDCALLS** (does not include **HOLDTIME**). Available for outbound calls on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature. **ACDTIME** includes **O_ACDTIME**.	C
O_ACWTIME	The duration of all after call work associated with **O_ACDCALLS**. Available for outbound calls on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature. **ACWTIME** includes **O_ACWTIME**.	C
O_OTHERCALLS	The number of outbound calls queued to this split/skill that were not answered or abandoned as ACD split/skill calls. These include forced busy calls and calls with unknown dispositions. Available for outbound calls on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
OLDESTCALL (real-time)	The number of seconds the oldest split/skill ACD call has waited in queue or ringing.	S
ONACD (real-time)	The current number of **POSITIONS** that are on inbound and outbound ACD calls to this split/skill. **ONACD** includes **ONACDOUT.**	S
ONACDAUXOUT (real-time)	The current number of **POSITIONS** that are on **AUXOUT** calls and have an ACD call for this split/skill on hold. For agents in multiple skills with multiple call handling, the last call the agent put on hold was for this skill. **Available for Generic 2.2 and Generic 3 switches.**	S
ONACDOUT (real-time)	The current number of **POSITIONS** that are on outbound calls placed by an adjunct to this split/skill. Available for outbound calls on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	S
ONACWIN (real-time)	The current number of **POSITIONS** that are in **ACW** for this split/skill and on inbound extension calls. These agents also appear in **INACW**. **ONACWIN** includes agents receiving extension calls from ACW associated with split/skill ACD calls and from ACW not associated with an ACD call.	S
ONACWOUT (real-time)	The current number of **POSITIONS** that are in **ACW** for this split/skill and on outbound extension calls. These agents also appear in **INACW**. **ONACWOUT** includes agents making extension calls from ACW associated with split/skill ACD calls and from ACW not associated with an ACD call.	S
ONAUXIN (real-time)	The current number of **POSITIONS** that are in AUX work or AVAILABLE, or, for Generic 2.2 and Generic 3 switches, including agents who have an ACD or AUXIN/AUXOUT call on hold, and on inbound extension calls, where **SPLIT** is **OLDEST LOGON**.	S

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
ONAUXOUT (real-time)	The current number of **POSITIONS** that are in AUX work or AVAILABLE or, for Generic 2.2 and Generic 3 switches, including agents who have an ACD or AUXIN / AUXOUT call attributed to this split / skill on hold, and on outbound extension calls.	S
ONHOLD (real-time)	The current number of split / skill ACD calls for this split / skill on hold at agent positions. Available on System 85, Generic 2, and Generic 3 switches.	S
OTHER (real-time)	The current number of **POSITIONS** that are doing **OTHER** work. For Generic 3 switches, other work includes: while in Auto-In or Manual-In mode, an agent put any call on hold and performed no further action; the agent is on a direct agent call or in ACW for a direct agent call; the agent is dialing to place a call or to activate a feature; an extension call or a direct agent ACD call is ringing with no other activity. For Generic 2.2 switch, the agent in Auto-In / Manual-In put a call on hold using the Hold button or the switchhook flash and has performed no further action. For Generic 2.2 switch with the EAS feature, Generic 1 and Generic 3 switches, agents are logged into multiple splits / skill other than this one (on an ACD call that is ringing or in ACW). For Generic 3 with EAS switches with multiple call handling, agents are available for other, multiple call handling, skills. Agent **POSITIONS** will show up in **OTHER** directly after the link to the switch comes up and directly after the agents log in before the CMS is notified of the agent's work state. **OTHER** includes **DA_INACW** and **DA_ONACD**.	S

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
OTHERCALLS	The number of calls offered to this split/skill that did not abandon and were not answered by an ACD agent for this split/skill. **OTHERCALLS** = **BUSYCALLS** + **DISCCALLS** + **OUTFLOWCALLS** + **DEQUEUECALLS**	C
OTHERTIME	The time **OTHERCALLS** spent waiting and ringing in this split's/skill's queue until the disposition was known. **NOTE: OTHERTIME** relates to time for **OTHERCALLS** and is not related to **I_OTHERTIME**, which is the time agents spent in the OTHER state. **OTHERTIME** = **BUSYTIME** + **DISCTIME** + **OUTFLOWTIME** + **DEQUETIME**	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
OUTFLOWCALLS	The number of **CALLSOFFERED** that were redirected to another destination while queued to this split/skill. This can happen under different circumstances, depending on the switch release and on whether vectoring is active or not. For Generic 1 or Generic 3 switches without vectoring, outflows are counted: • if the call intraflowed or interflowed. • if the split/skill call forwarding was active • if a ringing ACD call was answered using call pickup • if ringing ACD calls that redirects on no answer. For Generic 3 switches with vectoring, outflows are counted: • if ringing ACD calls that redirects on no answer. • if the call rang at an agent in this split/skill and was answered using call pickup • if the call was routed to another VDN • if the call routed to a number or digits • if the call queued to a messaging split/skill • if the call queued to this split/skill as the primary split/skill and was answered by an agent in another split/skill, rang at an agent in another split/skill and then abandoned or was redirected by the Redirection on No Answer feature (for Generic 3 Version 2 and later switch releases). For System 85 or Generic 2 switches without vectoring, outflows are counted when calls intraflow to another split or extension. For System 85 or Generic 2 switches with vectoring (except for Generic 2.2 with EAS), outflows are counted: • if the call was routed to another VDN • if the call is routed to a number • if the call queued to another split (using “queue to main” or “check backup”). **OUTFLOWCALLS** includes **INTERFLOWCALLS**, **NOANSREDIR**, and **SLVLOUTFLOWS.**	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
OUTFLOWCALLS (Contd)	For Generic 2.2 with EAS, outflows are counted: • if the call was routed to another VDN • if the call is routed to a number • if the call is queued to this skill which is a nonzero skill as primary and then is queued to the “zero” skill • if a call is queued to this skill which is a “zero” skill and then is queued to a “nonzero” skill • if a call is queued to this skill as primary in one skill tens group and then is subsequently queued to another skill tens group.	C
OUTFLOWTIME	The time **OUTFLOWCALLS** waited in queue or ringing at the agent’s voice terminal before being redirected.	C
PERIOD 1-9	The length, in seconds, of each service level increment as defined in the ACD Administration: Call Profile window. Each increment represents a progressively longer wait time. *CentreVu* CMS counts answered or abandoned calls that wait beyond the last increment (**PERIOD9**) in either **ACDCALLS10** or **ABNCALLS10**.	A
PERIODCHG	Indicates whether or not service level increments **PERIOD1-9** (as defined on the ACD Administration: Call Profile window) changed during the collection interval. Valid values for **PERIODCHG** are YES and NO.	A
PHANTOMABNS	The number of split/skill ACD calls with talk time less than the value of the phantom-abandoned call timer.	C
POSITIONS	The current number of agent positions that are assigned to this **SPLIT (non-EAS) or current number of agent positions logged into this skill (EAS)**.	A
RINGCALLS	The number of this split/skill's calls that rang at agent positions. Available on a Generic 2 and Generic 3 switch for ring tracking. **RINGCALLS** includes **ACDCALLS** and **NOANSREDIR.**	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
RINGTIME	The time this split/skill's calls spent ringing at agent positions independent of final disposition and other agent activity. **I_RINGTIME** is the time the agent spends with ringing calls and is affected by other agent activity. **RINGTIME** is the time the caller spends ringing and is independent of agent activity. Available on a Generic 2 and Generic 3 switch for ring tracking.	C
ROW_DATE (index)	The date on which data was collected.	C
SERVICELEVEL	The number of seconds within which calls must be answered in order to be considered acceptable for this split/skill (as defined on the ACD Administration: Call Profile window).	A
SLVLABNS	The number of **ABNCALLS** whose time to abandon was less than or equal to this split/skill’s **SERVICELEVEL**.	C
SLVLOUTFLOWS	The number of **OUTFLOWCALLS** whose time to outflow was less than or equal to this split/skill’s **SERVICELEVEL**.	C
SPLIT (index)	The split/skill number for which data was collected.	A
STAFFED (real-time)	The current number of **POSITIONS** that are staffed (logged in). **STAFFED** includes **AGINRING**, **AVAILABLE**, **ONACD**, **INACW**, **INAUX**, and **OTHER**.	S
STARTTIME	The start time for the interval data was collected. Applies to the interval table only.	C
SVCLEVELCHG	Indicates whether or not the service level was changed during the collection interval. Valid values for **SVCLEVELCHG** are YES and NO.	A

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
TAGINRING	The number of top agents logged into the skill who have ACD calls ringing and who are not doing anything else. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are only significant for Generic 3 switches and the ECS with EAS.	S
TAVAILABLE	The number of top agents logged into the skill who are available in the skill. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are only significant for Generic 3 switches and the ECS with EAS.	S
TDA_INACW	The number of top agents logged into the skill who are in after call work associated with direct agent calls. **TDA_INACW** is a subset of **TOTHER**. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are only significant for Generic 3 switches and the ECS with EAS.	S
TDA_ONACD	The number of top agents logged into the skill who are talking on direct agent calls. **TDA_ONACD** is a subset of **TOTHER**. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are only significant for Generic 3 switches and the ECS with EAS.	S

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
TINACW	The number of top agents logged into the skill who are in after call work for ACD calls to the skill. This includes top agents on ACWIN / ACWOUT calls, as well as agents who are in after call work not associated with an ACD call. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are only significant for Generic 3 switches and the ECS with EAS. **TINACW** includes **TONACWIN** and **TONACWOUT**.	S
TINAUX	The number of top agents logged into the skill who are in the AUX work mode. This includes agents on AUXIN / AUXOUT calls. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are only significant for Generic 3 switches and the ECS with EAS. **TINAUX** includes **TINAUX0...TINAUX9**, **TONACDAUXOUT**, **TONAUXIN**, and **TONAUXOUT**.	S
TINAUX0	The number of top agents logged into the skill who are in the AUX work for reason code 0 for all splits / skills or on AUXIN / AUXOUT calls for AUX with reason code 0. Reason code 0 is for “system” AUX work when reason codes are active (ECS with EAS). For switches without EAS and for releases prior to the ECS, TINAUX0 will be the same as TINAUX. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are only significant for Generic 3 switches and the ECS with EAS.	
TINAUX1-9	The number of top agents logged into the skill who are in AUX work for each of the reason codes 1-9. This includes agents on AUXIN / AUXOUT calls from AUX with the appropriate reason code. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are only significant for Generic 3 switches and the ECS with EAS.	S

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
TONACD	The number of top agents logged into the skill who are on inbound and outbound ACD calls for the skill. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, "top" database items are only significant for Generic 3 switches and the ECS with EAS. **TONACD** includes **TONACDOUT**.	S
TONACDAUXOUT	The number of top agents logged into the skill who are on AUXOUT calls with an ACD call for the skill on hold. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, "top" database items are only significant for Generic 3 switches and the ECS with EAS.	S
TONACDOUT	The number of top agents that are on outbound calls placed by an adjunct to this skill. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, "top" database items are only significant for Generic 3 switches and the ECS with EAS. Available for outbound calls on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	S
TONACWIN	The number of top agents that are in **ACW** for this skill and on inbound extension calls. These agents also appear in **TINACW**. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, "top" database items are only significant for Generic 3 switches and the ECS with EAS.	S
TONACWOUT	The number of top agents that are in **ACW** for this skill and on outbound extension calls. These agents also appear in **TINACW**. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, "top" database items are only significant for Generic 3 switches and the ECS with EAS.	S

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
TONAUXIN	The number of top agents that are in AUX work or AVAILABLE, including agents with an ACD or AUXIN / AUXOUT call attributed to this split / skill on hold and on inbound extension calls. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are only significant for Generic 3 switches and the ECS with EAS.	S
TONAUXOUT	The number of top agents that are in AUX work or AVAILABLE, including agents with an ACD or AUXIN / AUXOUT call attributed to this split / skill on hold and on inbound extension calls. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are only significant for Generic 3 switches and the ECS with EAS.	S
TOPCALLS	The number of **ACDCALLS** with top priority that were answered by agents in this split / skill. Available with System 85, Generic 2, and Generic 3 switches with vectoring.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
TOTHER	The number of top agents that are doing other work. For Generic 3, while in Auto-in or Manual-In mode: the agent put any call on hold and has performed no further action; the agent is on a direct agent call or in ACW for a direct agent call; the agent is dialing to place a call or to activate a feature; an extension call or a direct agent ACD call is ringing with no other activity. Agents are logged into multiple splits/skills and doing work for a split/skill other than this one (on an ACD call, in ACW, or ACD calls ringing). For Generic 3 EAS with multiple call handling, agents are available for other, multiple call handling, skills. Agent **POSITIONS** will show up in **TOTHER** directly after the link to the switch comes up and directly after the agents log in before the *CentreVu* CMS is notified of the agent's work state. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, "top" database items are only significant for Generic 3 switches and the ECS with EAS. **TOTHER** includes **TDA_INACW** and **TDA_ONACD.**	S
TRANSFERRED	The number of **ACDCALLS** that were transferred to another destination. For Generic 1 switch, includes transfers to a measured split or from a measured trunk to a measured trunk. For System 85 and Generic 2.1 switches, includes transfers to a measured VDN or split. For Generic 2.2 or Generic 3 switches, includes all split/skill calls transferred.	C

Table 5: Split/Skill Database Items (Contd)

Database Item	Description	Type
TSTAFFED	The current number of top agents that are staffed in **SPLIT**. Available with Generic 3 and Generic 2.2 switches with the EAS feature. However, “top” database items are significant only for Generic 3 switches and the ECS with EAS. TSTAFFED includes TAGINRING, TAVAILABLE, TINACD, TINACW, TINAUX, and TOTHER.	S

Switch Cross- Reference

Table 1-2 lists which Split / Skill database items are supported by each of the switch releases.

Note The following is a key to the database items tables:

- Items marked “X” indicate that the database item is supported by a switch.
- Items marked “EAS” require that the Expert Agent Selection feature be active on the switch for the items to be populated.
- Items marked “e” are populated for the releases shown, but the values are only meaningful for EAS releases.
- Items marked “t” are populated for the releases shown, but the values are only meaningful for Generic 3 EAS releases, with skill level distribution of calls.

Table 1-2: Switch Cross-Reference for Split/Skill Database Items

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ABNCALLS	X	X	X	X	X	X	X	X
ABNCALLS1-10	X	X	X	X	X	X	X	X
ABNRINGCALLS			X	X	X	X	X	X
ABNTIME	X	X	X	X	X	X	X	X
ACCEPTABLE	X	X	X	X	X	X	X	X
ACD (index)	X	X	X	X	X	X	X	X
ACDAUXOUTCALLS				X	X	X	X	X
ACDCALLS	X	X	X	X	X	X	X	X
ACDCALLS1-10	X	X	X	X	X	X	X	X
ACDTIME	X	X	X	X	X	X	X	X
ACWINCALLS	X	X	X	X	X	X	X	X
ACWINTIME	X	X	X	X	X	X	X	X
ACWOUTADJCALLS				X	X	X	X	X
ACWOUTCALLS	X	X	X	X	X	X	X	X
ACWOUTOFFCALLS				X	X	X	X	X
ACWOUTOFFTIME				X	X	X	X	X
ACWOUTTIME	X	X	X	X	X	X	X	X
ACWTIME	X	X	X	X	X	X	X	X
AGINRING			X	X	X	X	X	X
ANSTIME	X	X	X	X	X	X	X	X
ASA							X	X
ASSISTS	X	X	X	X	X	X	X	X

Table 1-2: Switch Cross-Reference for Split/Skill Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
AUXINCALLS	X	X	X	X	X	X	X	X
AUXINTIME	X	X	X	X	X	X	X	X
AUXOUTADJCALLS				X	X	X	X	X
AUXOUTCALLS	X	X	X	X	X	X	X	X
AUXOUTOFFCALLS				X	X	X	X	X
AUXOUTOFFTIME				X	X	X	X	X
AUXOUTTIME	X	X	X	X	X	X	X	X
AVAILABLE	X	X	X	X	X	X	X	X
BACKUPCALLS		X	X	X	X	X	X	X
BUSYCALLS	X	X	X	X	X	X	X	X
BUSYTIME	X	X	X	X	X	X	X	X
CALLSOFFERED	X	X	X	X	X	X	X	X
CONFERENCE				X	X	X	X	X
DA_ACWINCALLS					X	X	X	X
DA_ACWINTIME					X	X	X	X
DA_ACWOCALLS					X	X	X	X
DA_ACWOTIME					X	X	X	X
DA_INACW					X	X	X	X
DA_INQUEUE					X	X	X	X
DA_INRING					X	X	X	X
DA_OLDESTCALL					X	X	X	X
DA_ONACD					X	X	X	X
DEQUECALLS				EAS	X	X	X	X

Table 1-2: Switch Cross-Reference for Split/Skill Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
DEQUETIME				EAS	X	X	X	X
DISCCALLS		X	X	X	X	X	X	X
DISCTIME		X	X	X	X	X	X	X
EVENT1-9		X	X	X	X	X	X	X
EWTHIGH							X	X
EWTLOW							X	X
EWTMEDIUM							X	X
EWTTOP							X	X
HIGHCALLS		X	X	X	X	X	X	X
HOLDABNCALLS		X	X	X	X	X	X	X
HOLDCALLS		X	X	X	X	X	X	X
HOLDTIME		X	X	X	X	X	X	X
I_ACDAUXINTIME				X	X	X	X	X
I_ACDAUX_OUTTIME				X	X	X	X	X
I_ACDOTHERTIME				X	X	X	X	X
I_ACDTIME	X	X	X	X	X	X	X	X
I_ACWINTIME	X	X	X	X	X	X	X	X
I_ACWOUTTIME	X	X	X	X	X	X	X	X
I_ACWTIME	X	X	X	X	X	X	X	X
I_ARRIVED	X	X	X	X	X	X	X	X
I_AUXINTIME	X	X	X	X	X	X	X	X
I_AUXOUTTIME	X	X	X	X	X	X	X	X

Table 1-2: Switch Cross-Reference for Split/Skill Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
I_AUXTIME	X	X	X	X	X	X	X	X
I_AUXTIME0	X	X	X	X	X	X	X	X
I_AUXTIME1-9								EAS
I_AVAILTIME	X	X	X	X	X	X	X	X
I_DA_ACDTIME					X	X	X	X
I_DA_ACWTIME					X	X	X	X
I_OTHERTIME	X	X	X	X	X	X	X	X
I_RINGTIME			X	X	X	X	X	X
I_STAFFTIME	X	X	X	X	X	X	X	X
I_TAUXTIME	X	X	X	X	X	X	X	X
I_TAVAILABLE	X	X	X	X	X	X	X	X
INACW	X	X	X	X	X	X	X	X
INAUX	X	X	X	X	X	X	X	X
INAUX0	X	X	X	X	X	X	X	X
INAUX1-9								EAS
INCOMPLETE	X	X	X	X	X	X	X	X
INFLOWCALLS	X	X	X	X	X	X	X	X
INQUEUE	X	X	X	X	X	X	X	X
INRING			X	X	X	X	X	X
INTERFLOWCALLS	X	X	X	X	X	X	X	X
INTRVL	X	X	X	X	X	X	X	X
LOWCALLS	X	X	X	X	X	X	X	X
MAXINQUEUE	X	X	X	X	X	X	X	X

Table 1-2: Switch Cross-Reference for Split/Skill Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
MAXOCWTIME	X	X	X	X	X	X	X	X
MAXSTAFFED	X	X	X	X	X	X	X	X
MAXTOP	t	t	t	t	t	t	t	t
MEDCALLS	X	X	X	X	X	X	X	X
NOANSREDIR						X	X	X
O_ABNCALLS				X	X	X	X	X
O_ACDCALLS				X	X	X	X	X
O_ACDTIME				X	X	X	X	X
O_ACWTIME				X	X	X	X	X
O_OTHERCALLS				X	X	X	X	X
OLDESTCALL	X	X	X	X	X	X	X	X
ONACD	X	X	X	X	X	X	X	X
ONACDAUXOUT				X	X	X	X	X
ONACDOUT				X	X	X	X	X
ONACWIN	X	X	X	X	X	X	X	X
ONACWOUT	X	X	X	X	X	X	X	X
ONAUXIN	X	X	X	X	X	X	X	X
ONAUXOUT	X	X	X	X	X	X	X	X
ONHOLD		X	X	X	X	X	X	X
OTHER	X	X	X	X	X	X	X	X
OTHERCALLS	X	X	X	X	X	X	X	X
OTHERTIME	X	X	X	X	X	X	X	X

Table 1-2: Switch Cross-Reference for Split/Skill Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
OUTFLOWCALLS	X	X	X	X	X	X	X	X
OUTFLOWTIME	X	X	X	X	X	X	X	X
PERIOD 1-9	X	X	X	X	X	X	X	X
PERIODCHG	X	X	X	X	X	X	X	X
PHANTOMABNS					X	X	X	X
POSITIONS	X	X	X	X	X	X	X	X
RINGCALLS			X	X	X	X	X	X
RINGTIME			X	X	X	X	X	X
ROW_DATE	X	X	X	X	X	X	X	X
SERVICELEVEL	X	X	X	X	X	X	X	X
SLVLABNS	X	X	X	X	X	X	X	X
SLVLOUTFLOWS	X	X	X	X	X	X	X	X
SPLIT	X	X	X	X	X	X	X	X
STAFFED	X	X	X	X	X	X	X	X
STARTTIME	X	X	X	X	X	X	X	X
SVCLEVELCHG	X	X	X	X	X	X	X	X
TAGINRING	t	t	t	t	t	t	t	t
TAVAILABLE	t	t	t	t	t	t	t	t
TDA_INACW					t	t	t	t
TDA_ONACD					t	t	t	t
TINACW	t	t	t	t	t	t	t	t
TINAUX	t	t	t	t	t	t	t	t
TINAUX0	t	t	t	t	t	t	t	t

Table 1-2: Switch Cross-Reference for Split/Skill Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
TINAUX1-9								EAS
TONACD	t	t	t	t	t	t	t	t
TONACDAUXOUT				t	t	t	t	t
TONACDOUT				t	t	t	t	t
TONACWIN	t	t	t	t	t	t	t	t
TONACWOUT	t	t	t	t	t	t	t	t
TONAUXIN	t	t	t	t	t	t	t	t
TONAUXOUT	t	t	t	t	t	t	t	t
TOPCALLS		X	X	X	X	X	X	X
TOTHER	t	t	t	t	t	t	t	t
TRANSFERRED	X	X	X	X	X	X	X	X
TSTAFFED	t	t	t	t	t	t	t	t

Agent Database Items

The Agent database item descriptions (Table 6) apply to real-time and historical items.

The **Type** column refers to **Cumulative (C)**, **Administrative (A)**, or **Status (S)** data. Cumulative and Administrative items typically apply to both the current and previous interval real-time table. Status items apply only to the current interval real-time tables.

Real-Time agent database items apply to the Current Interval Agent (`cagent`) and Previous Interval Agent (`pagent`) tables. The real-time indexes are **ACD**, **LOGID**, **POSITION**, and **SPLIT**.

Historical agent database items apply to the Intrahour Agent (`hagent`), Daily Agent (`dagent`), Weekly Agent (`wagent`), and Monthly Agent (`magent`) tables, except as noted. The historical indexes are **LOGID**, **SPLIT,** and **ROW_DATE**.

Table 6: Agent Database Items

Database Item	Description	Type
ABNCALLS	The number of split/skill ACD calls that were abandoned while ringing the agent's voice terminal (after being directed to the agent voice terminal, but before being answered). This includes calls considered abandoned because their talk time was less than the phantom-abandoned call timer. For Generic 3 switches, **ABNCALLS** includes **PHANTOMABNS**. Available on Generic 2 and Generic 3 switches.	C
ABNTIME	The time split/skill ACD callers waited while ringing the agent’s voice terminal before being abandoned. For Generic 3 switches, **ABNTIME** includes the time from when ringing starts until the agent releases the call for phantom-abandoned calls. Available on Generic 2 and Generic 3 switches.	C
ACD (index)	The ACD number for which data were collected.	A

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
ACD_RELEASE	The number of split/skill ACD calls that the agent released or dropped before the far end released. NOTE: The transfers and conferences are always recorded as agent-released calls. Available for Generic 3 switches.	C
ACDAUXOUTCALLS	The number of **AUXOUTCALLS** the agent made with at least one split/skill or direct agent ACD call on hold. This includes calls made to transfer or conference the ACD call. Available on Generic 2.2 and Generic 3 switches.	C
ACDCALLS	The number of calls that were queued to **SPLIT** and answered by this agent in this **SPLIT**. **ACDCALLS** includes **ACD_RELEASE** and **O_ACDCALLS.**	C
ACDONHOLD (real-time)	The number of direct agent and split/skill ACD calls on hold for the agent. Available on System 85, Generic 2, and Generic 3 switches.	S
ACDTIME	The talk time of all **ACDCALLS**. **ACDTIME** includes **O_ACDTIME**. It does not include **HOLDTIME except System 85 and Generic 2.1 switches**.	C
ACWINCALLS	The number of inbound extension calls received by the agent while in ACW for this split. This includes ACW for split/skill and direct agent ACD calls and ACW not associated with a call.	C
ACWINTIME	Talk time of all **ACWINCALLS** (does not include **HOLDTIME** except on System 85 and Generic 2.1 switches). **ACWINTIME** includes **DA_ACWINCALLS**.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
ACWOUTADJCALLS	The number of **ACWOUTCALLS** that were placed by an adjunct on behalf of an agent (keyboard-dialed). If such calls are placed to off-switch destinations, then they are also counted as **ACWOUTOFFCALLS**. Available on the Generic 2.2 switch with the ASAI Gateway Interface feature and on the Generic 3 switch with the ASAI feature.	C
ACWOUTCALLS	The number of outbound extension calls made by the agent or on behalf of the agent while in **ACW** for this split. This includes ACW for split/skill ACD calls and ACW not associated with a call. **ACWOUTCALLS** includes **ACWOUTADJCALLS, ACWOUTOFFCALLS, and DA_ACWOCALLS**.	C
ACWOUTOFFCALLS	The number of **ACWOUTCALLS** that were made to an off-switch location. If these calls were placed by an adjunct on behalf of the agent (keyboard-dialed), then they are also counted as **ACWOUTADJCALLS**. Available for external calls on Generic 2.2 and Generic 3 switches.	C
ACWOUTOFFTIME	The talk time of all **ACWOUTOFFCALLS** (does not include **HOLDTIME**). **ACWOUTOFFTIME** is included in **ACWOUTTIME**. Available for external calls on Generic 2.2 and Generic 3 switches.	C
ACWOUTTIME	The talk time of all **ACWOUTCALLS** (does not include **HOLDTIME** except System 85 and Generic 2.1). This includes time on **ACWOUTADJCALLS** and on **ACWOUTOFFCALLS**. **ACWOUTTIME includes ACWOUTOFFTIME.**	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
ACWTIME	The duration of all after call work associated with **ACDCALLS**, including **ACWINTIME and ACWOUTCALLS** received/made during call-associated ACW. NOTE: ACWTIME does not include the time spent in ACW not associated with an ACD call (that is, the agent pressed the ACW button while not on an ACD call). However, both ACWINTIME and ACWOUTTIME do include time spent on calls made or received while in ACW not associated with an ACD call. Therefore, the sum of ACWINTIME and ACWOUTIME may be greater than ACWTIME. ACWTIME includes ACWINTIME, ACWOUTTIME, DA_ACWTIME, and O_ACWTIME.	C
AGSTATE (real-time)	The agent's current **WORKMODE** and call **DIRECTION**, for example, AUXOUT.	S
AGTIME (real-time)	The elapsed time since the last agent WORKMODE change for any split/skill. This item is not reset if the DIRECTION changes, but WORKMODE remains the same. For example, if the agent goes from AUX to AUXOUT to AUX, AGTIME continues without resetting.	S
ANSRINGTIME	The time split/skill and direct agent ACD calls spent ringing at the agent's voice terminal before being answered. Available for ring-tracking on Generic 2 and Generic 3 switches.	C
ASSIST (real-time)	A request for supervisor assistance is active for this agent for any split/skill.	S
ASSISTS	The number of times the split/skill supervisor was called (supervisor assists) by the agent who was on a split/skill or direct agent ACD call or in call-related after call work (ACW).	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
AUXINCALLS	The number of inbound extension calls the agent received while in AUX (auxiliary work), AVAILABLE, or, for Generic 2.2 and Generic 3 switches, with an ACD or AUXIN / AUXOUT call on hold.	C
AUXINTIME	The talk time of all **AUXINCALLS** (does not include **HOLDTIME** except on System 85 and Generic 2.1 switches).	C
AUXOUTADJCALLS	The number of **AUXOUTCALLS** an adjunct processor or host computer placed on behalf of the agent (keyboard dialed). If such calls are placed to off-switch destinations, then they are also counted as **AUXOUTOFFCALLS.** Available for outbound calls on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C
AUXOUTCALLS	The number of outbound extension calls made by the agent or on behalf of the agent while in AUX work, AVAILABLE or, for Generic 2.2 and Generic 3 switches, with an ACD or AUXIN / AUXOUT call on hold. NOTE: Calls the agent makes to transfer or conference an ACD call are included as AUXOUT calls. **AUXOUTCALLS** includes **ACDAUXOUTCALLS**, **AUXOUTADJCALLS,** and **AUXOUTOFFCALLS**.	C
AUXOUTOFFCALLS	The number of **AUXOUTCALLS** that were made to an off-switch location. If these calls were placed by an adjunct on behalf of the agent (keyboard-dialed), then they are also counted as **AUXOUTADJCALLS**. Available for external calls on Generic 2.2 and Generic 3 switches.	C
AUXOUTOFFTIME	The talk time of all **AUXOUTOFFCALLS** (does not include **HOLDTIME**). This time is included in **AUXOUTTIME**. Available for external calls on Generic 2.2 and Generic 3 switches.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
AUXOUTTIME	The talk time of all **AUXOUTCALLS** (does not include **HOLDTIME** except on Generic 2.1 and System 85 switches). This includes time on **AUXOUTOFFCALLS** and **AUXOUTADJCALLS**. **AUXOUTTIME** includes **AUXOUTOFFTIME**.	C
AUXREASON	The reason code associated with the agent's current state. This is blank if the agent is not in the AUX state. For agents in AUX on releases that are earlier than *DEFINITY* ECS or that do not have EAS and reason codes active, this will only be 0.	S
AWORKMODE	The current work mode for the agent. This item is identical to **WORKMODE**, except when the agent is available in some, but not all, splits/skills. In this case, **AWORKMODE** is only set to AVAIL if the agent is available in **SPLIT**. Otherwise, **AWORKMODE** is set to OTHER.	S
CHANGED (real-time)	Time of day that new agent activity started (for example, when **WORKMODE** or **DIRECTION** changed). Valid values are blank and time-of-day.	S
CONFERENCE	The number of times the agent completed a conference, that is, pushed the conference key a second time). Available on Generic 3 and Generic 2.2 switches.	C
DA_ABNCALLS	The number of direct agent ACD calls that were abandoned by callers while in queue or ringing the agent's voice terminal. This includes calls considered abandoned because their talk time was less than the phantom-abandon call timer. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
DA_ABNTIME	The time **DA_ABNCALLS** spent queued and ringing before the caller abandoned. This includes the time until the agent releases the call for phantom-abandoned calls. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_ACDCALLS	The number of direct agent ACD calls that the agent answered. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling. **DA_ACDCALLS** includes **DA_RELEASE**.	C
DA_ACDTIME	The talk time of all **DA_ACDCALLS** (does not include **HOLDTIME**). Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_ACWINCALLS	The number of inbound extension calls answered by the agent while in ACW for direct agent ACD calls. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_ACWINTIME	The talk time of all **DA_ACWINCALLS** (does not include **HOLDTIME**). Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_ ACWOADJCALLS	The number of **DA_ACWINCALLS** that were placed by an ASAI adjunct on behalf of the agent (keyboard-dialed). If these calls were placed to off-switch destinations, they are also counted as **DA_ACWOFFCALLS**. Requires a Generic 3 switch with the ASAI.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
DA_ACWOCALLS	The number of outbound extension calls made by the agent while in ACW for direct agent ACD calls. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling. **DA_ACWOCALLS** includes **DA_ACWOADJCALLS** and **DA_ACWOOFFCALLS.**	C
DA_ ACWOOFFCALLS	The number of **DA_ACWOCALLS** that were made to an off-switch location. If these calls were placed by an adjunct on behalf of the agent (keyboard-dialed), they are also counted as **DA_ACWOADJCALLS**. Requires a Generic 3 switch with ASAI.	C
DA_ACWOOFFTIME	The talk time of all **DA_ACWOOFFCALLS** (does not include **HOLDTIME**). **DA_ACWOOFFTIME** is included in DA_ACWOTIME. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_ACWOTIME	The talk time of all DA_ACWOCALLS (does not include HOLDTIME). Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling. **DA_ACWOTIME** includes **DA_ACWOOFFTIME**.	C
DA_ACWTIME	The duration of ACW associated with **DA_ACDCALLS**, including time on **DA_ACWINCALLS** and **DA_ACWOCALLS**. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling. **DA_ACWTIME** includes **DA_ACWINTIME** and **DA_ACWOTIME**.	C
DA_ANSTIME	The time spent by callers in direct agent queue and ringing before being answered. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
DA_INQUEUE (real-time)	The current number of direct agent calls waiting in any split / skill's queue for this agent. Available on Generic 3 switches with direct agent calling (the ASAI or EAS feature is required).	S
DA_OLDESTCALL (real-time)	The length of time that the current oldest direct agent call has waited in any split / skill queue for this agent. Available on Generic 3 switches with direct agent calling (the ASAI or EAS feature is required).	S
DA_OTHERCALLS	The number of direct agent calls that were redirected to another destination. For example, by call pickup, coverage or Redirection on No Answer. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_OTHERTIME	The time spent in queue or ringing by **DA_OTHERCALLS** before being redirected. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_RELEASE	The number of direct agent ACD calls released or dropped by the agent before the far end released. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
DA_SKILL	The skill currently assigned as the agent's direct agent skill. Direct agent calls to the agent are queued to this skill. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	S
DESTINATION (real-time)	The type of outbound call destination for the call the agent is active on for any split / skill. Valid values are blank, PBX, and OFF.	S

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
DIRECTION (real-time)	The direction of the call the agent is currently handling for any split/skill. Valid values are blank, IN, OUT, or as defined in Dictionary). If the agent is not on a call, the value is blank.	S
DURATION (real-time)	The duration of current **WORKMODE** and **DIRECTION** for this **SPLIT** (for example, length of time in current **AGSTATE** for this **SPLIT**).	S
EVENT1-9	The number of times each event (stroke count) feature button (1 to 9) was pressed while the agent was on an ACD call or in call-related after call work. Available on System 85, Generic 2, and Generic 3 switches.	C
EXTENSION	The extension number for which data was collected.	A
HOLDABNCALLS	The number of times callers abandoned from hold. For Generic 3 and Generic 2.2 switches, **HOLDABNCALLS** includes all calls held. For System 85 and Generic 2.1 switches, **HOLDABNCALLS** includes split calls held.	C
HOLDACDTIME	The time split/skill and direct agent ACD calls spent on hold at the agent's voice terminal. This includes time on AUXIN or AUXOUT calls with the ACD calls on hold.	C
HOLDCALLS	The number of calls that were placed on hold at least once. For Generic 3 and Generic 2.2 switches, **HOLDCALLS** includes all calls. For System 85 and Generic 2.1 switches, **HOLDCALLS** includes split calls only. **HOLDCALLS** includes **HOLDABNCALLS**. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
HOLDTIME	The time spent by callers on hold. For Generic 3 and Generic 2.2 switches, **HOLDTIME** includes all calls. For System 85 and Generic 2.1 switches, **HOLDTIME** includes split calls only. **HOLDTIME** includes **HOLDACDTIME**.	C
I_ACDAUXINTIME	The time during the collection interval that the agent spent talking on AUXIN calls with at least one split / skill or direct agent ACD call on hold. For agents in multiple splits / skills, this time is recorded in the record in which **SPLIT** is **OLDEST_LOGON**. Available on Generic 2.2 and Generic 3 switches.	C
I_ACDAUX_ OUTTIME	The time during the collection interval that the agent spent dialing (Generic 2.2) and talking on AUXOUT calls with at least one split / skill or direct agent ACD call for this split / skill with the call on hold. Available on Generic 2.2 and Generic 3 switches.	C
I_ACDOTHERTIME	The time during the collection interval that the agent spent in the OTHER state (dialing an outgoing call, with a ringing personal call [Generic 3 switches], or with calls on hold and with no other state selected) with at least one split / skill or direct agent ACD call on hold. Available on Generic 2.2 and Generic 3 switches.	C
I_ACDTIME	The time during the collection interval that the agent was talking on ACD calls for **SPLIT**. This includes time spent on **O_ACDCALLS**. Does not include HOLDTIME except on System 85 and Generic 2.1 switches.	C
I_ACWINTIME	The time during the collection interval that the agent was in ACW for SPLIT and on inbound extension calls. This includes ACW for split / skill ACD calls and ACW not associated with a call. **I_ACWINTIME** does not include the time inbound ACW calls spent on hold except for System 85 and Generic 2.1 switches.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
I_ACWOUTTIME	The time during the collection interval that the agent was in **ACW** for **SPLIT** and on outbound extension calls. This includes ACW for split/skill ACD calls and ACW not associated with a call. **I_ACWOUTTIME** does not include the time outbound ACW calls spent on hold except for System 85 and Generic 2.1 switches.	C
I_ACWTIME	The time during the collection interval that the agent was in **ACW** for **SPLIT**. This includes ACW for split/skill ACD calls and ACW not associated with a call. **NOTE: I_ACWINTIME** and **I_ACWOUTTIME** include time in **ACW** for direct agent calls, but **I_ACWTIME** does not include this time. Therefore, the sum of **I_ACWINTIME** and **I_ACWOUTTIME** may be greater than **I_ACWTIME**. **I_ACWTIME** includes **I_ACWINTIME** and **I_ACWOUTTIME.**	C
I_AUXINTIME	The time during the collection interval that the agent was in AUX work, **AVAILABLE**, or for Generic 2.2 and Generic 3 switches, including time when an ACD or AUXIN/AUXOUT call is on hold and on inbound extension calls and **SPLIT** was the **OLDEST_LOGON.** **I_AUXINTIME** includes **I_ACDAUXINTIME**. It does not include **HOLDTIME** except for System 85 and Generic 2.1 switches.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
I_AUXOUTTIME	The time during the collection interval that the agent was in AUX work, AVAILABLE, or, for Generic 2.2 and Generic 3 switches, including time when an ACD or AUXIN / AUXOUT call on hold and on outbound extension calls. In the cases where the agent was in AUX work, AVAILABLE or had an AUXIN / AUXOUT call on hold, the AUXOUT time and calls are recorded for the SPLIT that is the **OLDEST_LOGON**. In the case where the agent had an ACD call on hold, **SPLIT** is the split or skill associated with the last ACD call put on hold. Does not include time AUXOUT calls spent on hold except for System 85 and Generic 2.1 switches. **I_AUXOUTTIME** includes **I_ACDAUX_OUTTIME**.	C
I_AUXTIME	The time the agent spent in AUX work in SPLIT. When an agent is in AUX work in multiple splits / skills, this time is recorded in each split or skill in which the agent is in AUX. **I_AUXTIME** includes **I_AUXINTIME** and **I_AUXOUTTIME**.	C
I_AVAILTIME	The time during the collection interval that the agent was available for calls in this split / skill.	C
I_DA_ACDTIME	The time during the collection interval that the agent spent talking on direct agent calls. Does not include **HOLDTIME**. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C
I_DA_ACWTIME	The time during the collection interval that the agent was doing after call work associated with direct agent ACD calls. Requires a Generic 3 switch with the ASAI or EAS feature for direct agent calling.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
I_OTHERTIME	The time during the collection interval that the agent was doing other work. For Generic 3 switches, other work includes: while in Auto-In or Manual-In mode, an agent put any call on hold and performed no further action; the agent had a direct agent call ringing, was on a direct agent call or in ACW for a direct agent call; the agent dialed to place a call or activate a feature; or a personal call rang at the agent with no other activity. For Generic 1 and Generic 3 switches without EAS, agents were logged into multiple splits and doing work for a split other than this one (on an ACD call, in call-related ACW, or ACD call ringing). For Generic 2.2, the agent pushed the Hold button or flashed the switchhook from auto-in or manual-in mode. For Generic 2.2 and Generic 3 switches with EAS, the agent was logged into multiple skills and doing work for a skill other than this one (on an ACD call, in call-related ACW, multiple-call handling skills). For all switches, **I_OTHERTIME** is collected for the time period after the link to the switch comes up or after the agent logs in and before the *CentreVu* CMS receives notification of the agent's state from the switch. **I_OTHERTIME** includes **I_ACDOTHERTIME.**	C
I_RINGTIME	The time during the collection interval that the agent had split/skill and direct agent ACD calls ringing. If the agent changes work modes or makes/receives another call instead of answering the ringing call, **I_RINGTIME** will stop accumulating. **RINGTIME** is the time the caller spends ringing and is independent of agent activity. Available on a Generic 2 and Generic 3 switch for ring tracking.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
I_STAFFTIME	The time during the collection interval that the agent was staffed (logged in) in this split/skill. **I_STAFFTIME** includes **I_ACDTIME, I_ACWTIME, I_AUXTIME, I_AVAILABLE, I_DA_ACDTIME, I_DA_ACWTIME, I_OTHERTIME**, and **I_RINGTIME**.	C
INCOMPLETE	This indicates whether or not data is complete for this collection interval. Data is incomplete whenever the link goes down and whenever tracking is aborted for calls, due to trunk failures (System 85 and Generic 2 switches), the trunk going maintenance busy with a call active (Generic 1 and Generic 3 switches), or to protocol failures. The value for interval tables indicates whether data is incomplete for the interval (0 = data complete, 1 = data incomplete). The value in the daily, weekly, and monthly tables indicates the number of incomplete intervals in the day, week, or month.	C
INTRVL	The number of minutes in the intrahour interval (15, 30, 60). **INTRVL** applies to intrahour intervals only.	A
LEVEL	The skill level (1-16) associated with **SPLIT**. Requires an ECS with EAS.	S
LOGID **(index)**	The Login ID that was used to staff the **EXTENSION**. Agents in multiple splits/skills have one **LOGID**.	A
LOGONSKILL **(real-time)**	The first split/skill the agent logged in with. Requires a Generic 2.2 or Generic 3 switch with EAS.	S
LOGONSKILL2-20 **(real-time)**	The second through twentieth skills the agent logged in with. The number of skills per agent depends on the type of switch. Requires a Generic 2.2 or Generic 3 switch with EAS.	S

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
LOGONSTART (real-time)	The time of day that the agent logon session started for this **SPLIT**. This field is not set unless the agent is logged in. If the agent has not logged in during the collection interval, the value will be blank. Valid values are blank and time-of-day.	S
MALICIOUS (real-time)	This indicates whether a malicious call trace is active for the agent for any split/skill. Available on Generic 2 and Generic 3 switches (except for Generic 3i Version 1 switches).	S
MOVEPENDING (real-time)	A move to a new split or skill or a change of skills is pending for this agent. This is only available for G3V4 and later switch releases with the “Move Agent While Staffed” feature.	S
NOANSREDIR	The number of split/skill and direct agent ACD calls that rang at this agent’s voice terminal and then were automatically redirected by the Redirection on No Answer feature because they were not answered. Split/skill ACD calls are requeued to the split/skill or to a VDN, direct agent ACD calls are redirected to the agent’s coverage path. Redirection On No Answer to a split/skill is available on *DEFINITY* ECS or Generic 3 Version 2 or later switches. Redirection On No Answer to a VDN is only available on *DEFINITY* ECS.	C
O_ACDCALLS	The number of **ACDCALLS** and **DA_ACDCALLS** that were placed by an adjunct (predictive dialing). Available for outbound calling on a Generic 2.2 switch with the ASAI Gateway Interface feature and on a Generic 3 switch with the ASAI feature.	C
O_ACDTIME	The talk time of all **O_ACDCALLS** (does not include **HOLDTIME**). This time is included in **ACDTIME**. Available for outbound calling on a Generic 2.2 switch with the ASAI Gateway Interface feature and on a Generic 3 switch with the ASAI feature.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
O_ACWTIME	The duration of all after call work associated with the **O_ACDCALLS**. This time is included in **ACWTIME**. Available for outbound calling on a Generic 2.2 switch with the ASAI Gateway Interface feature and on a Generic 3 switch with the ASAI feature.	C
OLDEST_LOGON (real-time)	The split/skill the agent has been logged into the longest. For Generic 2.2 switches with EAS, this is always the default (zero) skill. For Generic 3 switches with EAS, this is always the first administered skill.	S
ONHOLD (real-time)	The current number of calls for any split/skill on hold at the agent's station. For Generic 2.2 and Generic 3 switches, **ONHOLD** includes all calls. For System 85 and Generic 2.1 switches, **ONHOLD** includes split ACD calls only. **ONHOLD** includes **ACDONHOLD**.	S
ORIGIN (real-time)	The outbound call origination for the call the agent is currently talking on for any split/skill. Valid values for **ORIGIN** are blank, PHONE, and KEYBOARD (adjunct-dialed).	S
PENDINGSPLIT (real-time)	The split or skill to which the agent will be moved. The move is pending until the agent is idle. In the case of a change of multiple skills in one request, **PENDINGSPLIT** is set to the first new skill for the agent. It is possible for **PENDINGSPLIT** to be blank or 0, even when **MOVEPENDING** is set. This can happen when the link to the switch comes up and a move is pending for an agent. Available on Generic 3 Version 4 and later switches.	S

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
PHANTOMABNS	The number of ACD calls with talk time less than the value of the phantom- abandoned call timer. Available on Generic 3 switches.	C
POSITION (index)	The position number associated with this **EXTENSION**. Agents in multiple splits without EAS have multiple **POSITIONs**. Agents in multiple skills with EAS have a single **POSITION**.	A
PREFERENCE	The agent's call handling preference. Valid values are blank, skill level (LVL) or greatest need (NEED). Requires an ECS with EAS.	S
RINGCALLS	The number of split/skill (Generic 2 and Generic 3 switches) and direct agent ACD calls (Generic 3 switches) that rang at the agent's position. Available on Generic 2 and Generic 3 switches for ring tracking. **RINGCALLS** includes **NOANSREDIR**.	C
RINGTIME	The time split/skill and direct agent ACD calls spent ringing at the agent's position (independent of disposition or other agent activity). **I_RINGTIME** is the time the agent spends in the ringing state and is affected by other agent activity. **RINGTIME** is the time the caller spends ringing and is independent of agent activity. Available on Generic 2 and Generic 3 switches. **RINGTIME** includes **ANSRINGTIME**.	C
ROW_DATE (index)	The date on which data was collected.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
SKILLTYPE (real-time)	The type ("p" for primary or "s" for secondary) of the first skill that the agent logged into. Requires Generic 2.2 or Generic 3 Version 2 switches with EAS. **NOTE:** For the ECS and later EAS releases, skill level 1 will be represented by "p", skill level 2 by "s" and skill levels 3-16 by blank. Users of more than 2 skill levels should use **SKLEVEL** items instead of **SKILLTYPE** items.	S
SKILLTYPE2-4 (real-time)	The type ("p" for primary or "s" for secondary) of the second, third, and fourth skills the agent logged into. Requires Generic 2.2 or Generic 3 Version 2 switches with EAS. **NOTE:** For the ECS and later EAS releases, skill level 1 will be represented by "p", skill level 2 by "s" and skill levels 3-16 by blank. Users of more than 2 skill levels should use **SKLEVEL** items instead of **SKILLTYPE** items.	S
SKLEVEL	The skill level (from 1-16) associated with the first skill the agent logged into. Requires an ECS with EAS.	S
SKLEVEL2-20	The skill level (from 1-16) associated with the second through twentieth skills the agent logged into. Requires an ECS with EAS.	S
SPLIT (index)	The split number that this **EXTENSION** is assigned to or the skill number that the agent logged into.	A
STARTED (real-time)	Time of day that **WORKMODE** began. Valid values are NULL and time-of day.	S
STARTTIME	The start time for the interval for which the data was collected. **NOTE:** Applies only to the Interval table.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
TI_AUXTIME	Time during the collection interval that the agent was in **AUX** for all splits / skills or on **AUXINCALLS** or **AUXOUTCALLS**. "TI_" time is only stored for the split / skill logged in to the longest. "TI_" time needs to be summed across the splits / skills the agents may log in to, in case the login order changes during the collection interval. **sum(TI_AUXTIME) = sum(TI_AUXTIME0 + TI_AUXTIME1 + TI_AUXTIME2 + TI_AUXTIME3 + TI_AUXTIME4 + TI_AUXTIME5 + TI_AUXTIME6 + TI_AUXTIME7 + TI_AUXTIME8 + TI_AUXTIME9)**, over all splits / skills the agent was logged into. **TI_AUXTIME** includes **TI_AUXTIME0...AUXTIME9, I_AUXINTIME**, and **I_AUXOUTTIME.** Requires an ECS with the EAS feature.	C
TI_AUXTIME0	The time the agent spent in **AUX** with reason code 0. This is time in "system" AUX for switches with AUX reason codes active. It is the same as **TI_AUXTIME** for switches without AUX reason codes active. "TI_" time is only stored for the skill logged in to the longest. "TI_" time needs to be summed across the skills the agents may log in to, in case the login order changes during the collection interval. Requires an ECS with the EAS feature.	C
TI_AUXTIME1-9	The time the agent spent in AUX with reason codes 1-9. "TI_" time is only stored for the skill logged in to the longest. "TI_" time needs to be summed across the skills the agents may log in to, in case the login order changes during the collection interval. Requires an ECS with the EAS feature.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
TI_AVAILTIME	The time during the collection interval that the agent was in the available state for split/skill or direct agent ACD calls in any split/skill. **TI_AVAILTIME** is recorded for the split/skill that was the **OLDEST_LOGON**. For non-EAS operation, if an agent logged into multiple splits and is in AUX mode in one split and is available for ACD calls in another split, the agent will accrue **I_AVAILTIME** for the split in which the agent is available and **TI_AVAILTIME** in the split logged into the longest. "TI_" time is only stored for the split/skill logged into the longest. "TI_" time needs to be summed across the splits/skills the agents may log in to, in case the login order changes during the collection interval.	C
TI_OTHERTIME	The time during the collection interval that the agent was doing other work in all splits/skills. For Generic 3 switches, other work includes: while in Auto-In or Manual-In mode, the agent put any call on hold and performed no further action, the agent dialed to place a call or to activate a feature, or an extension call rang with no other activity. For Generic 2.2 switches, the agent pushed the Hold button or flashed the switchhook from auto-in or manual-in mode and performed no further action. For all switches, **TI_OTHERTIME** is collected for the time period after the link to the switch comes up or after the agent logs in and before the *CentreVu* CMS receives notification of the agent's state from the switch. "TI_" time is only stored for the split/skill logged into the longest. "TI_" time needs to be summed across the splits/skills the agents may log in to, in case the login order changes during the collection interval. **TI_OTHERTIME** includes **I_ACDOTHERTIME**.	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
TI_STAFFTIME	The time during the collection interval that the agent was staffed in any split/skill. "TI_" time is only stored for the split/skill logged into the longest. "TI_" time needs to be summed across the splits/skills the agents may log in to, in case the login order changes during the collection interval. **sum(TI_STAFFTIME) = sum(I_ACDTIME + I_ACWTIME + I_RINGTIME + I_DA_ACDTIME + I_DA_ACWTIME + TI_AUXTIME + TI_AVAILTIME + TI_OTHERTIME),** over all splits/skills the agent was logged into. **TI_STAFFTIME** includes **I_ACDTIME, I_ACWTIME, I_DA_ACDTIME, I_DA_ACWTIME, I_RINGTIME, TI_AUXTIME, TI_AVAILTIME,** and **TI_OTHERTIME.**	C
TOPSKILL	The agent's first-administered, highest-level, measured skill, where skill level 1 is the highest, skill level 16 is the lowest. Available on a Generic 3 switch with EAS.	S
TRANSFERRED	The number of times the agent completed a transfer, that is, pressed the transfer key the second time. For Generic 1 switches, this includes a measured call to a measured split or a measured trunk. For Generic 2.2 and Generic 3 switches, this includes transferring all calls. For System 85 and Generic 2.1 switches, this includes transferring all calls **to a measured VDN or split.**	C

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
TYPE **(real-time)**	The skill type ("p" for primary or "s" for secondary) associated with SPLIT. Available on Generic 3 switches with vectoring. NOTE: For the ECS and later EAS releases, skill level 1 will be represented by "p", skill level 2 by "s" and skill levels 3-16 by blank. Users of more than 2 skill levels should use **SKLEVEL** items instead of **SKILLTYPE** items.	S
VDN **(real-time)**	The vector directory number associated with the agent's current split / skill or direct agent ACD call. Available on a System 85, Generic 2, Generic 3 with vectoring, and Generic 3 Version 4 switch with EAS.	S
WORKMODE **(real-time)**	The current work mode of the agent. Valid agent work modes include: AVAIL, ACD, ACW, AUX, DACD, DACW, RING, UNKNOWN, OTHER, and UNSTAFF. If the agent has not been logged in during the collection interval, the value will be blank.	S
WORKSKILL **(real-time)**	When an agent is on a split / skill or direct agent ACD call or in ACW, this is the split / skill associated with the call or ACW. When an agent is available, in AUX or in OTHER, this is null (blank). When an agent is on an AUXIN / AUXOUT call, this is **OLDEST_LOGON** split / skill. When an agent is on an AUXIN / AUXOUT call from the available state, while in AUX or with an AUXIN / AUXOUT call on hold, this is **OLDEST_LOGON** split / skill. When an agent is on an AUXOUT call with an ACD call on hold, this is the split / skill associated with the ACD call. **WORKSKILL** differs from **WORKSPLIT** only in the case that the agent is available. In this case, **WORKSKILL** will be blank and **WORKSPLIT** will contain one of the split / skills in which the agent is available. Requires a Generic 2.2 or Generic 3 Version 2 or later switch with EAS.	S

Table 6: Agent Database Items (Contd)

Database Item	Description	Type
WORKSKLEVEL	The skill level associated with the agent's current **WORKSKILL**, when **WORKSKILL** is not null. Requires a Generic 2.2 or Generic 3 Version 2 or later switch with EAS.	S
WORKSPLIT (real-time)	When an agent is on a split / skill or direct agent ACD call or in ACW, this is the split / skill associated with the call or ACW. When an agent is available, this is one of the splits / skills the agent went available in. When an agent is on an AUXIN / AUXOUT call from the available state, while in AUX or with an AUXIN / AUXOUT call on hold, this is **OLDEST_LOGON** split / skill. When an agent is on an AUXIN call with an ACD call on hold, this is **OLDEST_LOGON** split / skill. When an agent is on an AUXOUT call with an ACD call on hold, this is the split / skill associated with the ACD call. **WORKSKILL** differs from **WORKSPLIT** only in the case that the agent is available. In this case, **WORKSKILL** will be blank and **WORKSPLIT** will contain one of the split / skills in which the agent is available. For releases with EAS active, it is recommended to use **WORKSKILL** instead of **WORKSPLIT** in reports.	S
WORKSPLIT2-20 (real-time)	For agents available in multiple splits / skills, other splits / skills in which the agent is available. Available on Generic 2.2 with EAS, Generic 1 and Generic 3 switches.	S

Switch Cross-Reference

Table 7 lists which Agent database items are supported by each of the switch releases.

Note The following is a key to the database items tables:

- Items marked “X” indicate that the database item is supported by a switch.
- Items marked “EAS” require that the Expert Agent Selection feature be active on the switch for the items to be populated.
- Items marked “e” are populated for the releases shown, but the values are only meaningful for EAS releases.
- Items marked “*” are populated for the releases shown, but the values are only meaningful for Generic 3 EAS releases, with skill level distribution of calls.

Table 7: Switch Cross-Reference for Agent Database Items

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ABNCALLS			X	X	X	X	X	X
ABNTIME			X	X	X	X	X	X
ACD	X	X	X	X	X	X	X	X
ACD_RELEASE					X	X	X	X
ACDAUXOUTCALLS				X	X	X	X	X
ACDCALLS	X	X	X	X	X	X	X	X
ACDONHOLD		X	X	X	X	X	X	X
ACDTIME	X	X	X	X	X	X	X	X
ACWINCALLS	X	X	X	X	X	X	X	X
ACWINTIME	X	X	X	X	X	X	X	X
ACWOUTADJCALLS				X	X	X	X	X
ACWOUTCALLS	X	X	X	X	X	X	X	X
ACWOUTOFFCALLS				X	X	X	X	X
ACWOUTOFFTIME				X	X	X	X	X

Table 7: Switch Cross-Reference for Agent Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ACWOUTTIME	X	X	X	X	X	X	X	X
ACWTIME	X	X	X	X	X	X	X	X
AGSTATE	X	X	X	X	X	X	X	X
AGTIME	X	X	X	X	X	X	X	X
ANSRINGTIME			X	X	X	X	X	X
ASSIST	X	X	X	X	X	X	X	X
ASSISTS	X	X	X	X	X	X	X	X
AUXINCALLS	X	X	X	X	X	X	X	X
AUXINTIME	X	X	X	X	X	X	X	X
AUXOUTADJCALLS				X	X	X	X	X
AUXOUTCALLS	X	X	X	X	X	X	X	X
AUXOUTOFFCALLS				X	X	X	X	X
AUXOUTOFFTIME				X	X	X	X	X
AUXOUTTIME	X	X	X	X	X	X	X	X
AUXREASON	X[a]	X*	X*	X*	X*	X*	X*	X*
AWORKMODE	X	X	X	X	X	X	X	X
CHANGED	X	X	X	X	X	X	X	X
CONFERENCE				X	X	X	X	X
DA_ABNCALLS					X	X	X	X
DA_ABNTIME					X	X	X	X
DA_ACDCALLS					X	X	X	X
DA_ACDTIME					X	X	X	X

Table 7: Switch Cross-Reference for Agent Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
DA_ACWINCALLS					X	X	X	X
DA_ACWINTIME					X	X	X	X
DA_ACWOADJCALLS					X	X	X	X
DA_ACWOCALLS					X	X	X	X
DA_ACWOOFFCALLS					X	X	X	X
DA_ACWOOFFTIME					X	X	X	X
DA_ACWOTIME					X	X	X	X
DA_ACWTIME					X	X	X	X
DA_ANSTIME					X	X	X	X
DA_INQUEUE					X	X	X	X
DA_OLDESTCALL					X	X	X	X
DA_OTHERCALLS					X	X	X	X
DA_OTHERTIME					X	X	X	X
DA_RELEASE					X	X	X	X
DA_SKILL								X
DESTINATION	X	X	X	X	X	X	X	X
DIRECTION	X	X	X	X	X	X	X	X
DURATION	X	X	X	X	X	X	X	X
EVENT1-9		X	X	X	X	X	X	X
EXTENSION	X	X	X	X	X	X	X	X
HOLDABNCALLS		X	X	X	X	X	X	X
HOLDACDTIME		X	X	X	X	X	X	X

Table 7: Switch Cross-Reference for Agent Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
HOLDCALLS		X	X	X	X	X	X	X
HOLDTIME		X	X	X	X	X	X	X
I_ACDAUXINTIME				X	X	X	X	X
I_ACDAUX_OUTTIME				X	X	X	X	X
I_ACDOTHERTIME				X	X	X	X	X
I_ACDTIME	X	X	X	X	X	X	X	X
I_ACWINTIME	X	X	X	X	X	X	X	X
I_ACWOUTTIME	X	X	X	X	X	X	X	X
I_ACWTIME	X	X	X	X	X	X	X	X
I_AUXINTIME	X	X	X	X	X	X	X	X
I_AUXOUTTIME	X	X	X	X	X	X	X	X
I_AUXTIME	X	X	X	X	X	X	X	X
I_AVAILTIME	X	X	X	X	X	X	X	X
I_DA_ACDTIME				X	X	X	X	X
I_DA_ACWTIME				X	X	X	X	X
I_OTHERTIME	X	X	X	X	X	X	X	X
I_RINGTIME			X	X	X	X	X	X
I_STAFFTIME	X	X	X	X	X	X	X	X
INCOMPLETE	X	X	X	X	X	X	X	X
INTRVL	X	X	X	X	X	X	X	X
LEVEL								EAS
LOGID	X	X	X	X	X	X	X	X

Table 7: Switch Cross-Reference for Agent Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
LOGONSKILL	e	e	e	e	e	e	e	e
LOGONSKILL2-4				EAS		EAS	EAS	EAS
LOGONSKILL5				EAS				EAS
LOGONSKILL6-20								EAS
LOGONSTART	X	X	X	X	X	X	X	X
MALICIOUS			X	X	X (not G3i)	X	X	X
MOVEPENDING							X	X
NOANSREDIR						X	X	X
O_ACDCALLS				X	X	X	X	X
O_ACDTIME				X	X	X	X	X
O_ACWTIME				X	X	X	X	X
OLDEST_LOGON	X	X	X	X	X	X	X	X
ONHOLD		X	X	X	X	X	X	X
ORIGIN	X	X	X	X	X	X	X	X
PENDINGSPLIT							X	X
PHANTOMABNS					X	X	X	X
POSITION	X	X	X	X	X	X	X	X
PREFERENCE								X
RINGCALLS			X	X	X	X	X	X
RINGTIME			X	X	X	X	X	X
ROW_DATE	X	X	X	X	X	X	X	X

Table 7: Switch Cross-Reference for Agent Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
SKILLTYPE						EAS	EAS	X[b]
SKILLTYPE2-4						EAS	EAS	X[†]
SKLEVEL						EAS	EAS	EAS
SKLEVEL2-4						EAS	EAS	EAS
SKLEVEL5-20								EAS
SPLIT	X	X	X	X	X	X	X	X
STARTED	X	X	X	X	X	X	X	X
STARTTIME	X	X	X	X	X	X	X	X
TI_AUXTIME	X	X	X	X	X	X	X	X
TI_AUXTIME0	X	X	X	X	X	X	X	X
TI_AUXTIME1-9								EAS
TI_AVAILTIME	X	X	X	X	X	X	X	X
TI_OTHERTIME	X	X	X	X	X	X	X	X
TI_STAFFTIME	X	X	X	X	X	X	X	X
TOPSKILL	X	X	X	X	X	X	X	X
TRANSFERRED	X	X	X	X	X	X	X	X
TYPE						EAS	EAS	EAS
VDN		X	X	X	X	X	X	X
WORKMODE	X	X	X	X	X	X	X	X
WORKSKLEVEL						EAS	EAS	EAS
WORKSKILL	X	X	X	X	X	X	X	X
WORKSPLIT	X	X	X	X	X	X	X	X

Table 7: Switch Cross-Reference for Agent Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
WORKSPLIT2-3	X			EAS	X	X	X	X
WORKSPLIT4				EAS		X	X	X
WORKSPLIT5				EAS				EAS
WORKSPLIT6-20								EAS

a. These items are populated with 0 unless the switch release is the ECS or later with EAS and reason codes enabled.

b. These items are populated with “p” for skill level 1, “s” for skill level 2, and “blank” for skill levels 3-16. Customers with the ECS or later EAS should use the SKLEVEL items instead to see all skill levels.

Trunk Group Database Items

The Trunk Group database item descriptions (Table 8) apply to real-time and historical items.

The **Type** column refers to **Cumulative (C)**, **Administrative (A)**, or **Status (S)** data. Cumulative and Administrative items typically apply to both the current and previous interval real-time table. Status items apply only to the current interval real-time tables.

Real-Time trunk group database items apply to the Current Interval Trunk Group (`ctkgrp`) and Previous Interval Trunk Group (`ptkgrp`) tables. The real-time indexes are **ACD** and **TKGRP**.

Historical trunk group database items apply to the Intrahour Trunk Group (`htkgrp`), Daily Trunk Group (`dtkgrp`), Weekly Trunk Group (`wtkgrp`), and Monthly Trunk Group (`mtkgrp`) tables, except as noted. The historical indexes are **ROW_DATE** and **TKGRP**.

Table 8: Trunk Group Database Items

Database Item	Description	Type
ABNCALLS	The number of calls carried by this trunk group that were abandoned by the caller before being answered by an agent. Calls directly to unmeasured stations that did not go through a measured VDN or split/skill are not recorded. For Generic 2.2 and Generic 3 switches, this is all calls abandoned by the caller that were carried by this trunk group, except for calls directly to unmeasured stations that did not go through a measured VDN or split/skill. This includes ACD calls and calls that routed to an agent or extension with talk times less than the phantom-abandoned call timer value. For Generic 2.1 and System 85 switches, this is ACD calls that abandon from the split queue or from ringing, and calls that abandon from vector processing. For Generic 3 Version 1, Generic 2.1, and System 85 switches, calls that abandon while listening to a forced disconnect are also included in **ABNCALLS**. For Generic 1 switches, this is ACD calls that abandon from queue or from ringing. **ABNCALLS** includes **ABNVECCALLS**, **ABNQUEUECALLS**, and **ABNRINGCALLS**.	C
ABNQUECALLS	The number of **ABNCALLS** that were abandoned while in a split/skill or direct agent queue. Available on System 85, Generic 2, and Generic 3 switches. For System 85 switches, **ABNQUECALLS** includes calls that abandon from ringing.	C
ABNRINGCALLS	The number of split/skill **ABNCALLS** that abandoned by the caller while ringing at an agent position. Available on Generic 2 and Generic 3 switches.	C

Table 8: Trunk Group Database Items (Contd)

Database Item	Description	Type
ABNVECCALLS	The number of **ABNCALLS** that abandoned while in vector processing. This includes vector calls that abandoned while in queue or while ringing at an agent position. Available on System 85, Generic 2, and Generic 3 switches with vectoring. **ABNVECCALLS** includes **ABNQUECALLS** and **ABNRINGCALLS**.	C
ACD (index)	ACD number for which data was collected	A
ACDCALLS	The number of **INCALLS** that were answered by an agent as a split/skill or direct agent ACD call. **ACDCALLS** includes **BACKUPCALLS**.	C
ADJUNCTOUT (real-time)	The current number of **OUTBOUND** calls an adjunct processor originated. Available on Generic 2.2 switches with the ASAI feature and Generic 3 switches with the ASAI gateway.	S
ALLINUSE (real-time)	This indicates if all trunks in the trunk group are currently being used (on calls or maintenance busy). Values for **ALLINUSE** are YES and NO	S
ALLINUSETIME	The length of time during the interval that all trunks in the trunk group are in use (on calls or maintenance busy).	C
AUDIO	The number of calls for which audio difficulty problems were reported for trunks in this trunk group. Available on System 85, Generic 2, and Generic 3 switches.	C

Table 8: Trunk Group Database Items (Contd)

Database Item	Description	Type
BACKUPCALLS	The number of **ACDCALLS** that were delivered to and answered by this split/skill by a vector command other than “queue to main”. This includes calls delivered by “messaging split/skill”, “check backup”, and “route to split/skill” vector commands, direct agent calls, and redirect on no answer routing. Calls answered in a main split/skill can be calculated as **ACDCALLS - BACKUPCALLS**. Available on System 85, Generic 2, and Generic 3 switches with vectoring.	C
BH_ABNCALLS	The number of incoming calls carried by the trunk group that abandoned during the busy hour.	C
BH_ACDCALLS	The number of incoming ACD calls carried by this trunk group that were answered by an agent as split/skill or direct agent ACD calls and completed during the busy hour.	C
BH_ALLINUSETIME	The length of time during the busy hour that all trunks in the trunk group were in use.	C
BH_BUSYCALLS	The number of incoming calls carried by this trunk group during the busy hour that were given a busy signal by the switch.	C
BH_DISCCALLS	The number of incoming calls carried by this trunk group during the busy hour that were forced to disconnect by the switch.	C
BH_INCALLS	The number of incoming calls carried by this trunk group that completed during the busy hour. **BH_INCALLS** includes **BH_ABNCALLS**, **BH_ACDCALLS**, and **BH_OTHERCALLS**.	C
BH_INTIME	The trunk holding time of all incoming calls carried by this trunk group that completed during the busy hour.	C

Table 8: Trunk Group Database Items (Contd)

Database Item	Description	Type
BH_OABNCALLS	The number of outgoing adjunct-originated calls carried by the trunk group that abandoned during the busy hour. Available on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C
BH_OACDCALLS	The number of outgoing adjunct-originated ACD calls carried by the trunk group and answered by an agent as split/skill or direct agent ACD calls that completed during the busy hour. Available on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C
BH_ OOTHERCALLS	The number of outgoing calls carried by the trunk group during the busy hour that were not answered or abandoned as ACD calls. **BH_OOTHERCALLS** includes extension out calls, outbound call management calls forced busy or forced disconnect, short outgoing calls, and outgoing calls with unknown disposition.	C
BH_OTHERCALLS	The number of incoming calls carried by the trunk group during the busy hour that were not answered or abandoned. **BH_OTHERCALLS** include extension in calls, calls forced busy or disconnected, calls that outflowed off the switch, short inbound calls, and inbound calls of unknown disposition. **BH_OTHERCALLS** includes **BH_BUSYCALLS** and **BH_DISCCALLS**.	C
BH_OUTCALLS	The number of outgoing calls carried by the trunk group that completed during the busy hour. **BH_OUTCALLS** includes **BH_OABNCALLS**, **BH_OACDCALLS**, and **BH_OOTHERCALLS**.	C

Table 8: Trunk Group Database Items (Contd)

Database Item	Description	Type
BH_OUTTIME	The trunk holding time of all outgoing calls carried by the trunk group that completed during the busy hour.	C
BH_STARTTIME	The starting time of the hour for which busy hour data was collected. The busy hour is that set of contiguous intervals during the day totaling an hour in which the trunk holding time for the trunk group was a maximum.	C
BLOCKAGE	The number of outbound call attempts that were blocked because all trunks were busy. Available on System 85 and Generic 2 switches.	C
BUSYCALLS	The number of **INCALLS** that were given a busy signal by the switch. This can occur on all switches via the “busy" vector command. **BUSYCALLS** can occur on Generic 1 and Generic 3 switches without vectoring when a split queue is full or there are no queue slots, no busy coverage is administered, and an announcement has played or the trunk is not a CO trunk. On Generic 3 switches, **BUSYCALLS** can occur if a call is routed to a split/skill with coverage set to “yes” where there are no agents available, the queue is full (or there is no queue), there is no coverage, and an announcement has played or the trunk is not a CO trunk. Also on Generic 3 switches, **BUSYCALLS** can occur if a call is routed to a direct agent with coverage set to “yes”, the agent is not logged in and there is no coverage path administered, an announcement has played, or the trunk is not a CO trunk.	C
COMPLETED	The number of **OUTCALLS** that were completed (far end answered). Available on Generic 1 and Generic 3 switches.	C

Table 8: Trunk Group Database Items (Contd)

Database Item	Description	Type
CONNECTCALLS	The number of **INCALLS** that were answered at a station and were not split/skill or direct agent ACD calls.	C
DISCCALLS	With Generic 2.2 switches, the number of **INCALLS** that were disconnected by the switch by the “disconnect" vector command. With System 85, Generic 2.1, Generic 3 Version 1 and Generic 3 Version 2 (prior to load 100) switches, the number of **INCALLS** that were given a forced disconnect announcement, listened to the entire announcement, then were disconnected by the switch. The disconnect announcement is for a disconnect vector command. With Generic 3 Version 2 and later Generic 3 switches, the number of **INCALLS** that executed the “disconnect” vector command. This also includes the number of **INCALLS** that were disconnected by the switch when the vector disconnect timer expired or that reached the end of vector processing without being queued.	C
FAILURES	The number of trunk failures for this **TKGRP**. No time or call is recorded in any of the *CentreVu* CMS tables. Trunk failures can be due to trunk sequencing failures (usually hardware problems on the trunk or incompatible trunk types on either end of a call) or due to internal switch errors (such as errors in call processing or vectoring translations). This item does not include calls with short holding times. Available on System 85 and Generic 2 switches. The FAILURES database item is not populated for Generic 1 and Generic 3 switches because trunks that fail are automatically placed in the maintenance busy state.	C

Table 8: Trunk Group Database Items (Contd)

Database Item	Description	Type
I_INOCC	The total time during the collection interval that trunks in the trunk group were occupied by incoming calls. If an incoming call on a measured trunk is transferred off the switch, the incoming trunk remains in use for the call and accrues trunk holding time until the caller drops or the call is released.	C
I_OUTOCC	The time during the collection interval that trunks in this trunk group were occupied by outgoing calls.	C
INBOUND (real-time)	The current number of trunks in the trunk group that are busy on inbound calls.	S
INCALLS	The number of inbound calls that were carried by this **TKGRP** and that completed during the collection interval. **INCALLS** includes **ABNCALLS**, **ACDCALLS**, **OTHERCALLS**, **CONNECTCALLS**, and **TRANSFERRED.** **INCALLS** = **ACDCALLS** + **ABNCALLS** + **OTHERCALLS**	C
INCOMPLETE	This indicates whether or not data is complete for this collection interval. Data is incomplete whenever the link goes down and whenever tracking is aborted for calls, due to trunk failures (System 85 and Generic 2 switches), the trunk going maintenance busy with a call active (Generic 1 and Generic 3 switches), or protocol failures. The value for interval tables indicates whether data is incomplete for the interval (0 = data complete, 1 = data incomplete). The value in the daily, weekly, and monthly tables indicates the number of incomplete intervals in the day, week, or month.	C

Table 8: Trunk Group Database Items (Contd)

Database Item	Description	Type
INTIME	The trunk holding time for all **INCALLS** carried by trunks in this trunk group that completed during the collection interval. Trunk holding time is the time from the initial trunk seizure until the trunk goes idle (that is, until the caller drops, the agent releases the call, or the switch disconnects the call). If an incoming call on a measured trunk is transferred off the switch, the incoming trunk remains in use for the call and accrues trunk holding time until the caller drops or the call is released.	C
INTRVL	The number of minutes in the intrahour interval (15, 30, or 60). **INTRVL** applies to intrahour tables only.	A
MBUSY (real-time)	The current number of trunks in the trunk group that are maintenance busy.	S
MBUSYTIME	The total time during the collection interval that trunks in the trunk group were maintenance busy.	C
NUMINUSE (real-time)	The current number of **TRUNKS** that are busy (on calls or maintenance busy). **NUMINUSE** = **INBOUND** + **OUTBOUND** + **MBUSY**	S
O_ABNCALLS	The number of **OUTCALLS** on this trunk group that were offered by an adjunct as split/skill or direct agent ACD calls and were abandoned by the far end. Available on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C
O_ACDCALLS	The number of **OUTCALLS** from this trunk group that were offered by an adjunct as split/skill or direct agent ACD calls and were answered by an agent. Available on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C

Table 8: Trunk Group Database Items (Contd)

Database Item	Description	Type
O_OTHERCALLS	The number of **OUTCALLS** on this trunk group that were not answered or abandoned as ACD split/skill calls. These include extension out calls, calls forced busy and forced disconnected, short outgoing calls, and calls with unknown dispositions. **O_OTHERCALLS** includes **SHORTCALLS**.	C
OTHERCALLS	The number of **INCALLS** carried by this trunk group that were not answered as split/skill or direct agent ACD calls or abandoned. These include forced busy calls, forced disconnect calls, calls that were connected to a non-ACD destination, short inbound calls, calls that outflowed off the switch, and calls with unknown dispositions. **OTHERCALLS** includes **BUSYCALLS**, **DISCCALLS**, **SHORTCALLS, and CONNECTCALLS**. **OTHERCALLS** = **INCALLS - ACDCALLS - ABNCALLS**	S
OUTBOUND (real-time)	The current number of trunks in this trunk group that are busy on outbound calls. **OUTBOUND** includes **ADJUNCTOUT**.	S
OUTCALLS	The number of outbound calls that were carried by this **TKGRP** and were completed during the collection interval. **OUTCALLS** includes **COMPLETED**, **O_ABNCALLS**, **O_ACDCALLS**, **O_OTHERCALLS**, **TRANSFERRED, and SHORTCALLS.** **OUTCALLS** = **O_ACDCALLS** + **O_ABNCALLS** + **O_OTHERCALLS**	C

Table 8: Trunk Group Database Items (Contd)

Database Item	Description	Type
OUTTIME	The trunk holding time for all **OUTCALLS** carried by trunks in this trunk group that completed during the collection interval. Trunk holding time is the time from the initial trunk seizure until the trunk goes idle (that is, until the far end drops, the agent releases the call, or the switch disconnects the call). **OUTTIME** includes **SETUPTIME**.	C
ROW_DATE (index)	The day for which data was collected.	A
SETUPTIME	Amount of time from trunk seizure until **OUTCALLS** completed at the far end. Available on Generic 1 and Generic 3 switches.	C
SHORTCALLS	The number of inbound and outbound calls that occupied a trunk in the trunk group for less than 2 seconds and that did not queue to a split/skill, forward to a split/skill, get answered by an agent, get a forced busy or forced disconnect from the switch, or produce a trunk failure or maintenance busy. Note that **SHORTCALLS** includes both inbound and outbound calls. Therefore, **OTHERCALLS** and **O_OTHERCALLS** may each include some **SHORTCALLS**.	C
SPLIT	The split/skill to which this **TKGRP** terminates.	A
STARTTIME (real-time)	The start time of the interval for which data was collected. Applies to the interval table only.	S
TKGRP (index)	The trunk group number for which data was collected. This will be zero if the trunk group carrying the call is not measured	A

Table 8: Trunk Group Database Items (Contd)

Database Item	Description	Type
TRANSFERRED	The number of calls that were transferred to another destination. Note the **TRANSFERRED** includes both inbound and outbound calls. Therefore, **ACDCALLS** and **O_ACDCALLS**, and **OTHERCALLS** and **O_OTHERCALLS** may each include some **TRANSFERRED**. For Generic 1 switches, **TRANSFERRED** includes measured call-to-measured split or measured trunk-to-measured trunk transfers. For System 85 and Generic 2.1 switches, **TRANSFERRED** includes transfers to measured VDNs or splits/skills. For Generic 3 and Generic 2.2 switches, **TRANSFERRED** includes all calls.	C
TRUNKS	The current number of trunks assigned to this **TKGRP**.	A
VDN	The VDN to which the **TKGRP** terminates. Available on System 85, Generic 2, and Generic 3 switches with vectoring.	A
VECTOR	The vector to which this trunk group's **VDN** terminates. Available on System 85, Generic 2, and Generic 3 switches with vectoring.	A

Switch Cross-Reference

Table 9 lists the Trunk Group database items are supported by each of the switch releases.

Table 9: Switch Cross-Reference for Trunk Group Database Items

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ABNCALLS	X	X	X	X	X	X	X	X
ABNQUECALLS	X	X	X	X	X	X	X	X
ABNRINGCALLS			X	X	X	X	X	X
ABNVECCALLS		X	X	X	X	X	X	X
ACD (index)	X	X	X	X	X	X	X	X
ACDCALLS	X	X	X	X	X	X	X	X
ADJUNCTOUT				X	X	X	X	X
ALLINUSE	X	X	X	X	X	X	X	X
ALLINUSETIME	X	X	X	X	X	X	X	X
AUDIO		X	X	X	X	X	X	X
BH_ABNCALLS	X	X	X	X	X	X	X	X
BH_ACDCALLS	X	X	X	X	X	X	X	X
BH_ALLINUSETIME	X	X	X	X	X	X	X	X
BH_BUSYCALLS	X	X	X	X	X	X	X	X
BH_DISCCALLS		X	X	X	X	X	X	X
BH_INCALLS		X	X	X	X	X	X	X
BH_INTIME		X	X	X	X	X	X	X
BH_OABNCALLS				X	X	X	X	X
BH_OACDCALLS				X	X	X	X	X
BH_OOTHERCALLS	X	X	X	X	X	X	X	X

Table 9: Switch Cross-Reference for Trunk Group Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
BH_OTHERCALLS	X	X	X	X	X	X	X	X
BH_OUTCALLS	X	X	X	X	X	X	X	X
BH_OUTTIME	X	X	X	X	X	X	X	X
BH_STARTTIME	X	X	X	X	X	X	X	X
BACKUPCALLS		X	X	X	X	X	X	X
BLOCKAGE		X	X	X				
BUSYCALLS	X	X	X	X	X	X	X	X
COMPLETED	X				X	X	X	X
CONNECTCALLS	X	X	X	X	X	X	X	X
DISCCALLS		X	X	X	X	X	X	X
FAILURES		X	X	X				
I_INOCC	X	X	X	X	X	X	X	X
I_OUTOCC	X	X	X	X	X	X	X	X
INBOUND	X	X	X	X	X	X	X	X
INCALLS	X	X	X	X	X	X	X	X
INCOMPLETE	X	X	X	X	X	X	X	X
INTIME	X	X	X	X	X	X	X	X
INTRVL	X	X	X	X	X	X	X	X
MBUSY	X	X	X	X	X	X	X	X
MBUSYTIME	X	X	X	X	X	X	X	X
NUMINUSE	X	X	X	X	X	X	X	X
O_ABNCALLS				X	X	X	X	X
O_ACDCALLS				X	X	X	X	X

Table 9: Switch Cross-Reference for Trunk Group Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
O_OTHERCALLS	X	X	X	X	X	X	X	X
OTHERCALLS	X	X	X	X	X	X	X	X
OUTBOUND	X	X	X	X	X	X	X	X
OUTCALLS	X	X	X	X	X	X	X	X
OUTTIME	X	X	X	X	X	X	X	X
ROW_DATE	X	X	X	X	X	X	X	X
SETUPTIME	X				X	X	X	X
SHORTCALLS	X	X	X	X	X	X	X	X
SPLIT	X	X	X	X	X	X	X	X
STARTTIME	X	X	X	X	X	X	X	X
TKGRP	X	X	X	X	X	X	X	X
TRANSFERRED	X	X	X	X	X	X	X	X
TRUNKS	X	X	X	X	X	X	X	X
VDN		X	X	X	X	X	X	X
VECTOR		X	X	X	X	X	X	X

Trunk Database Items

The Trunk database item descriptions (Table 10) apply to real-time and historical items.

The **Type** column refers to **Cumulative (C)**, **Administrative (A)**, or **Status (S)** data. Cumulative and Administrative items typically apply to both the current and previous interval real-time table. Status items apply only to the current interval real-time tables.

Real-Time trunk database items apply to the Current Interval Trunk (`ctrunk`) and Previous Interval Agent (`ptrunk`) tables. The real-time indexes are **ACD**, **ITN**, **EQLOC**, and **TKGRP**.

Historical trunk database items apply to the Intrahour Trunk (`htrunk`), Daily Trunk (`dtrunk`), Weekly Trunk Group (`wtrunk`), and Monthly

Trunk (`mtrunk`) tables, except as noted. The historical indexes are **EQLOC**, **ROW_DATE** and **TKGRP**.

Table 10: Trunk Database Items

Database Item	Description	Type
ABNCALLS	The number of calls carried by this trunk that were abandoned by the caller before being answered by an agent. For Generic 2.2 and Generic 3 switches, this is all calls abandoned by the caller that were carried by this trunk, except for calls directly to unmeasured stations that did not go through a VDN or split/skill. For Generic 3 switches, this includes ACD calls and calls that routed to an agent or extension with talk times less than the phantom-abandoned call timer value. For Generic 2.1 and System 85 switches, this is ACD calls that abandon from the split queue or from ringing, calls that abandon from vector processing and calls that abandon after being routed to an extension (via the “route to" vector command). For Generic 3 Version 1, Generic 2.1, and System 85 switches, calls that abandon while listening to a forced disconnect announcement are also included. For Generic 1 switches, this is ACD calls that abandon from queue or ringing.	C
ACD (index)	The ACD number for which data was collected.	A
ACDCALLS	The number of **INCALLS** that were answered by an agent as a split/skill or direct agent ACD call.	C
AUDIO	The number of calls for which audio difficulty problems were reported for this trunk. Available on System 85, Generic 2, and Generic 3 switches.	C
CALLING_LOGID	The Login ID of the agent originating the current call on this trunk. This is NULL when the trunk idles.	S

Table 10: Trunk Database Items (Contd)

Database Item	Description	Type
DIRECTION (real-time)	The current call direction of the trunk (IN, OUT, or as defined in Dictionary). The value is blank (NULL) if the trunk is idle.	S
DURATION (real-time)	The current length of time the trunk has been in **TKSTATE**.	S
EQLOC (index)	The physical equipment location (trunk number) for which data was collected.	A
EXTENSION (real-time)	The extension to which this trunk is currently queued, ringing, or connected.	S
FAILURES	The number of trunk failures for this trunk. No time or call is recorded in any of the *CentreVu* CMS tables. Trunk failures can be due to trunk sequencing failures (usually hardware problems on the trunk or incompatible trunk types on either end of a call) or due to internal switch errors (such as errors in call processing or vectoring translations). This item does not include calls with short holding times. Available on System 85 and Generic 2 switches. The FAILURES database item is not populated for Generic 1 and Generic 3 switches because trunks that fail are automatically placed in the maintenance busy state.	C
I_INOCC	The total time during the collection interval that the trunk was occupied by inbound calls. If an incoming call on a measured trunk is transferred off the switch, the incoming trunk remains in use for the call and accrues trunk holding time until the caller drops or the call is released.	C
I_OUTOCC	The total time during the collection interval that this trunk was occupied by outbound calls.	C

Table 10: Trunk Database Items (Contd)

Database Item	Description	Type
INCALLS	The number of inbound calls carried by this trunk that completed during the collection interval. This includes **SHORTCALLS** but does not include **FAILURES**. **INCALLS** = **ABNCALLS** + **ACDCALLS** + **OTHERCALLS**	C
INCOMPLETE	This indicates whether or not data is complete for this collection interval. Data is incomplete whenever the link goes down and whenever tracking is aborted for calls, due to trunk failures (System 85 and Generic 2 switches), the trunk going maintenance busy with a call active (Generic 1 and Generic 3 switches), protocol failures, or when split/skill or VDN call profile is changed with data collection active. The value for interval tables indicates whether data is incomplete for the interval (0 = data complete, 1 = data incomplete). The value in the daily, weekly, and monthly tables indicates the number of incomplete intervals in the day, week, or month. Changing split/skill or VDN call profile data while data collection is active only affects the respective split/skill or VDN data.	C
INTIME	The trunk holding time for all **INCALLS** carried by this trunk that completed during the collection interval. Trunk holding time is the time from the initial trunk seizure until the trunk goes idle (that is, until the caller drops, the agent releases the call, or the switch disconnects the call). If an incoming call on a measured trunk is transferred off the switch, the incoming trunk remains in use for the call and accrues trunk holding time until the caller drops or the call is released.	C
INTRVL	The number of minutes in the intrahour interval (15, 30, or 60). **INTRVL** applies to intrahour intervals only.	A
ITN **(index)**	The internal trunk number of the trunk.	A

Table 10: Trunk Database Items (Contd)

Database Item	Description	Type
LOGID (real-time)	The Login ID of the agent handling the call currently carried by this trunk. This is blank (NULL) when the trunk is idle.	S
MBUSYTIME	The total time during the collection interval that this trunk was maintenance busy.	C
O_ABNCALLS	The number of **OUTCALLS** on this trunk that were offered by an adjunct as split/skill or direct agent ACD calls and were answered then abandoned by the far end before talking to an agent. Available on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C
O_ACDCALLS	The number of **OUTCALLS** from this trunk that were offered by an adjunct as split/skill or direct agent ACD calls and were answered by an agent in one of those splits/skills. Available on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.	C
O_OTHERCALLS	The number of **OUTCALLS** on this trunk that were not answered as ACD split/skill calls or abandoned. These include extension out calls, forced busy calls, short outgoing calls, and calls with unknown dispositions. **O_OTHERCALLS** includes **SHORTCALLS**.	C
OTHERCALLS	The number of **INCALLS** carried by this trunk that were not answered or abandoned as split/skill or direct agent ACD calls. These include forced busy calls, forced disconnect calls, calls that were connected to a non-ACD destination, short inbound calls, and calls with unknown dispositions. **OTHERCALLS** includes **BUSYCALLS**, **DISCCALLS**, and **SHORTCALLS**. **OTHERCALLS = INCALLS - ACDCALLS - ABNCALLS**	S

Table 10: Trunk Database Items (Contd)

Database Item	Description	Type
OUTCALLS	The number of outbound calls that were carried by the trunk and were completed during the collection interval. **OUTCALLS** = **O_ACDCALLS** + **O_ABNCALLS** + **O_OTHERCALLS**	C
OUTTIME	The trunk holding time for all **OUTCALLS** carried by this trunk that completed during the collection interval. Trunk holding time is the time from the initial trunk seizure until the trunk goes idle (that is, until the far end drops, the agent releases the call, or the switch disconnects the call).	C
PRIORITY (real-time)	The priority at which call was queued. Without vectoring, the values are YES, NO, or as defined in Dictionary. With vectoring, the values are LOW, MED, HIGH, TOP, or as defined in Dictionary. This is blank (NULL) when the call is dequeued (when the call rings at an agent, outflows or dequeues from the split/skill, the call abandons from queue, the call gets a forced busy or a forced disconnect). Generic 3 switches with vectoring use MED for “no priority” and HIGH for “priority” calls that queue directly to a split/skill without going through a vector, and calls that queue to a split/skill by “route to” number or “messaging split/skill” vector commands.	S
PRIORITY2-3 (real-time)	The priority at which call was queued to a second or third split/skill, the values are: LOW, MED, HIGH, TOP, or as defined in Dictionary. This is blank (NULL) when the call is dequeued (when the call rings at an agent, outflows or dequeues from the split/skill, the caller abandons from queue, the call gets a forced busy or a forced disconnect). Available on Generic 2.2 with vectoring and EAS, and Generic 3 switches with vectoring.	S

Table 10: Trunk Database Items (Contd)

Database Item	Description	Type
QUECOUNT (real-time)	The number of ACD split/skill queues that the call is in. This is blank (NULL) when the trunk goes idle, gets forced busy, gets a forced disconnect, connects to a station or agent, or forwards out of the queue. Values: NULL, 1-3	S
QUETYPE (real-time)	Whether this call entered the queue by the "queue to main" or another vector step. **QUEUETYPE** is NULL for direct agent calls, when vectoring is not used, and when the call dequeues (is answered, abandoned, gets forced busy, or gets a forced disconnect). Valid values are NULL, MAIN, and BACKUP.	S
QUETYPE2-3 (real-time)	Whether this call entered the second or third queue by the "queue to main" or another vector step. **QUEUETYPE2** and **QUEUETYPE3** are NULL when vectoring is not used and when the call dequeues (is answered, abandoned, gets forced busy, or gets a forced disconnect). Valid values are NULL, MAIN, and BACKUP. Available on Generic 2.2 switches with EAS and Generic 3 switches.	S
ROW_DATE (index)	The day for which data was collected.	A
SHORTCALLS	The number of inbound and outbound calls that occupied a trunk for less than 2 seconds and that did not queue to a split/skill, forward to a split/skill, get answered by an agent, get a forced busy or forced disconnect from the switch, or produce a trunk failure or maintenance busy. Note that **SHORTCALLS** includes both inbound and outbound calls. Therefore, **OTHERCALLS** and **O_OTHERCALLS** may each include some **SHORTCALLS**.	C

Table 10: Trunk Database Items (Contd)

Database Item	Description	Type
SPLIT **(real-time)**	The first split/skill number to which the is currently queued or split/skill for which call was answered. **SPLIT** is blank (NULL) when the trunk idles.	S
SPLIT2-3 **(real-time)**	The split/skill numbers of the second and third splits/skills to which the call is queued. This is blank (NULL) when the call dequeues (is answered, abandoned, gets a forced busy or forced disconnect). Available on Generic 2.2 switches with vectoring and EAS, and Generic 3 switches with vectoring.	S
STARTED **(real-time)**	The time of day that **TKSTATE** started. Valid values are NULL and time-of-day	S
STARTTIME **(real-time)**	The start time of the interval for which data was collected. Applies to the interval table only.	S
TKGRP **(index)**	The trunk group number to which the trunk is assigned.	A
TKSTATE **(real-time)**	The current state of the call. Trunk states include: IDLE, SEIZED, QUEUED, CONN, RING, DABN, FBUSY, FDISC, HOLD, MBUSY, UNKNOWN, or as defined in Dictionary.	S
VDN **(real-time)**	The VDN that is associated with the current call. This stays set until the trunk idles, at which time it is set to NULL. Available on System 85, Generic 2, and Generic 3 switches with vectoring.	S
VECTOR **(real-time)**	The vector that is associated with the current call. This stays set until the trunk idles, at which time it is set to NULL. Available on System 85, Generic 2, and Generic 3 switches with vectoring.	S

Switch Cross-Reference

Table 11 lists which Trunk database items are supported by each of the switch releases.

Table 11: Switch Cross-Reference for Trunk Database Items

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ABNCALLS	X	X	X	X	X	X	X	X
ACD	X	X	X	X	X	X	X	X
ACDCALLS	X	X	X	X	X	X	X	X
AUDIO		X	X	X	X	X	X	X
CALLING_LOGID	X	X	X	X	X	X	X	X
DIRECTION	X	X	X	X	X	X	X	X
DURATION	X	X	X	X	X	X	X	X
EQLOC	X	X	X	X	X	X	X	X
EXTENSION	X	X	X	X	X	X	X	X
FAILURES		X	X	X				
I_INOCC	X	X	X	X	X	X	X	X
I_OUTOCC	X	X	X	X	X	X	X	X
INCALLS	X	X	X	X	X	X	X	X
INCOMPLETE	X	X	X	X	X	X	X	X
INTIME	X	X	X	X	X	X	X	X
INTRVL	X	X	X	X	X	X	X	X
ITN	X	X	X	X	X	X	X	X
LOGID	X	X	X	X	X	X	X	X
MBUSYTIME	X	X	X	X	X	X	X	X
O_ABNCALLS				X	X	X	X	X

Table 11: Switch Cross-Reference for Trunk Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
O_ACDCALLS				X	X	X	X	X
O_OTHERCALLS	X	X	X	X	X	X	X	X
OTHERCALLS	X	X	X	X	X	X	X	X
OUTCALLS	X	X	X	X	X	X	X	X
OUTTIME	X	X	X	X	X	X	X	X
PRIORITY	X	X	X	X	X	X	X	X
PRIORITY2-3				X (EAS)	X	X	X	X
QUECOUNT	X	X	X	X	X	X	X	X
QUETYPE		X	X	X	X	X	X	X
QUETYPE2-3				X (EAS)	X	X	X	X
ROW_DATE	X	X	X	X	X	X	X	X
SHORTCALLS	X	X	X	X	X	X	X	X
SPLIT	X	X	X	X	X	X	X	X
SPLIT2-3				X (EAS)	X	X	X	X
STARTED	X	X	X	X	X	X	X	X
STARTTIME	X	X	X	X	X	X	X	X
TKGRP	X	X	X	X	X	X	X	X
TKSTATE	X	X	X	X	X	X	X	X
VDN		X	X	X	X	X	X	X
VECTOR		X	X	X	X	X	X	X

Vector Database Items

Vector database items are available only if the Vectoring feature has been purchased and authorized for you to use.

The Vector database item descriptions (Table 12) apply to real-time and historical items.

The **Type** column refers to **Cumulative (C)**, **Administrative (A)**, or **Status (S)** data. Cumulative and Administrative items typically apply to both the current and previous interval real-time table. Status items only apply to the current interval real-time tables.

Real-Time vector database items apply to the Current Interval Vector (`cvector`) and Previous Interval Vector (`pvector`) tables. The real-time indexes are **ACD** and **VECTOR**.

Historical vector database items apply to the Intrahour Vector (`hvector`), Daily Vector (`dvector`), Weekly Vector (`wvector`), and Monthly Vector (`mvector`) tables, except as noted. The historical indexes are **ROW_DATE** and **VECTOR**.

Table 12: Vector Database Items

Database Item	Description	Type
ABNCALLS	The number of **INCALLS** that were abandoned while **INPROGRESS** for this vector. This includes split/skill and direct agent ACD calls that abandon from queue or from ringing, calls that abandon from vector processing, and for the System 85, Generic 2.1, and Generic 3 Version 1 switches, calls that hung up while listening to a forced disconnect announcement. **ABNCALLS** includes **ABNQUECALLS**, **ABNRINGCALLS**, and **PHANTOMABNS**.	C
ABNQUECALLS	The number of **ABNCALLS** that hung up while in a split/skill or direct agent ACD queue. System 85 switch calls that abandon from ringing are included here.	C

Table 12: Vector Database Items (Contd)

Database Item	Description	Type
ABNRINGCALLS	The number of split/skill or direct agent **ABNCALLS** that were abandoned while ringing at an agent position. Available on Generic 2 and Generic 3 switches and on the ECS.	C
ABNTIME	The time caller waited while vector steps were executed, the call was queued, and ringing, before the caller hung up. For phantom-abandoned calls, this is the total time from when the call enters the vector until the agent released the call.	C
ACD (index)	The ACD number for which data was collected.	A
ACDCALLS	The number of split/skill and direct agent ACD calls that were answered by an agent. Includes calls from “queue to main, “check backup”, “messaging split/skill”, “route to” split/skill or direct agent, and “adjunct routing” to a split/skill or direct agent. **ACDCALLS** includes **BACKUPCALLS**.	C
ADJATTEMPTS	The number of adjunct routing attempts for calls in this **VECTOR**. Available on the ECS and Generic 3 switches with the ASAI feature. **ADJATTEMPTS** includes **ADJROUTED**.	C
ADJROUTED	The number of adjunct-routing calls that were redirected by an adjunct processor or host computer. Available on the ECS and Generic 3 switches with the ASAI feature.	C
ANSTIME	The time that split/skill and direct agent ACD calls waited while executing steps in this vector, queuing, and ringing before being answered by an agent. **ANSTIME** includes **RINGTIME**.	C

Table 12: Vector Database Items (Contd)

Database Item	Description	Type
BACKUPCALLS	The number of **ACDCALLS** that were queued to the answering split/skill using a vector command other than "queue to main". **BACKUPCALLS** includes "messaging split/skill" calls, "check backup" calls, and calls that route to a split/skill or direct agent, either by the "route to" vector command or by adjunct routing. Calls that are redirected back to the split/skill using the redirection on no answer feature and are subsequently answered are also counted as **BACKUPCALLS**. Calls answered in a main split/skill (**MAINCALLS**) are then calculated as **ACDCALLS - BACKUPCALLS**. However, **MAINCALLS** does not include direct agent calls. Available on System 85, Generic 2, and Generic 3 switches and on the ECS with the vectoring feature.	C
BUSYCALLS	The number of **INCALLS** that were given a busy signal by the switch. This can occur on all switches when the "busy" vector command is executed. On Generic 3 switches, **BUSYCALLS** can occur if a call is routed to a split with coverage set to "yes" where there are no agents available, the queue is full (or there is no queue), there is no coverage, and an announcement has played or the trunk is not a CO trunk. Also on Generic 3 switches, **BUSYCALLS** can occur if a call is routed to a direct agent with coverage set to "yes", the agent is not logged in and there is no coverage path administered, an announcement has played, or the trunk is not a CO trunk.	C
BUSYTIME	The time **BUSYCALLS** waited before hearing a busy signal.	C

Table 12: Vector Database Items (Contd)

Database Item	Description	Type
DISCCALLS	With Generic 2.2, Generic 3 Version 2, and later Generic 3 switches and with the ECS, the number of **INCALLS** that executed the “disconnect" vector command. With System 85, Generic 2.1, and Generic 3 Version 1 switches, the number of **INCALLS** that were given a forced disconnect announcement by the “disconnect” vector command and listened to the entire announcement, then were disconnected by the switch. With Generic 3 Version 2 and later Generic 3 switches and with the ECS, **DISCCALLS** also includes calls disconnected due to the expiration of the vector disconnect timer and those that were disconnected because they reached the end of vector processing without being queued. **DISCCALLS** includes **VDISCCALLS**.	C
DISCTIME	The time all **DISCCALLS** spent in this **VECTOR**. The time until the trunk drops following the forced disconnect command for those calls recorded as DISCCALLS. For Generic 2.2, Generic 3 Version 2 and later Generic 3 switches, and for the ECS, if the caller hangs up during the forced disconnect announcement, this time is the time until the caller hung up. For System 85, Generic 2.1, and Generic 3 Version 1 switches, **DISCTIME** is the time until the announcement ends and the caller is disconnected by the switch. For Generic 3 Version 2 and later Generic 3 switches, and for the ECS, **DISCTIME** also includes the time until the trunk drops for calls disconnected due to the expiration of the vector disconnect timer or because they reached the end of vector processing without being queued.	C
GOTOCALLS	The number of **OUTFLOWCALLS** that were redirected to another vector by way of a “go to vector" command. Available on Generic 2.2 and Generic 3 switches and on the ECS.	C

Table 12: Vector Database Items (Contd)

Database Item	Description	Type
GOTOTIME	The time all **GOTOCALLS** spent in this vector before being redirected to another vector. Available on Generic 2.2 and Generic 3 switches and on the ECS.	C
INCALLS	The number of inbound calls that were processed by this vector. **INCALLS** includes **ABNCALLS**, **RINGCALLS, INFLOWCALLS**, and **OTHERCALLS**. **INCALLS** = **ACDCALLS** + **ABNCALLS** + **OTHERCALLS**	C
INCOMPLETE	This indicates whether or not data is complete for this collection interval. Data is incomplete whenever the link goes down and whenever tracking is aborted for calls due to trunk failures (System 85 and Generic 2 switches), the trunk going maintenance busy with a call active (Generic 1 and Generic 3 switches and the ECS), or protocol failures. The value for interval tables indicates whether data is incomplete for the interval (0 = data complete, 1 = data incomplete). The value in the daily, weekly, and monthly tables indicates the number of incomplete intervals in the day, week, or month.	C
INFLOWCALLS	The number of calls that were redirected to this vector by way of a “go to vector" or a “route to" VDN command, or by redirection on no answer to a VDN.	C
INPROGRESS (real-time)	The current number of inbound calls that are being processed by this **VECTOR** until the disposition of the call is known (answered, abandoned, outflowed from the vector, at the beginning of forced busy, or dropped on a forced disconnect). **INPROGRESS** includes **INQUEUE** and **INRING**.	S
INQUEUE (real-time)	The current number of **INPROGRESS** calls that are in split/skill or direct agent ACD queues. System 85 switch calls that are ringing at agent positions are included here.	S

Table 12: Vector Database Items (Contd)

Database Item	Description	Type
INRING (real-time)	The current number of **INPROGRESS** split/skill and direct agent ACD calls that are ringing at an agent position. Available on Generic 2 and Generic 3 switches and on the ECS.	S
INTERFLOWCALLS	The number of **OUTFLOWCALLS** that were redirected to a destination outside the switch. **INTERFLOWCALLS** includes **LOOKFLOWCALLS**.	C
INTIME	The time spent by **INCALLS** in the **VECTOR** executing steps. **INTIME** stops accruing when the “Stop" vector step is executed, when the last step in the vector is reached, when busy or disconnect is sent, when the call is abandoned, when a “go to vector” or “route to" command succeeds, when a "messaging split/skill” or “adjunct routing" command succeeds, or when the split/skill or direct agent ACD call rings at an agent position.	C
INTRVL	The number of minutes in the interval (15, 30, 60). **INTRVL** applies to intrahour intervals only.	A
LOOKATTEMPTS	The number of look-ahead interflow attempts for calls processed by this **VECTOR**. **LOOKATTEMPTS** includes **LOOKFLOWCALLS**. Available on Generic 2.2 and Generic 3 switches and on the ECS with the vectoring and look-ahead Interflow features.	C
LOOKFLOWCALLS	The number of **INTERFLOWCALLS** that were redirected to another switch by way of the look-ahead interflow feature. **LOOKFLOWCALLS** is a subset of **INTERFLOWCALLS**. Available on Generic 2.2 and Generic 3 switches and on the ECS with the vectoring and look-ahead interflow features.	C

Table 12: Vector Database Items (Contd)

Database Item	Description	Type
NUMVDNS	The current number of VDNs that are assigned to this **VECTOR**.	A
OTHERCALLS	The number of **INCALLS** that were redirected out of the vector, given a busy signal, or were disconnected. **OTHERCALLS** includes **BUSYCALLS**, **DISCCALLS**, and **OUTFLOWCALLS**. **OTHERCALLS** = **INCALLS** - **ACDCALLS** - **ABNCALLS**	S
OTHERTIME	The time **OTHERCALLS** spent in the vector until the disposition was known and the call left the vector. **OTHERTIME** includes **BUSYTIME**, **DISCTIME**, and **OUTFLOWTIME**.	C
OUTFLOWCALLS	The number of **INCALLS** that were redirected to another destination by way of a “go to vector" command or by "route to" or "adjunct routing" to a destination other than a split/skill or direct agent. (Calls that route to a split/skill or direct agent by way of a “route to," “adjunct routing," or “messaging split/skill" command are still tracked in the vector.) **OUTFLOWCALLS** includes **GOTOCALLS** and **INTERFLOWCALLS**.	C
OUTFLOWTIME	Time all **OUTFLOWCALLS** spent in the **VECTOR** before being redirected. **OUTFLOWTIME** includes **GOTOTIME**.	C
PHANTOMABNS	The number of ACD calls and calls that routed to an agent or extension with talk time less than the value of the phantom-abandoned call timer. Available on Generic 3 switches and the ECS.	C

Table 12: Vector Database Items (Contd)

Database Item	Description	Type
RINGCALLS	The number of split/skill and direct agent ACD calls that rang at agent positions. **RINGCALLS** includes **ACDCALLS**. Available on Generic 2 and Generic 3 switches and the ECS.	C
RINGTIME	The time split/skill and direct agent ACD calls spent ringing at agent positions independent of final disposition. Available on Generic 2 and Generic 3 switches and the ECS.	C
ROW_DATE (index)	The date for which data was collected.	A
STARTTIME (real-time)	The start time of the interval for which data was collected. (Interval table only.)	S
VDISCCALLS	The number of calls forced to disconnect because the vector disconnect timer timed out or because the call reached a vector stop without being queued. “Vector stop” means an explicit “stop” vector command, the end of the vector, or one-thousandth step executed. Available on Generic 3 Version 2 and later switches and the ECS.	C
VECTOR (index)	The vector number that this row represents. Available on System 85, Generic 2, and Generic 3 switches and on the ECS with the vectoring feature.	A

Switch Cross- Reference

Table 13 lists which Vector database items are supported by each of the switch releases.

Table 13: Switch Cross-Reference for Vector Database Items

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ABNCALLS		X	X	X	X	X	X	X
ABNQUECALLS		X	X	X	X	X	X	X
ABNRINGCALLS			X	X	X	X	X	X
ABNTIME		X	X	X	X	X	X	X
ACD		X	X	X	X	X	X	X
ACDCALLS		X	X	X	X	X	X	X
ADJATTEMPTS					X	X	X	X
ADJROUTED					X	X	X	X
ANSTIME		X	X	X	X	X	X	X
BACKUPCALLS		X	X	X	X	X	X	X
BUSYCALLS		X	X	X	X	X	X	X
BUSYTIME		X	X	X	X	X	X	X
DISCCALLS		X	X	X	X	X	X	X
DISCTIME		X	X	X	X	X	X	X
GOTOCALLS				X	X	X	X	X
GOTOTIME				X	X	X	X	X
INCALLS		X	X	X	X	X	X	X
INCOMPLETE		X	X	X	X	X	X	X
INFLOWCALLS		X	X	X	X	X	X	X
INPROGRESS		X	X	X	X	X	X	X

Table 13: Switch Cross-Reference for Vector Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
INQUEUE		X	X	X	X	X	X	X
INRING			X	X	X	X	X	X
INTERFLOWCALLS		X	X	X	X	X	X	X
INTIME		X	X	X	X	X	X	X
INTRVL		X	X	X	X	X	X	X
LOOKATTEMPTS				X	X	X	X	X
LOOKFLOWCALLS				X	X	X	X	X
NUMVDNS		X	X	X	X	X	X	X
OTHERCALLS		X	X	X	X	X	X	X
OTHERTIME		X	X	X	X	X	X	X
OUTFLOWCALLS		X	X	X	X	X	X	X
OUTFLOWTIME		X	X	X	X	X	X	X
PHANTOMABNS					X	X	X	X
RINGCALLS			X	X	X	X	X	X
RINGTIME			X	X	X	X	X	X
ROW_DATE		X	X	X	X	X	X	X
STARTTIME		X	X	X	X	X	X	X
VDISCCALLS						X	X	X
VECTOR		X	X	X	X	X	X	X

VDN Database Items

VDN database items are available only if the vectoring feature has been purchased and authorized for you to use.

The VDN Database Item descriptions (Table 14) apply to real-time and historical items.

The **Type** column refers to **Cumulative (C)**, **Administrative (A)**, or **Status (S)** data. Cumulative and Administrative items typically apply to both the current and previous interval real-time tables. Status items apply only to the current interval tables.

Real-Time VDN database items apply to the Current Interval VDN (`cvdn`) and Previous Interval VDN (`pvdn`) tables. The real-time indexes are **ACD**, **VDN**, and **VECTOR**.

Historical VDN database items apply to the Intrahour VDN (`hvdn`), Daily VDN (`dvdn`), Weekly VDN (`wvdn`), and Monthly VDN (`mvdn`) tables, except as noted. The historical indexes are **ROW_DATE** and **VDN**.

Table 14: VDN Database Items

Database Item	Description	Type
ABNCALLS	The number of **INCALLS** that were abandoned while **INPROGRESS** for this VDN. This includes split/skill and direct agent ACD calls that abandon from queue or from ringing, calls that abandon from vector processing, calls that abandon after being routed to an extension via the “route to" vector command (for Generic 2.2, Generic 3 and later switches and for the ECS), and calls that abandoned while listening to a forced disconnect announcement (for the System 85, Generic 2.1, and Generic 3 Version 1 switches). **ABNCALLS** includes ACD calls and calls routed to an agent or extension with talk times less than the value of the phantom-abandoned call timer. **ABNCALLS1-10, ABNQUECALLS, ABNRINGCALLS, PHANTOMABNS**, and **SLVLABNS** are pegged as **ABNCALLS**.	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
ABNCALLS1-10	The number of **INCALLS** that abandoned in each of the service level increments **PERIOD1** through **PERIOD9** (as defined on the ACD Administration: VDN Call Profile Setup window). **ABNCALLS10** counts calls that abandoned after **PERIOD9**.	C
ABNQUECALLS	The number of **ABNCALLS** that were abandoned while in a split/skill or direct agent ACD queue. System 85 calls that are abandoned while ringing at an agent position are included here.	C
ABNRINGCALLS	The number of split/skill and direct agent **ABNCALLS** that were abandoned by the caller while ringing at an agent position. Available on Generic 2 and Generic 3 switches and on the ECS.	C
ABNTIME	The length of time caller waited before abandoning. For phantom-abandon calls, **ABNTIME** is the total time from entering the VDN until the agent released the call.	C
ACCEPTABLE	The number of **ACDCALLS** and **CONNECTCALLS** that were answered within the acceptable service level (as defined on the ACD Administration: VDN Call Profile Setup window).	C
ACD (index)	The ACD number for which data was collected.	A
ACDCALLS	The number of split/skill and direct agent ACD calls that were answered by an agent. This includes calls from vector commands: “queue to main”, “check backup”, “messaging split/skill”, “route to” split/skill or direct agent, and “adjunct routing” to a split/skill or direct agent. **ACDCALLS** includes **ACDCALLS1-10, ACCEPTABLE, ANSCONNCALLS1-10, BACKUPCALLS,** and **TRANSFERRED**.	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
ACDTIME	The talk time of all **ACDCALLS**, not including **HOLDTIME**. **ACDTIME** includes **SKILLTIME1** through **SKILLTIME3**.	C
ACTIVECALLS (real-time)	The switch-generated count of the number of active calls in the VDN. This includes only incoming trunk calls directly to the VDN. It does not include internal calls to the VDN, transfers to the VDN, or calls that route to the VDN or redirect from ringing to the VDN after having been through another VDN. Available on the Generic 3 Version 4 switch and on the ECS with the vectoring feature.	S
ACWTIME	The time that agents spent in After Call Work associated with split/skill or direct agent ACD calls. **ACWTIME** includes **SKILLACWTIME1-3**.	C
ADJATTEMPTS	The number of adjunct-routing attempts for calls to this VDN. **ADJATTEMPTS** includes **ADJROUTED**. Available on Generic 3 switches and on the ECS with the vectoring and ASAI features.	C
ADJROUTED	The number of adjunct routing calls that were redirected by the adjunct. Available on Generic 3 switches and on the ECS with the vectoring and ASAI features.	C
ANSCONNCALLS1-10	The number of times that callers were answered (**ACDCALLS**) and connected (**CONNECTCALLS**) during each of the time periods (service level increments **PERIOD1** through **PERIOD9**) set up for VDN call profiles. (**ANSCONNCALLS10** counts calls answered or connected after **PERIOD9**.) Answered/connected calls include split/skill and direct agent ACD calls and extension calls by a “route to” or “adjunct routing” vector command.	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
ANSTIME	The time split/skill and direct agent ACD calls spent waiting to be answered, in vector processing, in queue, and ringing. For extension calls on System 85 and Generic 2.1 switches, **ANSTIME** is the time until ringing starts. **ANSTIME** includes **RINGTIME**.	C
ASA (real-time)	The switch-provided rolling average speed of answer for this VDN. This value is sent to *CentreVu* CMS whenever it changes on the switch (for example, when a call is answered). Available on Generic 3 Version 4 switches and on the ECS with vectoring.	S
ATAGENT (real-time)	The current number of **INPROGRESS** calls (ACD and non-ACD) that have been answered by an agent or a station.	S
BACKUPCALLS	The number of **ACDCALLS** that were queued to the answering split/skill using a vector command other than “queue to main”. This includes calls delivered by “messaging”, “check backup”, and “route to split/skill” vector commands, and “redirect on no answer” routing. **BACKUPCALLS** includes “messaging split/skill” calls, “check backup” calls, and calls that route to a split/skill or direct agent, either by the “route to” vector command or by adjunct routing. Calls that are redirected back to the split/skill using the redirection on no answer feature and are subsequently answered are also counted as **BACKUPCALLS**. Calls answered in a main split/skill (**MAINCALLS**) are then calculated as **ACDCALLS - BACKUPCALLS**. However, **MAINCALLS** does not include direct agent calls. Available on System 85, Generic 2, and Generic 3 switches and the ECS with the vectoring feature.	C
BH_ABNCALLS	The number of **INCALLS** that were abandoned by callers during the busy hour.	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
BH_ACDCALLS	The number of **ACDCALLS** that were completed during the busy hour.	C
BH_ACDTIME	The talk time of **ACDCALLS** that were completed during the busy hour.	C
BH_BUSYCALLS	The number of **INCALLS** that were given a busy signal by the switch during the busy hour.	C
BH_DISCCALLS	The number of **INCALLS** that were disconnected by the switch during the busy hour.	C
BH_OTHERCALLS	The number of other incoming calls (**OTHERCALLS**) that were completed during the busy hour.	C
BH_STARTTIME	The starting time of the busy hour. The busy hour is that set of contiguous intervals comprising a total of one hour in which the number of **INCALLS** to the VDN reached a maximum for the day.	C
BH_VDNCALLS	The number of **INCALLS** to the VDN that completed during the busy hour.	C
BUSYCALLS	The number of **INCALLS** that were given a busy signal by the switch. This can occur on all switches via the “busy" vector command. On Generic 3 switches and the ECS, **BUSYCALLS** can occur if a call is routed to a split/skill with coverage set to “yes” where there are no agents available, the queue is full (or there is no queue), there is no coverage, and an announcement has played or the trunk is not a CO trunk. Also on Generic 3 switches and the ECS, **BUSYCALLS** can occur if a call is routed to a direct agent with coverage set to “yes”, the agent is not logged in and there is no coverage path administered, an announcement has played, or the trunk is not a CO trunk.	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
BUSYTIME	The duration of all **BUSYCALLS** (until the trunk goes idle).	C
CONNECTCALLS	The number of non-ACD **INCALLS** that were delivered to a station extension (other than a VDN or direct agent login ID) by a “route to” or “adjunct routing” vector command and were not abandoned by the callers. For System 85 and Generic 2.1 switches, non-ACD abandons are not tracked, so all calls that route to a station extension (other than a VDN) are included in **CONNECTCALLS** for those switch releases. **CONNECTCALLS** includes **ANSCONNCALLS1-10**.	C
CONNECTTIME	The time **CONNECTCALLS** waited before being answered (for the Generic 3 switch and the ECS). For System 85 and Generic 2 switches, **CONNECTTIME** is the time before ringing starts.	C
CONNTALKTIME	The talk time for all **CONNECTCALLS,** not including **HOLDTIME (except on System 85, Generic 2.1, and Generic 1 switches)**.	C
DISCCALLS	With Generic 2.2, Generic 3 Version 2 and later Generic 3 switches, and with the ECS, the number of **INCALLS** that executed the “disconnect" vector command. With System 85, Generic 2.1, and Generic 3 Version 1 switches, the number of **INCALLS** that were given a forced disconnect announcement by the “disconnect” vector command and listened to the entire announcement, then were disconnected by the switch. With Generic 3 Version 2 and later Generic 3 switches and with the ECS, the number also includes calls disconnected due to the expiration of the vector disconnect timer and those that were disconnected because they reached the end of vector processing without being queued. **DISCCALLS** includes **VDISCCALLS**.	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
DISCTIME	The time all **DISCCALLS** spent in this VDN. The time until the trunk drops following the forced disconnect command for those calls recorded as **DISCCALLS**. For Generic 2.2, Generic 3 Version 2 and later Generic 3 switches, and for the ECS, if the caller hangs up during the forced disconnect announcement, this is the time until the caller hangs up. For System 85, Generic 2.1, and Generic 3 Version 1 switches, **DISCTIME** is the time until the announcement ends and the caller is disconnected by the switch.	C
HOLDABNCALLS	The number of times that callers abandoned while on hold. For Generic 2.2 and Generic 3 switches, and for the ECS, **HOLDABNCALLS** includes all calls. For System 85 and Generic 2.1 switches, **HOLDABNCALLS** includes split calls only.	C
HOLDACDCALLS	The number of split/skill or direct agent ACD calls that were placed on hold at least one time.	C
HOLDACDTIME	The amount of time split/skill or direct agent ACD callers spent on hold.	C
HOLDCALLS	The number of calls that were placed on hold at least once. For Generic 2.2 and Generic 3 switches, and for the ECS, **HOLDCALLS** includes all calls. For System 85 and Generic 2.1 switches, **HOLDCALLS** includes split calls only. **HOLDCALLS** includes **HOLDABNCALLS** and **HOLDACDCALLS**.	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
HOLDTIME	The time that callers spent on hold. For Generic 2.2 and Generic 3 switches and for the ECS, **HOLDTIME** includes all calls. For System 85 and Generic 2.1 switches, **HOLDTIME** includes split calls only. **HOLDTIME** includes **HOLDACDTIME**.	C
I_ARRIVED	The number of calls that reached the VDN during the interval.	C
ILN	The internal line number of the VDN extension.	A
INCALLS	The number of inbound calls that were directed to this VDN. **INCALLS** includes **ABNCALLS**, **INFLOWCALLS**, **OTHERCALLS, RETURNCALLS**, and **RINGCALLS** (which includes **ACDCALLS**). **INCALLS** = **ACDCALLS** + **ABNCALLS** + **OTHERCALLS**	C
INCOMPLETE	This indicates whether or not data is complete for this collection interval. Data is incomplete whenever the link goes down and whenever tracking is aborted for calls, due to trunk failures (System 85 and Generic 2 switches), the trunk going maintenance busy with a call active (Generic 1 and Generic 3 switches and the ECS), or protocol failures. The value for interval tables indicates whether data is incomplete for the interval (0 = data complete, 1 = data incomplete). The value in the daily, weekly, and monthly tables indicates the number of incomplete intervals in the day, week, or month, respectively.	C
INFLOWCALLS	The number of calls that were redirected into the VDN by way of a “route to” VDN command, or by Redirection on No Answer to this VDN from another VDN.	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
INPROGRESS (real-time)	The current number of inbound calls that are associated with this VDN. Calls are considered to be in progress in the VDN until they are routed to another VDN, are routed off the switch, are transferred, or the trunk that is carrying them goes idle. **INPROGRESS** includes **ATAGENT** and **INVECTOR**.	S
INQUEUE (real-time)	The current number of **INPROGRESS** calls that are in a split/skill or direct agent ACD queue. For System 85 switches, this includes calls that are ringing at agent positions.	S
INRING (real-time)	The current number of **INPROGRESS** split/skill and direct agent ACD calls that are ringing at an agent position. Available on Generic 2 and Generic 3 switches and on the ECS.	S
INTERFLOWCALLS	The number of **OUTFLOWCALLS** that were redirected to a destination outside the switch. **INTERFLOWCALLS** includes **LOOKFLOWCALLS**.	C
INTIME	The time spent by **INCALLS** in this VDN. For Generic 2.2 and Generic 3 switches, and for the ECS, **INTIME** = **ACDTIME** + **ABNTIME** + **ANSTIME** + **HOLDTIME** + **OTHERTIME** However, on System 85 and Generic 2.1 switches, there are multiple call handling scenarios in which call-based **ACDTIME** is stopped before the call ends. In these scenarios, **INTIME** does not add up to **ACDTIME + ABNTIME + ANSTIME + OTHERTIME + HOLDTIME**, so hold time cannot be calculated. (The scenarios occur when an agent puts an ACD call on hold using the HOLD key when another ACD call is already on hold, or when a call is dropped while an ACD call is on hold.)	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
INTRVL	The number of minutes in the timed period (15, 30, 60). **INTRVL** applies to intrahour intervals only.	A
INVECTOR (real-time)	The current number of **INPROGRESS** calls that are being processed by a vector. Calls that are in queue and calls that are ringing are still counted as **INVECTOR**. Calls are no longer counted as **INVECTOR** when they connect to a station, are answered by an agent, are abandoned, or they outflow from the VDN. **INVECTOR** includes **INQUEUE** and **INRING**.	S
LOOKATTEMPTS	The number of look-ahead interflow attempts for calls in this VDN. **LOOKATTEMPTS** includes **LOOKFLOWCALLS**. Available on Generic 2.2 and Generic 3 switches and on the ECS with the vectoring and look-ahead interflow features.	C
LOOKFLOWCALLS	The number of **INTERFLOWCALLS** that were redirected by way of the look-ahead interflow feature. Available on Generic 2.2 and Generic 3 switches and on the ECS with the vectoring and look-ahead interflow features.	C
MAXOCWTIME	The maximum time during the collection interval that a caller waited in the VDN before being answered (ACD calls) or connected (non-ACD calls), abandoning, being redirected, receiving a busy signal or being disconnected. This applies only to the first disposition of the call.	C
MAXWAITING	The maximum number of calls simultaneously in progress in the VDN during the collection interval.	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
NOANSREDIR	The number of split/skill and direct agent ACD calls that rang at agent positions and then were automatically redirected by the redirection on no answer feature because they were not answered. Available on Generic 3 Version 2 and later switches and on the ECS.	C
NUMTGS	The number of trunk groups assigned to this VDN.	A
OLDESTCALL (real-time)	The number of seconds that the oldest call has been waiting in queue and ringing in this VDN.	S
OTHERCALLS	**OTHERCALLS** includes forced busy, forced disconnect, outflowed calls and non-ACD calls that were answered (**CONNECTCALLS**). **OTHERCALLS** includes **BUSYCALLS**, **CONNECTCALLS**, **DISCCALLS**, and **OUTFLOWCALLS**. **OTHERCALLS** = **INCALLS** - **ACDCALLS** - **ABNCALLS**	S
OTHERTIME	The duration of all **OTHERCALLS** from entering the VDN until the calls leave the VDN (the calls drop, are sent to another VDN, are transferred, or are sent outside the switch). **OTHERTIME** includes **BUSYTIME**, **CONNECTTIME**, **CONNTALKTIME**, **DISCTIME**, and **OUTFLOWTIME**.	C
OUTFLOWCALLS	The number of **INCALLS** that were redirected to another VDN or to a destination outside the switch by way of a “route to” or “adjunct routing” command, or were redirected on no answer to a VDN. Note that calls are counted as outflows from the VDN only when they are redirected to another VDN or to a destination outside the switch, not when they are routed to other destinations, such as split/skills or extensions. **OUTFLOWCALLS** includes **INTERFLOWCALLS** and **SLVLOUTFLOWS**.	C

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
OUTFLOWTIME	The time all **OUTFLOWCALLS** spent in this VDN before being redirected.	C
PERIOD1-9	The length, in seconds, of each service level increment that has been administered for VDN call profiles. Each increment represents a progressively longer wait time. Calls that wait a longer length of time (beyond the last of these nine increments) are counted in either **ANSCONNCALLS10** or **ABNCALLS10**.	A
PERIODCHG	This indicates whether or not the time periods defined for call profiles were changed during the data collection interval.	A
PHANTOMABNS	The number of split/skill and direct agent ACD calls and calls that routed to an agent or extension with talk time of less than the value set for the phantom-abandoned call timer. Available on Generic 3 switches and on the ECS.	C
RETURNCALLS	The number of calls that reached this VDN via the VDN return destination feature. Available on Generic 3 Version 3 and later switches and on the ECS.	C
RINGCALLS	The number of split/skill and direct agent ACD calls that rang at agent positions. **RINGCALLS** includes **ACDCALLS**. Available on Generic 2 and Generic 3 switches and on the ECS.	C
RINGTIME	The time split/skill and direct agent ACD calls spent ringing at agent positions, independent of final disposition. Available on Generic 2 and Generic 3 switches and on the ECS.	C
ROW_DATE (index)	The date for which information was collected.	A

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
SERVICELEVEL	The number of seconds in which calls must be answered/connected to be considered acceptable for this VDN.	A
SKILLACWTIME1-3	The After Call Work time spent by agents for calls answered in each VDN skill preference. Available on Generic 2.2 and Generic 3 Version 2 switches with EAS.	C
SKILLCALLS1-3	Number of calls answered by agents in each VDN skill preference. Available on Generic 2.2 and Generic 3 Version 2 switches with EAS.	C
SKILLTIME1-3	Time agents spent talking on calls they answered in each VDN skill preference. Available on Generic 2.2 and Generic 3 Version 2 switches with EAS.	C
SKILL1-3	First, second, and third VDN skill assigned to this VDN. Available on Generic 2.2 and Generic 3 Version 2 and later switches and on the ECS with the EAS feature.	A
SLVLABNS	The number of **ABNCALLS** whose time to abandon was less than or equal to the time increment administered as this VDN's **SERVICELEVEL**.	C
SLVLOUTFLOWS	The number of **OUTFLOWCALLS** whose time to outflow was less than or equal to the time increment administered as this VDN's **SERVICELEVEL**.	C
STARTTIME (Index)	The start time of the interval for which data was collected. (Interval table only.)	A
SVCLEVELCHG	This indicates whether the service level was changed during the data collection interval.	A

Table 14: VDN Database Items (Contd)

Database Item	Description	Type
TRANSFERRED	The number of calls that were transferred to another destination. For System 85 and Generic 2.1 switches, **TRANSFERRED** includes all VDN calls blind transferred to a measured VDN or split. For Generic 2.2 and Generic 3 switches and for the ECS, **TRANSFERRED** includes all VDN calls that were transferred.	C
VDISCCALLS	The number of calls forced disconnected because the vector disconnect timer timed out, or because the call reached a vector stop without being queued. ("Vector stop" means a "stop" vector command, the end of the vector, or the one-thousandth vector step.) Available on Generic 3 Version 2 and later switches and on the ECS.	C
VDN (index)	The vector directory number (extension) that this row represents.	A
VECTOR (index)	The number of the vector to which this VDN is assigned.	A

Switch Cross- Reference

Table 15 lists which VDN database items are supported by each of the switch releases.

Table 15: Switch Cross-Reference for VDN Database Items

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ABNCALLS		X	X	X	X	X	X	X
ABNCALLS1-10		X	X	X	X	X	X	X
ABNQUECALLS		X	X	X	X	X	X	X
ABNRINGCALLS			X	X	X	X	X	X
ABNTIME		X	X	X	X	X	X	X
ACCEPTABLE		X	X	X	X	X	X	X
ACD		X	X	X	X	X	X	X
ACDCALLS		X	X	X	X	X	X	X
ACDTIME		X	X	X	X	X	X	X
ACTIVECALLS							X	X
ACWTIME		X	X	X	X	X	X	X
ADJATTEMPTS					X	X	X	X
ADJROUTED					X	X	X	X
ANSCONNCALLS1-10		X	X	X	X	X	X	X
ANSTIME		X	X	X	X	X	X	X
ASA							X	X
ATAGENT		X	X	X	X	X	X	X
BH_ABNCALLS		X	X	X	X	X	X	X
BH_ACDCALLS		X	X	X	X	X	X	X
BH_ACDTIME		X	X	X	X	X	X	X

Table 15: Switch Cross-Reference for VDN Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
BH_BUSYCALLS		X	X	X	X	X	X	X
BH_DISCCALLS		X	X	X	X	X	X	X
BH_OTHERCALLS		X	X	X	X	X	X	X
BH_STARTTIME		X	X	X	X	X	X	X
BH_VDNCALLS		X	X	X	X	X	X	X
BACKUPCALLS		X	X	X	X	X	X	X
BUSYCALLS		X	X	X	X	X	X	X
BUSYTIME		X	X	X	X	X	X	X
CONNECTCALLS		X	X	X	X	X	X	X
CONNECTTIME		X	X	X	X	X	X	X
CONNTALKTIME		X	X	X	X	X	X	X
DISCCALLS		X	X	X	X	X	X	X
DISCTIME		X	X	X	X	X	X	X
HOLDABNCALLS		X	X	X	X	X	X	X
HOLDACDCALLS		X	X	X	X	X	X	X
HOLDACDTIME		X	X	X	X	X	X	X
HOLDCALLS		X	X	X	X	X	X	X
HOLDTIME		X	X	X	X	X	X	X
I_ARRIVED		X	X	X	X	X	X	X
ILN		X	X	X	X	X	X	X
INCALLS		X	X	X	X	X	X	X
INCOMPLETE		X	X	X	X	X	X	X

Table 15: Switch Cross-Reference for VDN Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
INFLOWCALLS		X	X	X	X	X	X	X
INPROGRESS		X	X	X	X	X	X	X
INQUEUE		X	X	X	X	X	X	X
INRING			X	X	X	X	X	X
INTERFLOWCALLS		X	X	X	X	X	X	X
INTIME		X	X	X	X	X	X	X
INTRVL		X	X	X	X	X	X	X
INVECTOR		X	X	X	X	X	X	X
LOOKATTEMPTS				X	X	X	X	X
LOOKFLOWCALLS				X	X	X	X	X
MAXOCWTIME			X	X	X	X	X	X
MAXWAITING		X	X	X	X	X	X	X
NOANSREDIR						X	X	X
NUMTGS		X	X	X	X	X	X	X
OLDESTCALL		X	X	X	X	X	X	X
OTHERCALLS		X	X	X	X	X	X	X
OTHERTIME		X	X	X	X	X	X	X
OUTFLOWCALLS		X	X	X	X	X	X	X
OUTFLOWTIME		X	X	X	X	X	X	X
PERIOD1-9		X	X	X	X	X	X	X
PERIODCHG		X	X	X	X	X	X	X
PHANTOMABNS					X	X	X	X

Table 15: Switch Cross-Reference for VDN Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
RETURNCALLS						X (V3)	X	X
RINGCALLS			X	X	X	X	X	X
RINGTIME			X	X	X	X	X	X
ROW_DATE		X	X	X	X	X	X	X
SERVICELEVEL		X	X	X	X	X	X	X
SKILL1-3				X (EAS)		X (EAS)	X (EAS)	X (EAS)
SKILLACWTIME1-3				X (EAS)		X (EAS)	X (EAS)	X (EAS)
SKILLCALLS1-3				X (EAS)		X (EAS)	X (EAS)	X (EAS)
SKILLTIME1-3				X (EAS)		X (EAS)	X (EAS)	X (EAS)
SLVLABNS		X	X	X	X	X	X	X
SLVLOUTFLOWS		X	X	X	X	X	X	X
STARTTIME		X	X	X	X	X	X	X
SVCLEVELCHG		X	X	X	X	X	X	X
TRANSFERRED		X	X	X	X	X	X	X
VDISCCALLS						X	X	X
VDN		X	X	X	X	X	X	X
VECTOR		X	X	X	X	X	X	X

Call Work Codes Database Items

Call work codes are only available with Generic 3 and Generic 2.2 switches.

The Call Work Codes database item descriptions (Table 16) apply to real-time and historical items.

The **Type** column refers to **Cumulative (C)**, **Administrative (A)**, or **Status (S)** data. Cumulative and Administrative items typically apply to both the current previous interval real-time tables. Status items apply only to the current interval real-time table.

Real-Time call work codes apply to the Current Interval CWC (`ccwc`) and Previous Interval (`pcwc`) tables. The real-time indexes are **ACD** and **CWC**.

Historical call work codes database items apply to the Intrahour Call Work Codes (`hcwc`), Daily Call Work Codes (`dcwc`), Weekly Call Work Codes (`wcwc`), and Monthly Call Work Codes (`mcwc`) tables, except as noted. The indexes are **ROW_DATE** and **CWC**.

Table 16: Call Work Codes Database Items

Database Item	Description	Type
ACD **(index)**	The ACD number for which data was collected.	A
ACDCALLS	The number of times this call work code was entered while an agent was on a split/skill or direct agent ACD call or in call-related ACW.	C
ACDTIME	The talk time of all **ACDCALLS** (not including **HOLDTIME**) associated with this call work code.	C
ACWTIME	The time the agent spent in ACW for **ACDCALLS** that were associated with this call work code.	C
CWC **(index)**	The call work code for which data was collected.	A

Table 16: Call Work Codes Database Items

Database Item	Description	Type
INCOMPLETE	This indicates whether or not data collection is complete for this interval. Data collection is incomplete whenever the link goes down and whenever tracking is aborted for calls, due to trunk failures (System 85 and Generic 2 switches), the trunk going maintenance busy with a call active (Generic 1 and Generic 3 switches), or protocol failures. The value for interval tables indicates whether data collection is incomplete for the interval (0 = data complete, 1 = data incomplete). The value in the daily, weekly, and monthly tables indicates the number of incomplete intervals in the day, week, or month.	C
INTRVL	The number of minutes in the intrahour interval (15, 30, or 60). **INTRVL** applies to intrahour intervals only.	A
ROW_DATE (index)	The day for which data was collected.	C
STARTTIME	The start time for the interval for which data was collected. **STARTTIME** applies to the intrahour table only.	C

Switch Cross- Reference

Table 17 lists the Call Work Codes database items and the switch(es) each item applies to.

Table 17: Switch Cross-Reference for Call Work Codes

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ACD				X	X	X	X	X
ACDCALLS				X	X	X	X	X
ACDTIME				X	X	X	X	X
ACWTIME				X	X	X	X	X
CWC				X	X	X	X	X
INCOMPLETE				X	X	X	X	X
INTRVL				X	X	X	X	X
ROW_DATE				X	X	X	X	X
STARTTIME				X	X	X	X	X

Agent Login/Logout Database Items

The Agent Login/Logout database item descriptions (Table 18) are **historical** items. They apply to the Agent Login/Logout (`haglog`) table. The indexes are **SPLIT** and **ROW_DATE**.

Table 18: Agent Login/Logout Database Items

Database Item	Description
ACD (index)	The ACD number for which data was collected.
EXTN	The extension number of the station that the agent staffed.
INFLAG	If not null, indicates that the agent was already logged in when the link came up. Values are NULL and <.
LOGID	The Login ID that was used to staff the extension. Agents in multiple splits/skills have one **LOGID**.
LOGIN	The time at which the agent logged into this extension and split/skill with the given login ID.
LOGONSKILL2-20	The skill number of the agent's second through twentieth skills. The number of skills per agent depends on the type of switch. Available on Generic 2.2 and later Generic 3 switches with EAS.
LOGOUT	The time at which the agent logged out.
LOGOUT_DATE	The date on which the agent logged out.
LOGOUTREASON	The reason code (0 through 9) associated with the agent's logout. For switch releases earlier than the ECS switch releases that do not have the EAS feature and reason codes active, this field will always contain 0 when the agent has logged out.
OUTFLAG	If not null, indicates that the agent logged out while the link was down. Values are NULL and >.
ROW_DATE (index)	The date the agent logged in.

Table 18: Agent Login/Logout Database Items

Database Item	Description
SKILLTYPE	The type (primary or secondary) of the first skill the agent logged into. Available on Generic 3 Version 2 and later Generic 3 switches with EAS. Because skill level 1 is primary, skill level 2 is secondary, and skill levels 3 through 16 are blank on the ECS, it is recommended that you use **SKLEVEL** instead of **SKILLTYPE**.
SKILLTYPE2-4	The type (primary or secondary) of the second skill the agent logged into, the third skill the agent logged into, and the fourth skill the agent logged into. Available on Generic 3 Version 2 and later Generic 3 switches with EAS.
SKLEVEL	The skill level (1 through 16) associated with **SPLIT**.
SKLEVEL2-20	The skill levels (1 through 16) associated with **LOGONSKILL2** through **LOGONSKILL20**.
SPLIT (index)	The split number to which the extension is assigned or skill number that the agent logged into.

Switch Cross- Reference

Table 19 lists which Agent Login / Logout database items are supported by each of the switch releases.

Table 19: Switch Cross-Reference for Agent Login/Logout Database Items

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ACD	X	X	X	X	X	X	X	X
EXTN	X	X	X	X	X	X	X	X
INFLAG	X	X	X	X	X	X	X	X
LOGID	X	X	X	X	X	X	X	X
LOGIN	X	X	X	X	X	X	X	X
LOGONSKILL2-4				X (EAS)		X (EAS)	X (EAS)	X (EAS)
LOGONSKILL5				X (EAS)				X (EAS)
LOGONSKILL6-20								X (EAS)
LOGOUT	X	X	X	X	X	X	X	X
LOGOUT_DATE	X	X	X	X	X	X	X	X
LOGOUTREASON								X (EAS)
OUTFLAG	X	X	X	X	X	X	X	X
ROW_DATE	X	X	X	X	X	X	X	X
SKILLTYPE						X (EAS)	X (EAS)	X (EAS)
SKILLTYPE2-4						X (EAS)	X (EAS)	X (EAS)

Table 19: Switch Cross-Reference for Agent Login/Logout Database Items

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
SKLEVEL						X (EAS)	X (EAS)	X (EAS)
SKLEVEL2-4						X (EAS)	X (EAS)	X (EAS)
SKLEVEL5-20								X (EAS)
SPLIT	X	X	X	X	X	X	X	X

Agent Trace Database Items

The Agent Trace database item descriptions (Table 20) are **historical** items. They apply to the Agent Trace (`ag_actv`) table. The indexes are **LOGID** and **ROW_DATE**.

The **Optional** database items collect data only when those items are selected in the *CentreVu* CMS System Setup: Agent Trace Record Contents window and are not used in any standard reports. To receive a report containing optional Agent Trace historical database items, a custom report must be created.

Table 20: Agent Trace Database Items

Database Item	Description
ACD (index)	The ACD number for which data was collected.
AGT_RELEASED	The agent released or dropped the split/skill or direct agent ACD call. This is always true for ACD calls the agent transferred or conferenced. Available on Generic 3 and later switches.
ASSIST_ACTV	The agent requested supervisor assistance (pressed ASSIST key).
AUXREASON	The reason code associated with the agent’s change to AUX mode. For agents in AUX on switch releases earlier than the ECS or on switches that do not have the EAS feature and reason codes active, this will be 0.
CALLER_HOLD	The agent put the current call on hold. For System 85 and Generic 2.1 switches, **CALLER_HOLD** applies to split ACD calls. For Generic 2.2 and Generic 3 switches, **CALLER_HOLD** applies to all calls.
CALLING_II	The Information Indicator (II) digits associated with the call. These digits supply information about the originator location, for example, pay phone, hospital, or prison. Available on the ECS.

Table 20: Agent Trace Database Items (Contd)

Database Item	Description
CALLING_PTY	The calling party identification. This is the ANI/SID, for Generic 2.2 and Generic 3 Version 4 and later switches with ISDN ANI delivery. Otherwise, it is the extension or trunk equipment location identifying the originator of the call. The field is blank if the trunk is not measured or, for internal calls, if the originating extension is not measured.
CONFERENCE	The agent activated a conference. Available on Generic 3 and Generic 2.2 switches.
DIGITS_DIALED	The digits the agent dialed to originate a call. Trunk access codes, feature access codes, account and authorization codes are not included. Available on Generic 2.2 and Generic 3 switches.
DIRECTION	The direction of the call the agent is currently handling for any split/skill (IN, or OUT, or as defined in Dictionary). If the agent is not on a call, the value is blank (NULL).
DURATION	The duration of current **WORKMODE** and **DIRECTION** for this split (that is, length of time in current AGSTATE for this split).
EVENT_TIME	The time of day (hour, minute, and second) the **WORKMODE** or **DIRECTION** changed.
EXT_CALL_ORIG	The agent originated an external (off-switch) call. Available on Generic 2.2 and Generic 3 switches.
KEYBD_DIALED	The call was keyboard dialed. Available on Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.
LOGID **(index)**	The Login ID that was used to staff the extension. Agents in multiple splits/skills have one **LOGID**.
LOGOUTREASON	The reason code associated with the agent's logout. For switch releases earlier than the ECS or switch releases that do not have the EAS feature and reason codes active, this field will always contain 0 when the agent has logged out.

Table 20: Agent Trace Database Items (Contd)

Database Item	Description
MCT	The agent activated a malicious call trace. Available on System 85, Generic 2, and Generic 3 (except for Generic 3i Version 1) switches.
RECONNECT	This event represents the agent reconnecting to the call after putting it on hold. Available on System 85, Generic 2, and Generic 3 switches.
ROW_DATE (index)	The date the event (**WORKMODE** or **DIRECTION** change) took place.
SPLIT	The split number that the agent's extension is assigned to or skill number associated with the agent's current ACD call or ACW session.
STARTTIME	The time of day (hour and minute) for which the agent trace report is being ordered. This is the time of day you enter to request the report.
TRANSFERRED	The agent transferred the call. For Generic 1 switches, **TRANSFERRED** includes measured call-to-measured split or measured trunk-to-measured trunk transfers. For System 85 and Generic 2.1 switches, **TRANSFERRED** includes calls transferred to a measured VDN or split. For Generic 3 and Generic 2.2 switches, **TRANSFERRED** includes all calls that were transferred.
WMODE_SEQ	The sequence number for events that occur in the same second.
WORKCODE	The call work code the agent entered for the call. Available on Generic 3 and Generic 2.2 switches with call work codes.

Table 20: Agent Trace Database Items (Contd)

Database Item	Description
WORKMODE	The work mode in which the agent was working during the trace. Agent work modes include AVAIL, ACD, ACW, AUX, DACD, DACW, RING, UNKNOWN, OTHER, and UNSTAFF. If the agent has not been logged in during the collection interval, the value is blank.

Switch Cross- Reference

Table 21 lists which Agent Trace database items are supported by each of the switch releases.

Table 21: Switch Cross-Reference for Agent Trace Database Items

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ACD	X	X	X	X	X	X	X	X
AGT_RELEASED					X	X	X	X
ASSIST_ACTV	X	X	X	X	X	X	X	X
AUXREASON	X	X	X	X	X	X	X	X
CALLER_HOLD		X	X	X	X	X	X	X
CALLING_II								X
CALLING_PTY	X	X	X	X	X	X	X	X
CONFERENCE				X	X	X	X	X
DIGITS_DIALED				X	X	X	X	X
DIRECTION	X	X	X	X	X	X	X	X

Table 21: Switch Cross-Reference for Agent Trace Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
DURATION	X	X	X	X	X	X	X	X
EVENT_TIME	X	X	X	X	X	X	X	X
EXT_CALL_ORIG				X	X	X	X	X
KEYBD_DIALED				X	X	X	X	X
LOGID (index)	X	X	X	X	X	X	X	X
LOGOUTREASON	X	X	X	X	X	X	X	X
MCT		X	X	X	X	X	X	X
RECONNECT		X	X	X	X	X	X	X
ROW_DATE	X	X	X	X	X	X	X	X
SPLIT	X	X	X	X	X	X	X	X
STARTTIME	X	X	X	X	X	X	X	X
TRANSFERRED	X	X	X	X	X	X	X	X
WMODE_SEQ	X	X	X	X	X	X	X	X
WORKCODE				X	X	X	X	X
WORKMODE	X	X	X	X	X	X	X	X

Call Record Database Items

The Call Record database item descriptions (Table 22) are **historical** items. They apply to the Call Record (`call_rec`) table. The indexes are **ACD** and **ROW_DATE**.

Table 22: Call Record Database Items

Database Item	Description
ACD (index)	The number of the ACD that handled this call.
ACWTIME	The time spent, in seconds, in ACW (after call work) related to this call by the answering agent in this segment.
AGT_RELEASED	The agent released or dropped the split/skill or direct agent ACD call. This is always true for ACD calls the agent transferred or conferenced. Available on Generic 3 switches.
ANSHOLDTIME	The total time call was put on hold by the answering agent, in seconds, in this call segment. Note that in agent-to-agent calls, ANSHOLDTIME is accrued for the answering agent if the agent puts the call on hold, but not for the other agent (who continues to accrue talk time). For System 85 and Generic 2.1 switches, **ANSHOLDTIME** includes split ACD calls held. For Generic 2.2 and Generic 3 switches, and the ECS, **ANSHOLDTIME** includes all calls held.
ANSLOGIN	The login ID of the agent who answered the call in this segment. This field is blank for unmeasured extensions when EAS is not active.
ANSREASON	The reason code (0-9) associated with the answering agent's mode, if the agent is in the AUX mode. For agents in AUX on switches with releases that are earlier than the ECS or that do not have EAS and reason codes active, this will only be 0.
ASSIST	Whether or not the answering agent in this segment requested supervisor assistance on this call (YES or NO).

Table 22: Call Record Database Items (Contd)

Database Item	Description
AUDIO	Whether or not an agent in this segment reported an audio difficulty problem (YES / NO).
CALLID	A unique number assigned to this call and all its segments. Note that in the case of a conference or transfer, when the data for the conference / transfer is recorded, the same call ID will be recorded for all call segments of the conference / transfer. Note that in the case of “meet-me conferences, this may result in higher-numbered segments of the call starting before the first segment on the call. Call IDs are not necessarily strictly sequential, but will be unique for calls over a day.
CALLING_II	The Information Indicator (II) digits associated with the call. These digits supply information about the originator location, for example, pay phone, hospital, prison. Available on the ECS and later switches.
CALLING_PTY	The Automatic Number Identification (ANI) / Station Identification (SID) (Generic 2.2 or Generic 3 Version 4 or later Generic 3 switches with ANI delivery), extension or trunk equipment location identifying the originator of the call. This field is blank if the trunk is not measured or, for internal calls, if the originating extension is not measured. (Up to 12 digits in this field.)
CONFERENCE	Whether or not this call segment represents part of a conference (YES / NO). Available on Generic 3 and Generic 2.2 switches.
CONSULTTIME	The time an agent talked on any outbound call, while in AUX work or ACW. This includes the time the originating agent spent talking to the destination party while establishing a conference or transferring a call. (This is the time between presses of the transfer or conference button.) It includes wait time if the agent is calling a VDN or split / skill extension, but the wait time can be subtracted out by subtracting the **DISPTIME** item from **CONSULTIME**.

Table 22: Call Record Database Items (Contd)

Database Item	Description
DA_QUEUED	Whether or not the call was queued as a direct agent call (YES / NO). Applies to Generic 3 switches only.
DIALED_NUM	The number the caller dialed (up to 24 digits). This will be the VDN for inbound vectoring calls and dialed digits for outbound calls. This will be blank for inbound calls without vectoring.
DISPIVECTOR	The number of the first vector associated with the disposition VDN (DISPVDN).

Table 22: Call Record Database Items (Contd)

Database Item	Description
DISPOSITION	This indicates whether the call was answered, connected, interflowed, abandoned, forced busy, forced disconnect, or other, in the call segment. An answered call is any split/skill or direct agent ACD call for which CMS receives an indication that the call was answered by an agent. A connected call is a non-ACD call to a measured agent for which CMS receives an indication that the call was connected or, in the case of System 85 R2V4 and Generic 2.1 switches, any call that was delivered to an extension by a “route to” vector command (CMS receives no indication if the call abandons). An interflowed call is a call that was redirected to an off-switch destination. An abandoned call is any call for which CMS receives notification that the caller abandoned. This includes calls with talk times shorter than the phantom-abandoned call timer. Forced busy calls are calls that CMS records as **BUSYCALLS** for the trunk group that carried them. These calls can be VDN calls that received a forced busy from the vector command or, on Generic 1 and Generic 3 switches and ECS a split/skill call that received a busy indication from the switch because the split queue was full, or no queue and no available agents, or no staffed agents. Forced disconnect calls are VDN calls that are disconnected by the switch due to the execution of a disconnect vector command (Generic 2.2, Generic 3 Version 2, later Generic 3 switches, and the ECS) or, for System 85, Generic 2.1, and Generic 3 Version 1 switches, calls that were given a forced disconnect announcement and listened to the entire announcement, then were disconnected by the switch. For Generic 3 Version 2 and later Generic 3 releases, disconnect calls also include calls disconnected because of the disconnect vector timer or because they reached the end of vector processing without being queued. Other calls are any other calls.

Table 22: Call Record Database Items (Contd)

Database Item	Description
DISPPRIORITY	The priority the call had at its disposition in this segment. Priorities can be LOW, MED, HIGH, or TOP (with vectoring) or YES / NO (without vectoring). For Generic 3 switches with vectoring, calls directed to split / skills using "route to" or "messaging split / skill" commands and calls directly to splits / skills without going through a vector will have MED (no priority) or HIGH (priority) priority, depending on the class of restriction of the originator of the call (agent, extension, trunk group, or VDN). If the call never queued to a split / skill, the priority will not be set.
DISPSKLEVEL	The skill level (1-16) associated with the skill for which the agent answered the call or, for calls that abandoned from ringing or from a direct agent queue, with the agent from whom the call abandoned. Available on the ECS with EAS.
DISPSPLIT	The number of the split or skill associated with the call at its disposition in this call segment. Calls that were not queued to a split or skill at the time of disposition will have **DISPSPLIT** set to null. Calls that were queued to an unmeasured split or skill at the time of disposition will have **DISPSPLIT** set to zero.
DISPTIME	The wait time (in the vector, in queue, ringing) until the disposition recorded in **DISPOSITION** for the call segment. For extension calls made directly to agents (not through a VDN), this will always be zero.
DISPVDN	The number of the VDN associated with the call at its disposition for this call segment. **DISPVDN** will be blank for calls that are not associated with a VDN at their disposition.
DURATION	The total time the trunk was held. This is the overall trunk holding time from the beginning of the call segment until the caller is disconnected. For the first segment of a call, this will be the trunk holding time for the caller for the entire call (from seized until idle). With a transfer, the original trunk remains associated with both call segments until the call ends.

Table 22: Call Record Database Items (Contd)

Database Item	Description
EQLOC	The physical equipment location of the trunk that carried the call. This will be blank if the trunk is not measured.
EVENT1-9	The number of times each event (stroke count) button was pressed for this call segment. Available on System 85, Generic 2, and Generic 3 switches.
FIRSTVECTOR	The number of the first vector associated with the first VDN for the call segment.
FIRSTVDN	The number of the first VDN associated with the call segment.
HELD	The total number of times this call was placed on hold by the answering agent in this call segment. With agent-to-agent calls, this count is incremented for the agent who puts the call on hold, regardless of whether that agent answered or originated the call, but not for the other agent who is continuing to accrue talk time). (for System 85 R2V4, Generic 2.1 switches, this includes only split ACD calls held. With Generic 2.2 and Generic 3 switches, this includes all calls the agent put on hold.)
HOLDABN	Whether this call abandoned from hold (YES/NO) in this call segment. With System 85 and Generic 2.1 switches, this is only for split ACD calls. With Generic 2.2 and Generic 3 switches, this includes all calls the agent put on hold.
LASTCWC	The last call work code (up to 16 digits) entered by the answering agent in this segment. This database item applies to Generic 2.2 and Generic 3 switches only.

Table 22: Call Record Database Items (Contd)

Database Item	Description
LASTDIGITS	The last set of collected digits sent to the CMS by the switch. These are digits the switch sends to CMS when it executes a “Collect” vector command. The digits may be digits the caller was prompted to enter, either through the prompting feature on the switch or through network-prompted digits (“caller-entered digits (ced)”), customer-database provided digits (“cdpd” from the network) or digits collected through a “Converse” vector command. Available on the ECS.
LASTOBSERVER	The login ID of the last agent that service-observed or bridged on to this call.
MALICIOUS	This indicates whether or not a malicious call trace was activated for this call segment. Valid values for **MALICIOUS** are YES and NO. Applies to Generic 2 and Generic 3 (except Generic 3i Version 1) switches.
OBSERVINGCALL	Whether this call represents an agent observing or bridging on to an existing call. Valid values for **OBSERVINGCALL** are YES and NO.
ORIGLOGIN	The Login ID of the agent originating the call. This is used for calls an agent originates to another agent, to an on-switch extension, or to an external destination.
ORIGREASON	The reason code (0 - 9) associated with the originating agent’s mode, if the agent is in the AUX mode. For agents in AUX on switches with releases that are earlier than the ECS or that do not have EAS and reason codes active, this will only be zero.
ROW_DATE	The date the call started.
ROW_TIME	The time of day that the call started.
SEGMENT	The number of the call segment. Segment numbers are from 1 up to the number of segments in the call.

Table 22: Call Record Database Items (Contd)

Database Item	Description
SEGSTART	The time the call segment started. A new segments starts when CMS receives the first message for the call, since each call segment represents a call. (When an agent transfers or conferences a call, the agent makes another call to effect the transfer/conference.)
SEGSTOP	*The t*ime when the call and any associated after call work ended. The call ends when all trunks and agents associated with the call segment have dropped off the call. This means that after call work time for the agent(s) is included when calculating the call segment stop time.
SPLIT1	The first split/skill to which the call queued in the first VDN with which it was associated in the call segment.
SPLIT2	The second split/skill to which the call was also queued to in the first VDN with which it was associated in the call segment. This only applies to Generic 2.2 with EAS and Generic 3 switches with vectoring.
SPLIT3	The third split/skill to which the call was also queued in the first VDN with which it was associated in the call segment. This applies only to Generic 2.2 with EAS and Generic 3 switches with vectoring.
TALKTIME	The total talk time for the answering agent in this call segment.
TKGRP	The number of the trunk group that carried the call. This will be null if the trunk carrying the call is not measured.
TRANSFERRED	Whether or not the agent initiated a transfer on this call segment. Valid values for **TRANSFERRED** are YES and NO. For Generic 2.2 and Generic 3 switches, **TRANSFERRED is set for any call transferred.** For System 85 and Generic 2.1 switches, **TRANSFERRED is set for transfers** to a measured VDN or split. For Generic 1 switches, **TRANSFERRED is set only if a** measured call is transferred to a measured split or from a measured trunk to a measured trunk.

Switch Cross- Reference

Table 23 lists which Call Record database items are supported by each of the switch releases.

Table 23: Switch Cross-Reference for Call Record Database Items

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
ACD	X	X	X	X	X	X	X	X
ACWTIME	X	X	X	X	X	X	X	X
AGT_RELEASED					X	X	X	X
ANSHOLDTIME		X	X	X	X	X	X	X
ANSLOGIN	X	X	X	X	X	X	X	X
ANSREASON	X	X	X	X	X	X	X	X
ASSIST	X	X	X	X	X	X	X	X
AUDIO		X	X	X	X	X	X	X
CALLID	X	X	X	X	X	X	X	X
CALLING_II								X
CALLING_PTY	X	X	X	X	X	X	X	X
CONFERENCE				X	X	X	X	X
CONSULTTIME	X	X	X	X	X	X	X	X
DA_QUEUED					X	X	X	X
DIALED_NUM		X	X	X	X	X	X	X
DISPIVECTOR		X	X	X	X	X	X	X
DISPOSITION	X	X	X	X	X	X	X	X
DISPPRIORITY	X	X	X	X	X	X	X	X
DISPSKLEVEL								X (EAS)

Table 23: Switch Cross-Reference for Call Record Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
DISPSPLIT	X	X	X	X	X	X	X	X
DISPTIME	X	X	X	X	X	X	X	X
DISPVDN		X	X	X	X	X	X	X
DURATION	X	X	X	X	X	X	X	X
EQLOC	X	X	X	X	X	X	X	X
EVENT1-9	X	X	X	X	X	X	X	X
FIRSTIVECTOR		X	X	X	X	X	X	X
FIRSTVDN		X	X	X	X	X	X	X
HELD		X	X	X	X	X	X	X
HOLDABN		X	X	X	X	X	X	X
LASTCWC				X	X	X	X	X
LASTDIGITS								
LASTOBSERVER					X	X	X	X
MALICIOUS			X	X	X (not G3iV1)	X	X	X
OBSERVINGCALL					X	X	X	X
ORIGLOGIN	X	X	X	X	X	X	X	X
ORIGREASON	X	X	X	X	X	X	X	X
ROW_DATE	X	X	X	X	X	X	X	X
ROW_TIME	X	X	X	X	X	X	X	X
SEGMENT	X	X	X	X	X	X	X	X
SEGSTART	X	X	X	X	X	X	X	X
SEGSTOP	X	X	X	X	X	X	X	X

Table 23: Switch Cross-Reference for Call Record Database Items (Contd)

Database Item	G1	85	G2.1	G2.2	G3V1	G3V2 G3V3	G3V4	ECS
SEQNUM	X	X	X	X	X	X	X	X
SPLIT1	X	X	X	X	X	X	X	X
SPLIT2				X (EAS)	X	X	X	X
SPLIT3				X (EAS)	X	X	X	X
TALKTIME	X	X	X	X	X	X	X	X
TKGRP	X	X	X	X	X	X	X	X
TRANSFERRED	X	X	X	X	X	X	X	X

Exceptions Historical Database Items

In Table 24 through Table 29, the database item **EXTYPE** lists numerical values associated with exception types. The database item **REASON** in Table 30 lists numerical values associated with exception types.

CentreVu CMS stores exception types using the numerical values, then translates the numbers into the text you see in standard exception reports.

To select specific exception types for a custom report, you must enter the numerical value(s) in the `Select rows where:` statement.

Agent Exceptions Database Items

The Agent Exception database item descriptions (Table 24) are **historical** items. They apply to the Agent Exception (`agex`) table.

Table 24: Agent Exception Database Items

Database Item	Description
ACD (index)	The ACD the agent was logged into.
EXTYPE	The type of exception that occurred: Numerical ValueType 1 Time Available 2 Time on inbound ACD call (min) 3 Time on inbound ACD call (max) 4 Time in after call work 5 Time on outbound ACW call 6 Time on inbound ACW call 7 Time in AUX work 8 Time on outbound AUX call 9 Time on inbound AUX call 10 Number of outbound ACW calls/agent 11 Number of inbound ACW calls/agent 12 Number of outbound AUX calls/agent 13 Number of inbound AUX calls/agent 14 Login not in dictionary 15 Time ACD call spent on hold* 16 Number ACD calls placed on hold* 17 Number ACD calls abandoned while on hold* 18 Time on outbound ACD call (min) 19 Time on outbound ACD call (max)[†] 20 Number calls transferred**

Table 24: Agent Exception Database Items (Contd)

Database Item	Description
	21 Time on external outbound ACW call[†] 22 Time on external outbound AUX call[†] 23 Time on direct agent call[‡] 24 Number external outbound ACW calls / agent** 25 Number external outbound AUX calls / agent** 26 Time ACD call spends ringing** 27 Different logins on same extension 28 Ringing call automatically redirected from agent 29 Agent logged out with active / held calls
	30 Number of calls waiting in direct agent queue[‡] 31 Time oldest call has waited in direct agent queue[‡] 32 Number of calls abandoned from direct agent queue[‡] 34 Number of calls outflowed from direct agent queue[‡] 38 Number calls transferred 48 Logout attempt without valid reason code 49 Could not be logged in 59 AUX attempt without valid reason code 60 Time in AUX with reason code 0 (default) 61 Time in AUX with reason code 1 62 Time in AUX with reason code 2 63 Time in AUX with reason code 3 64 Time in AUX with reason code 4 65 Time in AUX with reason code 5 66 Time in AUX with reason code 6 67 Time in AUX with reason code 7 68 Time in AUX with reason code 8 69 Time in AUX with reason code 9 98 Agent denied login to some skills 99 Invalid call work code
LOGID	The Login ID of the agent who had the exception.
REASON_CODE	The reason code that the agent was in when the exception occurred.
ROW_DATE	The date on which the exception occurred.
ROW_TIME	The time at which the exception occurred.

Table 24: Agent Exception Database Items (Contd)

Database Item	Description
SPLIT	The split or skill in which the agent was doing work when the exception occurred.
THRESHOLD	The limit, as a number of occurrences, administered for the exception type. An exception occurs when the agent's activity falls outside of that limit.
TIME	The limit, as a number of seconds, administered for timed exceptions types. An occurrence is logged against the threshold when the agent's activity falls outside of that limit.

*Available only on System 85, Generic 2, and Generic 3 switches.
†Available only with Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.
** Available only with Generic 2.1 or later and Generic 3 switches.
‡ Available only with Generic 3 switches with the ASAI or EAS feature.

Split/Skill Exceptions Database Items

The Split / Skill Exception database item descriptions (Table 25) are **historical** items. They apply to the Split / Skill Exception (`spex`) table.

Table 25: Split/Skill Exception Database Items

Database Item	Description
ACD (index)	The ACD of the split or skill.
EXTYPE	The type of exception that occurred: Numerical ValueType 30 Number calls waiting 31 Time call has waited in queue 32 Number calls abandoned 33 Number intraflowed-in calls 34 Number intraflowed-out calls 35 Number interflowed-out calls 36 Number calls offered while queue full* 37 Number calls handled as backup† 38 Number calls transferred** 39 Average speed of answer (seconds) 40 Rolling average speed of answer (seconds) 41 Expected wait time (pri top) 42 Expected wait time (pri high) 43 Expected wait time (pri medium) 44 Expected wait time (pri low)
ROW_DATE	The date on which the exception occurred.
ROW_TIME	The time at which the exception occurred.
SPLIT	The split or skill in which the exception occurred.
THRESHOLD	The limit, as a number of occurrences, administered for the exception type. An exception occurs when the split's / skill's activity falls outside of that limit.
TIME	The limit, as a number of seconds, administered for timed exceptions types. An occurrence is logged against the threshold when the split's / skill's activity falls outside of that limit.

*Available only on System 85, Generic 2, and Generic 3 switches.

†Available only with Generic 2.2 switches with the ASAI Gateway Interface feature and Generic 3 switches with the ASAI feature.

** Available only with Generic 2.1 or later and Generic 3 switches.

Trunk Group Exceptions Database Items

The Trunk Group Exception database item descriptions (Table 26) are **historical** items. They apply to the Trunk Group Exception (`tgex`) table.

Table 26: Trunk Group Exception Database Items

Database Item	Description
ACD (index)	The ACD of the trunk group.
EXTYPE	The type of exception that occurred: Numerical ValueType 50 Time trunk in use (min) 51 Time trunk in use (max) 52 Number trunks in use 53 Total time trunks maintenance busy 54 Number trunks maintenance busy 55 Length of time all trunks busy 56 Number trunk failures in group 57 Number failures on any single trunk 58 Audio difficulty
EQLOC	The trunk location where the exception occurred.
LOGID	The Login ID of the agent reporting audio difficulty.
ROW_DATE	The date on which the exception occurred.
ROW_TIME	The time at which the exception occurred.
THRESHOLD	The limit, as a number of occurrences, administered for the exception type. An exception occurs when the trunk group's activity falls outside of that limit.
TIME	The limit, as a number of seconds, administered for timed exceptions types. An occurrence is logged against the threshold when the trunk group's activity falls outside of that limit.
TKGRP	The number of the trunk group where the exception occurred.

VDN Exceptions Database Items

The VDN Exception database item descriptions (Table 27) are **historical** items. They apply to the Agent Exception (`vdnex`) table. VDN exceptions are available only with the vectoring feature.

Table 27: VDN Exception Database Items

Database Item	Description
ACD (index)	The ACD of the VDN.
EXTYPE	The type of exception that occurred: Numerical ValueType 2 Time at agent (min) 3 Time at agent (max) 30 Number calls in an ACD split queue 32 Number calls abandoned while in vector 33 Number calls flowed into VDN 34 Number calls flowed out of VDN 35 Number calls interflowed out of VDN 37 Number calls handled by backup split 71 Time in vector (max) 72 Number calls forced busy 73 Number calls disconnected 74 Number unsuccessful lookahead attempts 75 Number unsuccessful adjunct routing attempts 76 Rolling average speed of answer
ROW_DATE	The date on which the exception occurred.
ROW_TIME	The time at which the exception occurred.
THRESHOLD	The limit, as a number of occurrences, administered for the exception type. An exception occurs when the VDN activity falls outside of that limit.
TIME	The limit, as a number of seconds, administered for timed exceptions types. An occurrence is logged against the threshold when the VDN activity falls outside of that limit.
VDN	The VDN for which the exception occurred.
VECTOR	The vector number associated with the exception.

Vector Exceptions Database Items

The Vector Exception database item descriptions (Table 28) are **historical** items. They apply to the Vector Exception (`vecex`) table. Vector exceptions are available only with the vectoring feature.

Table 28: Vector Exception Database Items

Database Item	Description
ACD (index)	The ACD of the vector.
EXTYPE	The type of exception that occurred: Numerical ValueType 30 Number calls in an ACD split queue 32 Number calls abandoned while in vector 72 Number calls forced busy 73 Number calls disconnected 74 Number unsuccessful lookahead interflow attempts 75 Number unsuccessful adjunct routing attempts 80 Time in vector (min) 81 Time in vector (max)
ROW_DATE	The date on which the exception occurred.
ROW_TIME	The time at which the exception occurred.
THRESHOLD	The limit, as a number of occurrences, administered for the exception type. An exception occurs when the vector activity falls outside of that limit.
TIME	The limit, as a number of seconds, administered for timed exceptions types. An occurrence is logged against the threshold when the vector activity falls outside of that limit.
VECTOR	The vector number for which the exception occurred.

Malicious Call Trace Exceptions Database Items

The Malicious Call Trace Exception database item descriptions (Table 29) are **historical** items. They apply to the Malicious Call Trace Exception (`mctex`) table.

Table 29: Malicious Call Trace Exception Database Items

Database Item	Description
ACD (index)	The ACD on which the malicious call was recorded.
ANI_SID	The billing number or phone number from which the malicious call originated (available only if the switch has ANI/SID service).
EQLOC	The location of the trunk that carried the malicious call.
EXTYPE	Type of exception that occurred: Numerical Value Type 90 Malicious call
II_DIGITS	The Information Indicator digits. Indicates type of originating line of caller.
LOGID	The Login ID of the agent reporting the malicious call.
ROW_DATE	The date on which the malicious call was reported.
ROW_TIME	The time at which the malicious call was reported.
SPLIT	The split/skill of the agent reporting the malicious call.
THRESHOLD	Not used.
TIME	Not used.
TKGRP	The number of the trunk group that carried the malicious call.
VDN	The VDN that carried the malicious call. Available with System 85, Generic 2, and Generic 3 switches with vectoring.

Data Collection Exceptions Database Items

The Data Collection Exception database item descriptions (Table 30) are **historical** items. They apply to the Data Collection Exception (`linkex`) table.

Table 30: Data Collection Exception Database Items

Database Item	Description
ACD (index)	The ACD for which data collection was interrupted.
DURATION	The length of time for which data collection was off.
REASON	The reason for the interruption of data collection. The reasons may be as follows: Numerical ValueReason 91 Data collection started 92 Data collection started - new translations 93 Data collection turned off 94 Data collection busied out 95 Data collection timed out 96 Data collection clock was reset 97 Data collection session down
ROW_DATE	The date on which data collection was interrupted.
ROW_TIME	The time at which data collection was interrupted.
THRESHOLD	the limit, as a number of occurrences, administered for the exception type. An exception occurs when the data collection activity falls outside of that limit.

Agent State and Row Search Values Cross-Reference

Use Table 31 to identify how *CentreVu* CMS stores Agent State (names) and the applicable row search values.

Table 31: Agent State and Row Search Values Cross-Reference

Status Database Items	State Names	Numerical Values for Row Search
AG_DEST	PBX OFF	1 2
AG_DIR	OUT IN	1 2
AG_ORIG	BLANK PHONE KEYBOARD	0 1 2
AG_PREF	LVL NEED	1 2
ALL_BUSY	YES NO	1 0
PER_CHG	YES NO	1 0
SLVL_CHG	YES NO	1 0

Table 31: Agent State and Row Search Values Cross-Reference (Contd)

Status Database Items	State Names	Numerical Values for Row Search
TKSTATE	UNKNOWN	0
	IDLE	1
	SEIZED	2
	QUEUED	3
	CONN	4
	DABN	5
	MBUSY	6
	FBUSY	7
	FDISC	8
	HOLD	9
	RING	80
TK_DIR	IN	2
	OUT	1
TK_PRI	YES	1
	NO	0
TK_QTYPE	MAIN	1
	BACKUP	2
WORKMODE	UNKNOWN	0
	UNSTAF	10
	AVAIL	20
	ACD	30
	ACW	40
	AUX	50
	DACD	60
	DACW	70
	OTHER	220
	RING	80
	LOGON	100
	LOGOFF	110
	TRACE ON	120
	TRACE OFF	121

Call Disposition and Row Search Values Cross-Reference

Use Table 32 to identify how *CentreVu* CMS stores Call Disposition and the applicable row search values.

Table 32: Call Disposition and Row Search Values Cross-Reference

Status Database Items	State Names	Numerical Values for Row Search
DISPOSITION	CONN	1
	ANS	2
	ABAN	3
	IFLOW	4
	FBUSY	5
	FDISC	6
	OTHER	7

Standard Dictionary Calculations

Table 33 lists all of the standard *CentreVu* CMS Dictionary calculations. These calculations are used in real-time and historical reports. You can also use them in custom reports.

Caution

Do **NOT** modify any of the standard *CentreVu* CMS Dictionary calculations. If you modify the standard calculations the meaning of the data will be changed.

Table 33: Standard Dictionary Calculations

Calculation Name	Calculation	Description
AGENTS_ON_EXT_CALLS	(ONACWIN + ONAUXIN + ONACWOUT +ONAUXOUT)	Agents on extension calls
AVG_ABANDON_TIME	ABNTIME / ABNCALLS	Average time to abandon
AVG_ABANDON_TIME_SUM	sum(ABNTIME) / sum(ABNCALLS)	Total average abandon time
AVG_ACD_TALK_TIME	ACDTIME / ACDCALLS	Average ACD talk time
AVG_ACD_TALK_TIM_SUM	(sum(ACDTIME) / sum(ACDCALLS)	Total average ACD talk time
AVG_ACW_TIME	ACWTIME / ACDCALLS	Average ACW time
AVG_ACW_TIME_SUM	sum(ACWTIME) / sum(ACDCALLS)	Total average ACW time
AVG_AGENT_ACW_SUM	sum(TOTAL_ACWTIME) / sum(TOTAL_ACDCALLS)	Total average agent ACW time
AVG_AGENT_ACW_TIME	TOTAL_ACWTIME / TOTAL_ACDCALLS	Average ACW time

Table 33: Standard Dictionary Calculations (Contd)

Calculation Name	Calculation	Description
AVG_AGENT_TALK_SUM	sum(TOTAL_ACDTIME) / sum(TOTAL_ACDCALLS)	Total average agent ACD talk time
AVG_AGENT_TALK_TIME	TOTAL_ACDTIME / TOTAL_ACDCALLS	Average agent ACD talk time
AVG_ANSWER_SPEED	ANSTIME / ACDCALLS	Average speed of answer
AVG_ANSWER_SPEED_SUM	sum(ANSTIME) / sum(ACDCALLS)	Total average answer speed
AVG_CONNECT_TIME	CONNECTTIME / CONNECTCALLS	Average amount of time for call to connect to agent
AVG_CONNECT_TIME_SUM	sum(CONNECTTIME) / sum(CONNECTCALLS)	Total average amount of time for call to connect to agent
AVG_HOLD_TIME	HOLDTIME / HOLDCALLS	Average hold time
AVG_HOLD_TIME_SUM	sum(HOLDTIME) / sum(HOLDCALLS)	Total average hold time
AVG_INB_ACD_TIME_SUM	(sum(TOTAL_ACDTINE-O_ACDTIME)) / INBOUND_ACDCALLS	Average inbound ACD time
AVG_INB_ACW_TIME_SUM	(sum(TOTAL_ACWTIME-O_ACWTIME))/ INBOUND_ACDCALLS	Average inbound ACW time
AVG_OUTB_ACD_SUM	sum(O_ACDTIME) / sum(O_ACDCALLS)	Total outbound average ACD talk time
AVG_OUTB_ACD_TIME	O_ACDTIME / O_ACDCALLS	Outbound average ACD talk time
AVG_OUTB_ACW_SUM	sum(O_ACWTIME) / sum(O_ACDCALLS)	Total outbound average ACW talk time

Table 33: Standard Dictionary Calculations (Contd)

Calculation Name	Calculation	Description
AVG_OUTB_ACW_TIME	O_ACWTIME / O_ACDCALLS	Outbound average ACW talk time
AVG_POS_STAFF	I_STAFFTIME / (INTRVL * 60)	Average positions staffed
AVG_POS_STAFF_SUM	sum(I_STAFFTIME) / sum(INTRVL * 60)	Average positions staffed total
AVG_TALK_TIME_IN	(ACWINTIME + AUXINTIME) / (ACWINCALLS + AUXINCALLS)	Extension in calls average talk time
AVG_TALK_TIME_IN_SUM	sum(ACWINTIME + AUXINTIME) / sum(ACWINCALLS + AUXINCALLS)	Extension in calls total average talk time
AVG_TALK_TIME_OUT	(ACWOUTTIME + AUXOUTTIME) / (ACWOUTCALLS + AUXOUTCALLS)	Extension out calls average talk time
AVG_TALK_TIM_OUT_SUM	sum(ACWOUTTIME + AUXOUTTIME) / sum(ACWOUTCALLS + AUXOUTCALLS)	Extension out calls total average talk time
AVG_TOP_STAFF	sum(TOTAL_I_ACDACW+TOTAL_I_ACDHOLD+TOP_AVAUXTIME)/(INTRVL*60)	Calculates average positions staffed for EAS, making use of the top agent concept to avoid double-counting agents' time when they are staffed in multiple skills.

Table 33: Standard Dictionary Calculations (Contd)

Calculation Name	Calculation	Description
AVG_TOP_STAFF_SUM	sum(TOT_I_ACDACW_SUM+TOT_I_ACDHOLD_SUM+TOP_AVAUXTIME_SUM)/sum(INTRVL*60)	Calculates average positions staffed for EAS, summed over all records found in the search, making use of the top agent concept to avoid double-counting agents' time when they are staffed in multiple skills.
AVG_TRK_HOLD_IN_SUM	sum(INTIME) / sum(INCALLS)	Inbound total average trunk holding time
AVG_TRK_HOLD_OUT_SUM	sum(OUTTIME) / sum(OUTCALLS)	Outbound total average trunk holding time
AVG_TRK_HOLD_TIME	(INTIME + OUTTIME) / (INCALLS + OUTCALLS)	Average trunk holding time
AVG_TRK_HOLD_TIME_IN	INTIME / INCALLS	Inbound average trunk holding time
AVG_TRK_HOLD_TIM_OUT	OUTTIME / OUTCALLS	Outbound average trunk holding time
AVG_VDN_TIME	(INTIME / INCALLS)	Average VDN time
AVG_VDN_TIME_SUM	sum(INTIME) / sum(INCALLS)	Average time in VDN total
AVG_VEC_TIME	INTIME / INCALLS	Average vector time
AVG_VEC_TIME_SUM	sum(INTIME) / sum(INCALLS)	Average vector time total
BUSY_DISCONNECT	(BUSYCALLS + DISCCALLS)	Number of calls that were busy and disconnected
CALLS_PER_POS	(60 * INTRVL * ACDCALLS) / I_STAFFTIME)	Calls per position

Table 33: Standard Dictionary Calculations (Contd)

Calculation Name	Calculation	Description
CALLS_PER_POS_SUM	(sum(60 * INTRVL) * sum(ACDCALLS))/ sum(I_STAFFTIME	Calls per position total
EXT_CALL_IN	(ACWINCALLS + AUXINCALLS)	Incoming extension calls
EXT_CALL_OUT	(ACWOUTCALLS + AUXOUTCALLS)	Outgoing extension calls
EXT_IN_TIME	(I_ACWINTIME + I_AUXINTIME)	Time on incoming extension calls
EXT_OUT_TIME	(I_ACWOUTTIME + I_AUXOUTTIME)	Time on outgoing extension calls
INBOUND_ACDCALLS	(sum (TOTAL_ACDCALLS - O_ACDCALLS))	Total inbound ACD calls
INT_AUXTIME	I_STAFFTIME - I_AVAILTIME - I I_ACDTIME - I_ACWTIME -I_OTHERTIME - I_RINGTIME - I I_DA_ACDTIME - I_DA_ACWTIME	Total AUX time
PERCENT_ACD_TIME	100 * ((I_ACDTIME + I_ACWTIME) / I_STAFFTIME)	Percent ACD time
PERCENT_ACD_TIME_SUM	100 * (sum(I_ACDTIME + I_ACWTIME) / sum(I_STAFFTIME))	Percent ACD time total
PERCENT_ALL_BUSY	100 * (ALLINUSETIME / SECS_PER_DAY)	Percentage of time all trunks in use
PERCENT_ALL_BUSY_D	100 * (ALLINUSETIME / d_secs.SECSPERDAY)	Percentage of time all trunks in use in the day

Table 33: Standard Dictionary Calculations (Contd)

Calculation Name	Calculation	Description
PERCENT_ALL_BUSY_M	100 * (ALLINUSETIME / m_secs.SECSPERMN)	Percentage of time all trunks in use in the month
PERCENT_ALL_BUSY_W	100 * (ALLINUSETIME / w_secs.SECSPERWK)	Percentage of time all trunks in use in the week
PERCENT_ALL_BUSY_SUM	100 * (sum(ALLINUSETIME) / sum(SECS_PER_DAY))	Percentage of time all trunks in use
PERCENT_AL_BSY_SUM_D	100 * (sum(ALLINUSETIME) / sum(d_secs.SECSPERDAY))	Percentage of time all trunks in use in the day
PERCENT_AL_BSY_SUM_M	100 * (sum(ALLINUSETIME) / sum(m_secs.SECSPERMN))	Percentage of time all trunks in use in the month
PERCENT_AL_BSY_SUM_W	100 * (sum(ALLINUSETIME) / sum(w_secs.SECSPERWK))	Percentage of time all trunks in use in the week
PERCENT_AUX_WORK	100 * (I_AUXTIME / I_STAFFTIME)	Percent AUX time
PERCENT_AUX_WORK_SUM	100 * (sum(I_AUXTIME) / sum(I_STAFFTIME))	Total percent AUX time
PERCENT_CALL_ABAN	100 * (ABNCALLS / (CALLSOFFERED))	Percentage of calls abandoned
PERCENT_CALL_ANS	100 * (ACDCALLS / CALLSOFFERED)	Percentage of calls offered that were answered
PERCENT_CALL_ANS_SUM	100 * (sum(ACDCALLS) / sum(CALLSOFFERED))	Total percent of calls offered that were answered

Table 33: Standard Dictionary Calculations (Contd)

Calculation Name	Calculation	Description
PERCENT_MBUSY	100 * (MBUSYTIME / (SECS_PER_DAY * TRUNKS))	Percent of time all trunks in use
PERCENT_MBUSY_D	100 * (MBUSYTIME / (d_secs.SECSPERDAY * TRUNKS))	Percent of time all trunks busied-out in the day
PERCENT_MBUSY_M	100 * (MBUSYTIME / (m_secs.SECSPERMN * TRUNKS))	Percent of time all trunks busied-out in the month
PERCENT_MBUSY_W	100 * (MBUSYTIME / (w_secs.SECSPERWK * TRUNKS))	Percent of time all trunks busied-out in the week
PERCENT_MBUSY_SUM_D	100 * (sum(MBUSYTIME) / (avg(d_secs.SECSPERDAY) * sum(TRUNKS)))	Percent of time all trunks busied-out in the day
PERCENT_MBUSY_SUM_M	100 * (sum(MBUSYTIME) / (avg(m_secs.SECSPERMN) * sum(TRUNKS)))	Percent of time all trunks busied-out in the month
PERCENT_MBUSY_SUM_W	100 * (sum(MBUSYTIME) / (avg(w_secs.SECSPERWK) * TRUNKS))	Percent of time all trunks busied-out in the week
PERCENT_MBUSY_SUM	100 * (sum(MBUSYTIME) / (avg(SECS_PER_DAY) * sum(TRUNKS)))	Percent time all trunks in use
PERCENT_SERV_LVL_SPL	100 * (ACCEPTABLE / CALLSOFFERED)	Percent of calls answered in service level for split
PERCENT_SERV_LVL_VDN	100 * (sum(ACCEPTABLE) / sum(INCALLS))	Percent of calls answered within service level for VDN
PERCENT_SLVL_SPL_SUM	100 * (sum(ACCEPTABLE) * sum (CALLSOFFERED))	Percent of total split calls answered in service level

Table 33: Standard Dictionary Calculations (Contd)

Calculation Name	Calculation	Description
PERCENT_VDN_ABAN	100 * (sum(ABNCALLS) / sum(INCALLS))	Percent of calls abandoned
PERCENT_VDN_ANSCONN	100 * (sum(ACDCALLS + CONNECTCALLS) / sum(INCALLS))	Percent of calls answered in service level
SECS_PER_DAY	(24 * 60 * 60)	Seconds per day
TOP_AVAUXTIME	sum (I_TAUXTIME+I_TAVAILTIME)	Subcalculation that supports the new AVG_TOP_STAFF calculation. Sums the time top agents spent in AUX work and available.
TOP_AVAUXTIME_SUM	sum (I_TAUXTIME+I_TAVAILTIME)	Subcalculation that supports the new AVG_TOP_STAFF_SUM calculation. Sums the time top agents spent in AUX work and available.
TOT_I_ACDACW_SUM	sum(I_ACDTIME+I_ACWTIME+I_DA_ACDTIME+I_DA_ACWTIME+I_RINGTIME)	Subcalculation that supports the new AVG_TOP_STAFF_SUM calculation. Sums the ACD and ACW time for split/skill and direct agent calls, plus the (agent) ringing time for those calls.
TOT_I_ACDHOLD_SUM	sum(I_ACDOTHERTIME+I_ACDAUXTIME+I_ACDAUX_OUTTIME)	Subcalculation that supports the new AVG_TOP_STAFF_SUM calculation. Sums the time agents spent with ACD calls on hold.

Table 33: Standard Dictionary Calculations (Contd)

Calculation Name	Calculation	Description
TOTAL_I_ACDACW	sum (I_ACDTIME + I_ACWTIME +I_DA_ACDTIME+I_DA_ ACWTIME+II_RINGTIME)	Subcalculation that supports the new AVG_TOP_STAFF calculation. Sums the ACD and ACW time for split/skill and direct agent calls, plus the (agent) ringing time for those calls.
TOTAL_ACDCALLS	(ACDCALLS + DA_ACDCALLS)	Total ACD calls
TOTAL_I_ACDHOLD	sum (I_ACDOTHERTIME+ I_ACDAUXINTIME+I_AC DAUX_OUTITME)	Subcalculation that supports the new AVG_TOP_STAFF calculation. Sums the time agents spent with ACD calls on hold.
TOTAL_ACDTIME	(ACDTIME + DA_ACDTIME)	Total ACD time
TOTAL_ACWTIME	(ACWTIME + DA_ACWTIME)	Total ACW time
TOTAL_I_ACDTIME	(I_ACDTIME + I_DA_ACDTIME)	Total interval-based ACD time
TOTAL_I_ACWTIME	(I_ACWTIME + I_DA_ACWTIME)	Total interval-based ACW time

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