Lucent Technologies
Bell Labs Innovations

INTUITY™ CONVERSANT® System

VoiceStats™

585-310-580
Comcode 108283680
Issue 2
August 1998

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- Answered by the called station
- Answered by the attendant
- Routed to a recorded announcement that can be administered by the CPE user

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Acknowledgment
This document was prepared by Product Publications, Lucent Technologies, Columbus, OH.

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About This Document

Purpose

This document, *INTUITY™ CONVERSANT® System VoiceStats™,* 585-310-580, Issue 2, describes VoiceStats™, a powerful system used to access/monitor a Lucent Technologies CentreVu® call management system (CMS). This document includes:

- an overview of how VoiceStats operates
- instructions to install VoiceStats software
- descriptions and instructions for the administrative functions
- instructions to use VoiceStats software
- guidelines for troubleshooting VoiceStats software

Intended Audiences

The primary audience for this document is the administrator who installs VoiceStats and administers the user “favorites” and profiles.

This document assumes that you have knowledge of UNIX, the INTUITY CONVERSANT system in general, and the specific CMS system being monitored.

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How to Use This Document

The chapters of this document build on one another. It is recommended that you read them in order.

- Chapter 1, “VoiceStats System Overview”, introduces you to VoiceStats, explains the software’s main purpose, and lists some general capabilities.
- Chapter 2, “Understanding the VoiceStats System”, explains the VoiceStats features.
- Chapter 3, “Installing VoiceStats”, provides detailed installation instructions.
- Chapter 4, “Using VoiceStats”, describes the touch tone and web interface administration required for both users and system administrators.
- Chapter 5, “VoiceStats/Silent Sentry Interface”, describes the VoiceStats/Silent Sentry Interface links, including the procedures needed to set up and administer thresholds for the interface.
- Chapter 6, “VoiceStats Administration Details”, describes VoiceStats default behavior.
- Chapter 7, “Troubleshooting”, contains troubleshooting procedures for finding and correcting problems that may occur during or after installation.

- Chapter A, “Parameters Worksheet”, provides worksheets designed to help you determine and record the various parameters for CMS, WebVRU, and VoiceStats installation.
- Glossary, contains the VoiceStats speech phrases, a list of expanded abbreviations, as well as definitions for selected words.
- Index, contains topic entries for quick access to those topics.

Conventions Used

Terminology

- The word “type” means to press the key or sequence of keys specified. For example, an instruction to type the letter “y” is shown as

  Type **y** to continue.

- The word “enter” means to type a value and then press ENTER. For example, an instruction to type the letter “y” and press ENTER is shown as

  Enter **y** to continue.

- The word “select” means to move the cursor to the desired menu item and then press ENTER. For example, an instruction to move the cursor to the start test option on the Network Loop-Around Test screen and then press ENTER is shown as

  Select `Start Test.`

Terminal Keys

- Keys that you press on your terminal or PC as well as Web interface buttons are represented as rounded boxes. For example, an instruction to press the enter key is shown as

  Press ENTER.

- Two or three keys that you press at the same time on your terminal or PC (that is, you hold down the first key while pressing the second and/or third key) are represented as a series of separate rounded boxes. For example, an instruction to press and hold ALT while typing the letter “d” is shown as

  Press ALT D.

- Function keys on your terminal, PC, or system screens, also known as *soft keys*, are represented as round boxes followed by the function or value of that key enclosed in parentheses. For example, an instruction to press function key 3 is shown as

  Press F3 (Choices).

- Keys that you press on your telephone keypad are represented as square boxes. For example, an instruction to press the first key on your telephone keypad is shown as

  Press [1] to record a message.

Screen Displays

- Values, system messages, field names, and prompts that appear on the screen are shown in typewriter-style `constant-width` type, as shown in the following examples:

  Example 1:

  Enter the number of ports to be dedicated to outbound traffic in the `Maximum Simultaneous Ports` field.

  Example 2:

  ```
  Alarm Form Update was successful.

  Press <Enter> to continue.
  ```

- The sequence of menu options that you must select to display a specific screen or submenu is shown as follows:

  Start at the INTUITY CONVERSANT Main Menu and select

  ```
  > Voice System Administration
      > Configuration Management
  ```

  In this example, you would access the INTUITY CONVERSANT Main Menu and select the Voice System Administration menu. From the Voice System Administration menu, you would then select the Configuration Management screen.

Typography

- Commands and text you type in or enter appear in **bold** type, as in the following examples:

  Example 1:

  Enter **change-switch-time-zone** at the `enter command:` prompt.

  Example 2:

  Type **high** or **low** in the `Speed:` field.

- Command variables are shown in ***bold italic*** type when they are part of what you must type in and *regular italic* type when they are not, for example

  Enter **ch ma *machine_name***, where *machine_name* is the name of the call delivery machine you just created.

- Spoken phrases are enclosed in quotation marks and shown in italics. *"This is VoiceStats calling."*

Safety and Security Alert Labels

This document uses the following symbols to call your attention to potential problems that could cause personal injury, damage to equipment, loss of data, service interruptions, or breaches of toll fraud security:

CAUTION:
Indicates the presence of a hazard that if not avoided can or will cause minor personal injury or property damage, including loss of data.

WARNING:
Indicates the presence of a hazard that if not avoided can cause death or severe personal injury.

DANGER:
Indicates the presence of a hazard that if not avoided will cause death or severe personal injury.

Indicates the presence of a toll fraud security hazard. Toll fraud is the unauthorized use of a telecommunications system by an unauthorized party.

Related Documentation

The following is a list of related INTUITY CONVERSANT System documentation:

- Version 6.0:
  - *INTUITY CONVERSANT System Version 6.0 Upgrade*, 585-310-183
  - *INTUITY CONVERSANT System Version 6.0 Maintenance*
    - MAP/40, 585-310-181
    - MAP/100, 585-310-179
    - MAP/100C, 585-310-180
  - *INTUITY CONVERSANT System Version 6.0 Administration*, 585-310-591
  - *INTUITY CONVERSANT System Version 6.0 Application Development with Advance Methods*, 585-310-761
  - *INTUITY CONVERSANT System Version 6.0 Application Development with Script Builder*, 585-310-760
- Version 7.0:
  - *INTUITY CONVERSANT System Version 7.0 Upgrade Planning*, 585-313-601
  - *INTUITY CONVERSANT System Version 7.0 Maintenance*
    - MAP/5P, 585-313-107
    - MAP/40P, 585-313-108
    - MAP/100P, 585-313-110
    - MAP/100C, 585-313-109
  - *INTUITY CONVERSANT System Version 7.0 Administration*, 585-313-501
  - *INTUITY CONVERSANT System Version 7.0 Application Development with Advanced Methods*, 585-313-203
  - *INTUITY CONVERSANT System Version 7.0 Applicaton Development with Script Builder*, 585-313-206

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VoiceStats System Overview

1

This chapter provides an overview of VoiceStats™ including a description of what it is, a typical configuration, and the major features of the system.

Overview

VoiceStats is a software package that facilitates the quick and easy access of crucial call center information. Typically, call center information is provided by the Lucent Technologies CentreVu™ Call Management System (CMS) and is often only available to users in a printed report format or through a limited number of direct terminals.

VoiceStats makes CMS information accessible either over the telephone or by using a desktop PC web browser interface. By making this information more readily available to the appropriate personnel, informed management decisions can be made quickly, in and away from the office, to keep the call center operating efficiently.

System Configuration

Figure 1-1 illustrates a typical VoiceStats system configuration. The systems that make up this configuration are described in this section.

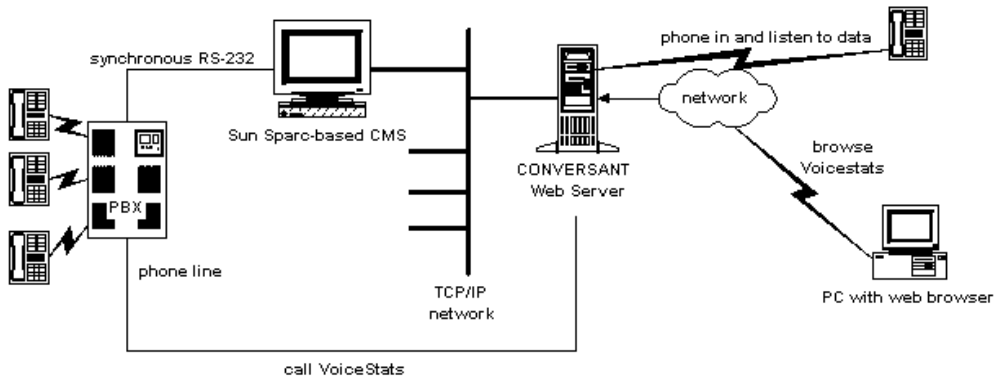

Figure 1-1. VoiceStats System Configuration

Call Management System

The Call Management System (CMS) is a software product used to monitor calls that are processed by the automatic call distribution (ACD) feature of a Lucent switch. The CMS collects call traffic data, formats management reports, and monitors call activities to aid an administrator in determining the most efficient service possible for call center customers. The CMS provides VoiceStats with the desired call data.

VoiceStats can access information from up to four (4) ACDs served by a single Sun Sparc-based CMS server.

The CMS (R3V5) system communicates over a TCP/IP (ethernet) network with the INTUITY CONVERSANT system.

INTUITY CONVERSANT System

The INTUITY CONVERSANT system serves as:

- an interactive voice system that can be accessed over the telephone.
- an intranet server that can be accessed with any standard HTTP 1.0-compliant browser.

NOTE:
VoiceStats is certified to work with Netscape Navigator™, Versions 2, 3, and 4, and Microsoft Internet Explorer®, Versions 2, 3, and 4.

The VoiceStats server software package, WebVRU, (written by Gold Systems, Inc.) allows your INTUITY CONVERSANT Version 5.0, Version 6.0 Update1, or Version 7.0 system to act as a web server. The software includes the Apache Server, one of the most widely used web servers, especially for UNIX machines. The Apache Server Version 1.0.1 is provided to support UnixWare 2.1 (the operating system running on the voice system). See the Apache group (URL, **http://www.apache.org**) for more information. The VoiceStats server software package provides additional utilities and automatically configures your web server to run correctly on your voice system.

In addition to including the server software, the VoiceStats server software also installs the proper configuration for running the server on a voice system. Because your voice system is most important as an interactive voice response (IVR) system, the server is configured to use only a limited number of resources available on the voice system. As more users access your web server, they will encounter slower response times, rather than limiting the voice system's ability to handle your important voice response customers.

CAUTION:
Do not use your voice system *as a general-purpose or broad-access web server and also expect your voice system to adequately handle your IVR traffic. The VoiceStats web server on your voice system will not support more than five concurrent users. You should not add your own Web-based applications to your INTUITY CONVERSANT system.*

DEFINITY

The DEFINITY® switch is connected to the Sun Sparc-based CMS system via a synchronous RS-232 connection.

The VoiceStats system is compatible with DEFINITY G3r, G3i, V1, V1.1, V2, V3, V4, V5, and DEFINITY G2.2.

VoiceStats Features

VoiceStats contains a standard set of CMS real-time and historical data items. The system administrator chooses a unique subset of the available data items for each user. This subset of data items is referred to as the user "profile" throughout the VoiceStats system.

Real-Time Data Items

Examples of real-time data items that can be accessed are:

- ACD calls
- abandoned calls
- percent answered within service level
- average speed of answer
- agents available
- agents staffed

Historical Data Items

Examples of historical data items that can be accessed are:

- percent answered
- ACD calls
- average speed of answer
- percent answered within service level
- percent abandoned
- abandoned calls
- average abandon time

See Chapter 6, "VoiceStats Administration Details" for a complete list of available data items.

Favorites

Users familiar with Internet Explorer should be familiar with the term "favorites."

The system administrator chooses a list of ACDs, splits, skills, and VDNs for each user. This list is referred to as user "favorites."

Levels

The system administrator can allow certain users to modify and maintain their own profiles and favorites by defining them as Level 1 users. Level 2 is the default user level and has limited permissions.

User Interfaces

Accessing current call center information through VoiceStats is as easy as using a telephone or a PC with a web browser.

Telephone Interface

A call center user, either on- or off-site, can hear critical call center information by dialing into the system. During the call, the data items (that is, ACD number, split, skill, or VDN) chosen in their favorites list and profile are spoken:

“Calls Waiting: 5; Oldest Call Waiting: 25 seconds;....”

Web Browser Interface

From any notebook or desktop PC, a call center user can access the VoiceStats web interface using a standard web browser to view their profile and favorites list. If they have permission (Level 1 users), they can modify their profile and favorite selections and view the data.

VoiceStats/Silent Sentry Interface

There is a separate product, the VoiceStats/Silent Sentry Interface, which links VoiceStats to Silent Sentry If you purchase the Interface, you must install the software in the following order for it to work properly:

1. VoiceStats (including WebVRU)
2. Silent Sentry
3. VoiceStats/Silent Sentry Interface

System Administration

VoiceStats administration allows a system administrator to perform the following functions using the web interface:

- Add new users and assign an initial password
- Define a general purpose default profile
- Define a custom profile
- Assign profiles to users
- Configure each user favorites: the ACDs, splits, skills or VDNs for which the user will hear information
- Determine a security level for each user
- View VoiceStats system usage reports

User Administration

Each individual user can administer their own use of VoiceStats by:

- Changing passwords — Password changes over the telephone change *only* the telephone password. Password changes through the web change *both* the telephone and web passwords.
- Modifying profiles — Level 1 and 2 users can view and modify their profile.
- Modifying/Viewing favorites — Level 1 users can view and modify their own favorites list and *define* their own profile. Each Level 1 user can modify their favorites from either the touch-tone interface or the web Interface, however, their profile can only be modified from the web Interface. These changes can be made at any time. When calling VoiceStats to hear current information, each user hears only those data items currently chosen in their profile.

  Level 2 users can view their favorites. A system administrator must define or modify them.

Understanding the VoiceStats System

2

This chapter explains the VoiceStats components that are referenced throughout this document.

Master List

Each VoiceStats CMS report contains a number of data items, called the master list of data items. These are the actual fields, such as the number of calls waiting, that appear on the report.

Profile

A profile is a custom sub list of data items of interest from the master list of data items available. The data items in a user's profile are the only ones that VoiceStats will report to that particular user. The use of a profile allows VoiceStats to offer many different data items to individual users.

The administrator will initially set up a default profile for new users. Each user will choose those data items of interest to them and can either modify the profile themselves or the administrator can modify it for them.

Levels

VoiceStats is designed so that users can be given access to important CMS information, without actually having access to the CMS machine. As an added security measure, the system administrator can set up each user with one of the following two Security levels:

- Level 1 — Users with this security level can administer both their profile and their favorites. This means that they will be able to select any ACD, split, skill, or VDN to access, and choose their data items of interest.
- Level 2 — Users with this security level can administer their profile, but not their favorites. This means that only the system administrator can specify the ACD, split, skill, or VDNs that can be accessed.

When a user is added, they are set up as a Level 2 by default. This means the system administrator must set up their favorites or they will not be allowed to access any information. If it is determined that the user should become a Level 1 user, the system administrator can set up their initial favorites or let the user set them up themselves, either over the phone or with a browser.

Users

Users can be defined as anyone who is allowed access to VoiceStats data. This could be a supervisor, however, it does not need to be restricted to CMS users. Since user access can be limited to specific VDNs, splits, or skills, anyone can be given access through the phone interface, without security concerns. Below is a list of general user guidelines:

- Each user has a unique user ID.
- When requesting information from VoiceStats, each user will be required to enter their user ID and password.
- Each user has their own profile, which they can administer themselves.
- Each user also has their own favorites. Level 1 users can administer their favorites and profiles themselves.
- If the user has a Level 2 security, they can administer their own profile through the web interface. However, the VoiceStats administrator must administer that user's favorites.

Favorites

A favorite is a list of ACD, split, skill and VDN chosen by the user as the areas from which they would most like data information. Each Level 1 user will have a list of their favorite choices for ACD, split, skill, or VDN. When they call into the system they will immediately hear data for these pre-selected favorites. The caller will have the option to change the favorite selections if they are a Level 1 user. The system administrator maintains the favorite list for the Level 2 user.

Telephone Interface

A VoiceStats caller, on- or off-site, can hear critical call center information simply by dialing into the system. The caller will immediately hear data for pre-selected favorites. The caller will have the option to request historical data, selecting from daily, weekly, or monthly reports.

Level 1 callers will have the option to request other split, skill, or VDN records to hear “on the fly” during the phone call.

Web Browser Interface

The user can access the VoiceStats intranet site using a standard web-browser. There they can view or modify the data items provided through their favorites list and profile. The profile and favorites list are also maintained via the intranet site.

VoiceStats has been fully tested to work with Netscape Navigator, versions 2, 3, and 4, and Microsoft Internet Explorer, versions 2, 3, and 4.

Reports

A brief description of each VoiceStats CMS report follows. Each report can be run on a skill, split, or VDN, depending on your switch environment.

Real-Time Reports

VoiceStats supports two types of real-time reports:

1. Real-Time Snapshot – Reports on the current interval that can be broken down into as little as 15-minute increments. The reporting interval is set up on the CMS by the system administrator.
2. Real-Time Cumulative – This report is cumulative for the current day. The data is summarized from a chosen start time until the current time today.

Both types of real-time reports, snapshot and cumulative, use the same set of data items, both in the master list and in the user's profile set up. Both types of real-time reports can also be set up in a user's favorites.

Historical Reports

Historical reports consist of summary and percentage information on the data items chosen. There are three types of historical reports available. Each of these three types share the same data items, in both the master list and a user's profile. They are:

- Daily – The user can request information for any previous 24-hour period (other than today).

  The user enters the date for the specific day for which they would like information. The system will inform the user if no data is available.

- Weekly – The user can request information summarized from the previously completed week (default Sunday to Sunday).
- Monthly – The user can request information summarized over a 1-month time period and VoiceStats will speak the information to the user.

Historical reports cannot be included as favorites. A Level 1 user can request other skills, splits, or VDNs of interest, in addition to the specific interval for a daily or monthly report. A Level 2 user will hear historical reports only for those skills, splits, or VDNs that the VoiceStats system administrator has already set up as the particular user's favorites.

Installing VoiceStats

3

Purpose

This chapter provides the procedures needed to install the VoiceStats software.

The features provided once the installation is complete are detailed in Chapter 4, “Using VoiceStats” and Chapter 6, “VoiceStats Administration Details”.

Pre-Installation Questions

Before installing the software, answer the following questions, using Table 3-1 to record your answers to the following questions:

Table 3-1. Pre-Installation Questions

Question	Answer
Is the CMS on the network?	
What is the machine network name of the CMS (for network capabilities)?	
What is the machine network name of the voice system (for network capabilities)?	
What is the login ID and password for the voice system? (On the CMS the login is **vstats** and the password is **vstats23**. These are automatically set up during installation).	
Is the voice system in the **/etc/hosts** and **.rhosts** files on CMS? (The CMS needs to be rebooted after adding IP addresses to the **/etc/hosts** file.)	
Is the CMS in the **/etc/hosts** and **.rhosts** files on the voice system? If not, get the IP address and put it in the **/etc/hosts** file, then do the ping test from both directions to make sure the packets are getting sent and received.	
Is VoiceStats going to monitor splits, skills, VDN(s), or a combination of the three options?	
Which splits, skills, VDN(s) are going to be monitored?	
Which channel on the voice system is going to be used for telephone administration?	
Which channel(s) are going to be used for users to call into the system? How are the callers going to access these channels? (Example: Are they going to have direct channel access (implies DID numbers), or go through a vector on the switch (using hunt groups and VDN(s))?	

System Requirements

The section describes the basic requirements for the INTUITY CONVERSANT system, the user PC, and the CMS.

INTUITY CONVERSANT System

The following is required to install the VoiceStats software:

- INTUITY CONVERSANT software, Unixware, and Base Application
- Approximately 3 Mbytes (6000 blocks) in **/tmp** prior to installation

  The installation will fail immediately if there is not enough available disk space.
- Approximately 3 Mbytes (6000 blocks) in **/usr** after the installation
- root-level access

User PC

In order to access web-enabled applications, you must install the web server software. The following must also occur:

- Your voice system must be on your company's network.
- Your network must be administered to allow access to the voice system from users PCs.

NOTE:
VoiceStats works with Netscape Navigator, versions 2, 3, and 4, and Microsoft Internet Explorer, versions 2, 3, and 4.

CMS

The following is required for the CMS:

- SUN Sparc 5 running Solaris 2.4
- CentreVu Call Management System R3V5
- Disk space needed to install VoiceStats
  - — approximately 318 Kbytes in **/**
  - — approximately 89 Kbytes in **/cms**
- Disk space required after installation:
  - — approximately 169 Kbytes in **/**
  - — approximately 89 Kbytes in **/cms**
- root-level access

Pre-Installation Steps

NOTE:
Read the software license agreement on the back of the title page of this document and Chapter 4, “Using VoiceStats” before installing the VoiceStats software.

Once you know the answer to VoiceStats related questions, have met all of the system requirements, and have your voice system and network set up properly, read and follow these steps:

1. Set up the VoiceStats server access on the voice system.
    a. Log into your voice system as **root**.

       First you must set up the voice system so it knows about the **http** protocol used for browser-to-server communications.

    b. Open the **/etc/services** file and search for a line with the following information:

       ```
       http    80/tcp
       ```

       This line sets up the **http** service and assigns it to port 80.

       If the line above does not exist in the **/etc/services** file, you *must* add it. Typically the lines in this file are entered in order based on the port number, so you should add it to your file in order.

       Port 80 is the standard port used for web server access. You may select a different port number if 80 is being used by another non-standard service, but then you must make sure to change the server configuration file (**httpd.conf**). See “VoiceStats Server Software Administration” in Chapter 4, “Using VoiceStats”, for more information about changing the **httpd.conf** file.

2. Set up remote execution on the voice system.
    a. In the **/etc/services** file, find the line entry for **exec** and copy it.

    b. Insert it below the original **exec** line.

    c. Change it to **rexec XXX/tcp exec**

       The two lines should read:

       ```
       exec XXX/tcp

       rexec XXX/tcp exec
       ```

       XXX is the port number. The two lines must use the same port number.

    d. Open the **/etc/hosts** files on the voice system and add the CMS machine’s name and IP address.

e. Add the CMS machine name to the **.rhosts** files under the **root** directory. This enables the **rcp** command for root prior to the installation process.

   Once VoiceStats is installed data is moved from the CMS machine to the voice system machine using **rcp** as user **vstats**.

   After installation, **rcp** needs to be disabled by removing the entry in this same **.rhosts** file.

3. Set up remote access on the CMS.

   a. Log into the CMS as **root**.

   b. Open the **/etc/hosts** files on the CMS and add the voice system machine name and IP address.

   c. Add the voice system machine name to the **.rhosts** files under the **root** directory.

4. Verify that the voice system can properly communicate with the CMS machine over the network:

   At the voice system machine:

   a. Log in as **root**

   b. Enter **cd /tmp**

   c. Enter **echo ha > abc**

   d. Enter **rcp abc *cms*:/tmp/abc**
   where *cms* is the name of the CMS machine.

   e. Enter **rm abc**

   None of the above commands should result in any error messages. If you receive an error message such as `Permission denied` or `Host name lookup failure` from the **rcp** command, check to make sure that the voice system machine name appears in the **/etc/hosts** and **.rhosts** file on the CMS.

5. Verify that the CMS machine can properly communicate with the voice system over the network:

   At the CMS machine:

   a. Log in as **root**.

   b. Enter **cd /tmp**

   c. Enter **cat abc**

      System response:

      ha

   d. Enter **rm abc**

   e. Enter **echo no > def**

f. Enter **rcp def *voicesystem*:/tmp/def**
where *voicesystem* is the name of the voice system machine.

g. Enter **rm def**

None of the above commands should result in any error messages. If you receive an error message such as `Permission denied` or `Host name lookup failure` from the **rcp** command, check to make sure that the CMS machine name appears in the **/etc/hosts** and **.rhosts** file on the voice system.

At the voice system machine again:

a. Log in as **root**.

b. Enter **cd /tmp**

c. Enter **cat def**

System response:

no

d. Enter **rm def**

Defining the Installation Parameters

During the installation process you are asked to provide the following information that is specific to your environment. See Appendix A, "Parameters Worksheet", for information on defining the installation parameters.

CMS ACDs, Splits, Skills, and VDNs Reports

NOTE:
This is the only opportunity you will have to set these parameters. They cannot be modified later without reinstalling.

When entering the ACD, splits, skills, and/or VDN(s), use the same conventions CMS used for entering them into a CMS report.

For example, suppose you want to monitor ACD 1 through 4 and the splits you want to monitor are 1, 2, 3, 4, 7, 8, 9, 20, 24, and 30.

- Enter the ACDs as a range or as a comma-delineated string:

  1–4

  or

  1,2,3,4

- You have 3 options to enter the split numbers:
  - — Enter each number separately, using a semi-colon as the delimiter:

    1;2;3;4;7;8;9;20;24;30

  This entry would work for a limited number of splits.

  - — If you have a large number of splits, enter them in ranges, if possible, since the line is limited to 50 characters or less.

    1–4;7–9;20;24;30

Login ID and Password

The login ID and password are needed for remote access to the CMS and are used only for configuring the voice system. CMS installation automatically enters the vstats login and password (vstats23) for you. You may change these values on the voice system later using the VoiceStats **cms1_set_login** command.

CMS Machine Host Name

You must know the name of your CMS machine and it should be listed in your **/etc/hosts** file. After you enter the host name during the installation, you should see the message:

`The CMS Computer <host name> is reachable on the network.` (seen during CMS installation)

`<host name> is alive` (seen during voice system installation)

If you do not see these messages, the network configuration allowing the voice system to access your CMS machine has not been completed. If this is the case, press ENTER at this prompt to accept the default and continue the installation. If the CMS machine cannot be accessed, later steps in the installation procedure will generate an error message indicating the **cms1dip** is unable to run. (Refer to the Pre-Installation Steps on page 3-4.)

Once the voice system can access the CMS machine, use the **cms1_change_params** command to set the host name to the correct value and restart the DIP.

Current Command for the CMS DIP

Press the ENTER key to accept the default.

VoiceStats Information Request Channel

The Information Request channel is the telephone number you assign to allow your VoiceStats users to call in and listen to the CMS information over the phone. You may specify multiple channels with a comma-delineated list, or a range of channels. Each of these entries is valid:

1

2,4,6,8

24–34

Once the VoiceStats software has been installed, you may change these voice channel assignments by assigning or un-assigning the **vs_inf_req** service through the standard **cvis_menu** options.

VoiceStats Administration Channel

The Administration channel is an optional channel you may specify if you wish to administer VoiceStats over the phone. You may only specify a single channel. If you do not plan to administer VoiceStats over the phone, enter a non-existent channel number and the administration application will not be assigned to a voice channel. You must always enter a channel number, even if it is to be non-existent. Once the VoiceStats software has been installed, you may allow administration over the phone by assigning the **vs_admin** service to a channel through the standard **cvis_menu** options.

Passwords to Access VoiceStats Administration

This password is for accessing VoiceStats administration, either over the phone or with a web browser.

Web Browser ID and Passwords

The administrator's ID for accessing VoiceStats administration through the web browser is *VoiceStats Admin*. The password is determined by the installer.

Phone ID and Passwords

The administrator ID for accessing VoiceStats administration through the phone is *vstats* (878287). The password is *vstats* (878287).

A person calling in to hear VoiceStats information (in other words, a user), uses a unique ID and password to access the information through the phone. Users can set up and administer their own ID and passwords. Passwords must be numeric and between 4 and 10 digits in length.

Step 1: CMS Installation and Setup

Use the procedure below to install CMS software:

1. Make sure you have the information from "Pre-Installation Questions" and that you have completed "Pre-Installation Steps".

   NOTE:
   Any previously installed version of VoiceStats CMS software must first be removed. See "Software Package Removal" for more information.

2. Log onto the INTUITY CONVERSANT system as **root**.
3. Insert the diskette labeled "VoiceStats (CMS) CONVERSANT cpio Disk 1 of 1" into the floppy diskette drive.
4. At the system prompt, enter **cd /tmp**
5. Enter **cpio**SPACE**-icdumv**SPACE**</dev/rdsk/f0**
6. Enter **/tmp/cvis_Install**

   The **cpio** command will read the files into the voice system from the diskette drive. The **cvis_Install** command allows the CMS and INTUITY CONVERSANT systems to communicate via the LAN and send the files from the voice system to the CMS.

7. When prompted, enter the name of the CMS system from Table 3-1.

   System response:

   ```
   The CMS Computer <host name> is reachable on the
   network.
   ```

   Two files are sent to the CMS:

   /tmp/cms_Install

   /tmp/VS_CMS.cpio

   The **/tmp/VS_CMS.cpio** file is a cpio archive containing all files and programs needed for VoiceStats on the CMS.

NOTE:
Steps 8-12 are on the CMS.

8. After the **cvis_Install** command has successfully completed installation on the voice system, log onto the CMS as **root**.
9. Enter **/tmp/cms_Install**

   The **/tmp/cms_Install** files executes the setup of VoiceStats on the CMS and installs all of the files and programs from the cpio archive.

   System response:

   ```
   Please enter the System name of the CONVERSANT.
   ```

10. Enter the name of the voice system from Table 3-1.

    ```
    Do you want real-time reports based on:
      1. Splits
      2. Skills
      3. VDNs
      4. DONE
    Please choose by number:
    ```

11. Remember the guidelines in "CMS ACDs, Splits, Skills, and VDNs Reports" when you set up VoiceStats to monitor splits, skills, vdns, or a combination.

    To monitor skills and VDNs, first select 2, answer all questions, then select 3, and answer all questions.

    Select 4 for Done when you have completed set up of reports.

12. Choose a CMS reporting interval: 15, 30, or 60 minutes.
13. Remove the diskette from the voice system.

Before installing the software on the voice system, log in to the CMS machine as **cmssvc**. Under User Permissions, set the user permission to allow the vstats login access to the required splits, skills, and VDNs.

Step 2: WebVRU Installation and Setup on the Voice System

Follow these steps to begin the WebVRU installation:

1. Insert the diskette labeled "VoiceStats Server(WebVRU) Package Installation Disk 1 of 1" into the floppy disk drive on the INTUITY CONVERSANT system.
2. Enter **pkgadd -d diskette1**

   System response:

   ```
   Insert diskette into Floppy Drive 1.

       Type [go] when ready,
       or [q] to quit:  (default:  go)
   ```

3. Press ENTER.

   System response:

   ```
   Installation in progress.  Do not remove the diskette.
   ```

4. When prompted to select the package to install, enter **all**

System response:

```
Installing...
```

The installation process adds custom report directories. The reports software is called InFocus. The login ID for the InFocus web interface is **daily**.

If the InFocus application is installed on your voice system, you are prompted as follows by the system:

- When prompted for a user login ID, enter **daily**
- When prompted for a password, enter **daily**

If the InFocus application is NOT installed on your voice system, these ID and password prompts do not apply.

When the procedure is completed successfully you will see the following message:

```
******Installation of WebVRU complete!******
```

After you have installed the software, the next time you log into the machine, your environment, including your PATH and the environment variables VSTATS and WEBVRU, are set up so you can access the web server utilities.

See “VoiceStats Server Software Administration” and “Server Configuration” in Chapter 4, “Using VoiceStats” for more information.

CAUTION:

Although the Apache server is free and well documented via their web site and numerous books, WebVRU also includes configuration and setup that is specific to running the server on a voice system. DO NOT change the configuration.

Step 3: Voice System Installation and Setup

NOTE:

Before installing the software, verify that the voice system is set up to allow browser access (has the IP addresses of any PCs allowed to access the VoiceStats application) and that the voice system and CMS machines can communicate with each other over the TCP/IP network.(Refer to the Pre-Installation Steps on page 3-4).

Once you have finished “Step 1: CMS Installation and Setup” and “Step 2: WebVRU Installation and Setup on the Voice System”, you are ready to install VoiceStats on the voice system. You will be using standard UNIX commands to install and remove the VoiceStats software package.

Follow these steps for software installation:

1. Make sure you have the information from “Pre-Installation Questions” and that you have completed “Pre-Installation Steps”.

   NOTE:
   Installing VoiceStats will overwrite any older versions of this software. Any previously installed version should first be removed. See “Software Package Removal” for more information.

2. Log onto the INTUITY CONVERSANT system as **root**.
3. Insert the diskette labeled “VoiceStats Package Installation Disk 1” into the floppy diskette drive.
4. Type **pkgadd -d diskette1**.

   You will see a number of status messages throughout the installation. This is typical.

   As you continue through the installation, you will be prompted for additional diskettes. Insert the correct diskettes as requested.

5. When prompted for the Host name for the **cms1dip**, enter the CMS machine name.

   System response:

   ```
   host name is alive
   ```

6. When prompted for the command for the **cms1dip**, press ENTER to accept the default.

   System response:

   ```
   Current command for the cms1 Dip is
   /usr/add-on/vstats/cms1_stub

   Enter channel(s) to run the vs_inf_req script on:
   ```

7. Enter the channel number(s) to be used by users to call the VoiceStats system.

   Enter a non-existent channel number if you are unsure of what number you want to use.

   System response:

   ```
   Enter channel to run the vs_admin script on:
   ```

8. Enter the channel number to be used by **vs_admin**.

   Enter a non-existent channel number if you are unsure of what number you want to use. If you do not want this option, press ENTER and the script will not be assigned.

   System response:

   ```
   Adding phrases to talkfile
   ```

```
The login for the VoiceStats Web interface is
VoiceStats Admin. The default password for VoiceStats
Web interface is 878287.

Creating the vstats login

Enter the password:
```

9. Enter a password of your choice.

   System response:

   ```
   Reenter the password:
   ```

10. Reenter the password from step 9.
11. After several minutes (and status messages and prompts for diskettes), the system responds:

    ```
    ******Installation of VoiceStats complete!******
    ```

Go to the next section, “Step 4: Administering Your PC for Browser Access”, to continue with the installation.

Step 4: Administering Your PC for Browser Access

To access the VoiceStats Web browser front end, enter the URL in the following format:

http://*machine*/webvru/vstats

The machine can either be the IP address of your voice system, or its machine name, if your PC has been administered to access it by machine name. A common way to do this is to put the voice system’s name and IP address in your PC hosts file. On a typical Windows PC, this file is:

c:\windows\hosts

Typically for a PC running NT, this file is:

c:\Winnt\System32\Drivers\etc\Hosts

Once you have done this, you should be able to access the Web interface with the name of the voice system. For instance, if your voice system is named zeus, and you wish to access VoiceStats, you could type the following URL:

http://zeus/webvru/vstats

At this point you are ready to go on to “System Administration” in Chapter 4, “Using VoiceStats”.

Software Package Removal

Use the following procedures to remove the individual VoiceStats software packages.

CMS Software Package Removal

To remove the CMS software package:

1. Log onto the CMS as **root**.
2. Enter **cd**SPACE**/tmp**
3. Enter **cp**SPACE**/usr/add-on/vstats/.removepkg/Vstats.Remove**SPACE**/tmp**
4. Enter **/tmp/Vstats.Remove**

You can find a README file in **/usr/add-on/vstats/.removepkg** that explains the process.

WebVRU Software Package Removal

To remove the WebVRU software package:

1. Enter **stop_apache**
2. Enter **ps_server**
3. Enter **pkgrm WebVRU**

VoiceStats Software Package Removal

Enter **pkgrm Vstats** to remove the software package.

Using VoiceStats

4

Purpose

This chapter contains the procedures required to customize VoiceStats to meet the individual needs of the users. Both user administration and system administration are documented in this chapter.

NOTE:
This chapter contains graphic representations of the VoiceStats web browser interface. Some of the screens shown are partial and may be different than those seen by actual users.

User Administration

There are two ways in which to interface with VoiceStats user administration:

- telephone
- web browser

This section describes the two different possible interfaces.

Telephone Interface

When a caller dials into the VoiceStats application, the system prompts for an ID and password. The system validates the caller's ID and password and the caller is presented with three main menu options:

1. historical reports
2. real-time reports
3. user administration

NOTE:
Level 2 users who have not specified favorites cannot continue.

The following sections describe each of the menu options.

NOTE:
At any point during the telephone interface, press * 6 (* M) to return to the main menu or press * 4 (* H) to get help.

Option 1 – Historical Reports

Historical reports choices include daily, last week, or monthly reports. Once the caller selects the type of report to hear, the system prompts for dates, if applicable. The caller hears the requested report for their favorites. As each record (split, skill, or VDN) is announced, the caller can choose to press 0 to hear the data, or to press # to skip the data.

Level 1 users have the option to request additional records (splits, skills, or VDNs) "on the fly." They can request these additional or different records after hearing their favorites or by interrupting their favorites (the caller presses 1 for a record from the same report, 2 for a different report).

Option 2 – Real-Time Reports

If the caller chooses real-time reports, the system announces the real-time data and cumulative snapshot data for that caller's favorites. As each record (split, skill, or VDN) is announced, the caller can choose to press 0 to hear the data, or to press # to skip the data.

Level 1 users have the option to request additional records (splits, skills, or VDNs) “on the fly”. They can request these additional or different records after hearing their favorites or by interrupting their favorites (the caller presses 1 for a record from the same report, 2 for a different report).

Option 3 – User Administration

The Level 1 user can review their favorites or change their password. The Level 2 user is given the option to hear their favorites or change their password. If the caller chooses to change their password, they are prompted to enter the password and then prompted to enter it a second time before the password is changed.

NOTE:
When the user changes their password using the phone interface, the password is changed only for the phone interface. The web interface password is *not* changed.

Callflow for User Administration

Figure 4-1 through Figure 4-3 illustrate the user information request script callflows. Figure 4-4 through Figure 4-6 illustrate the user favorites administration scripts callflows.

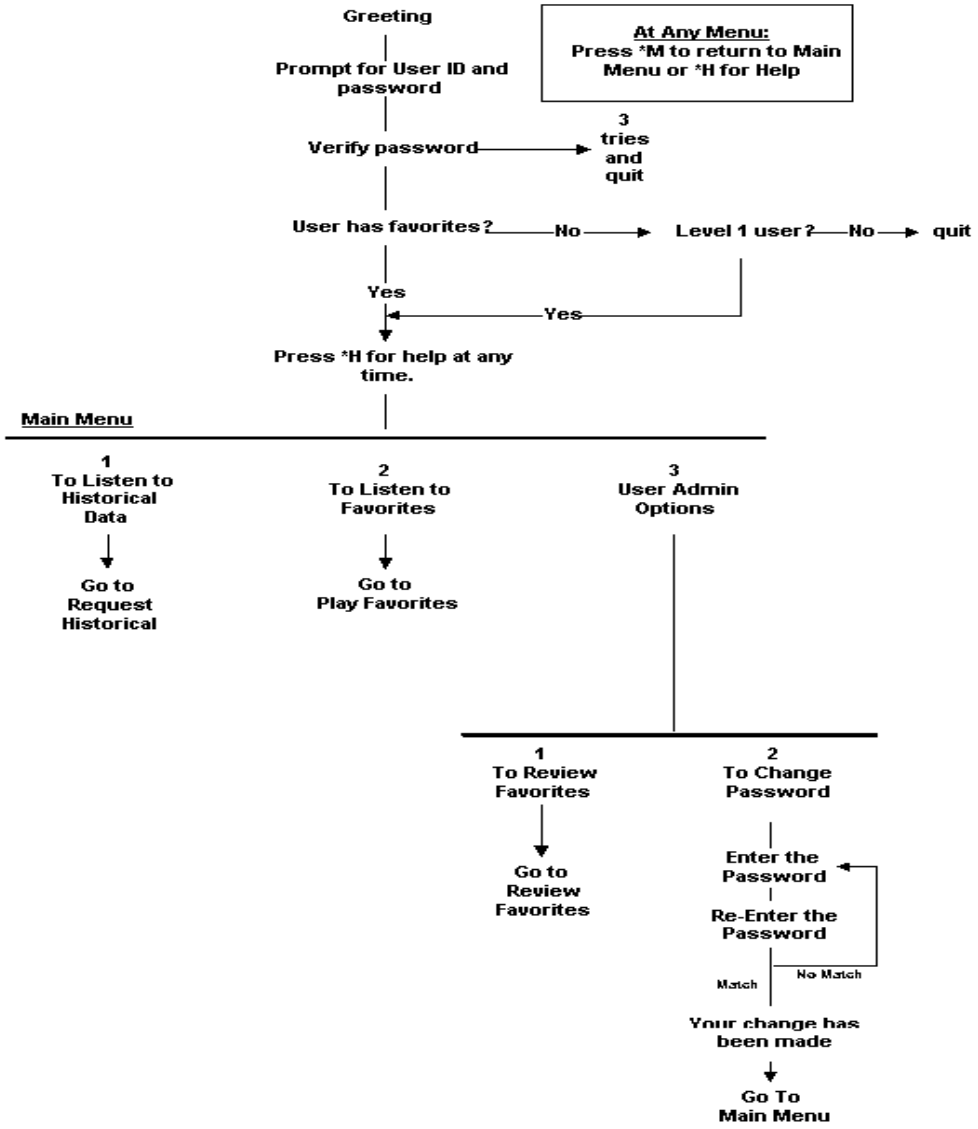

Figure 4-1. User Information Request Script Callflow, Part 1

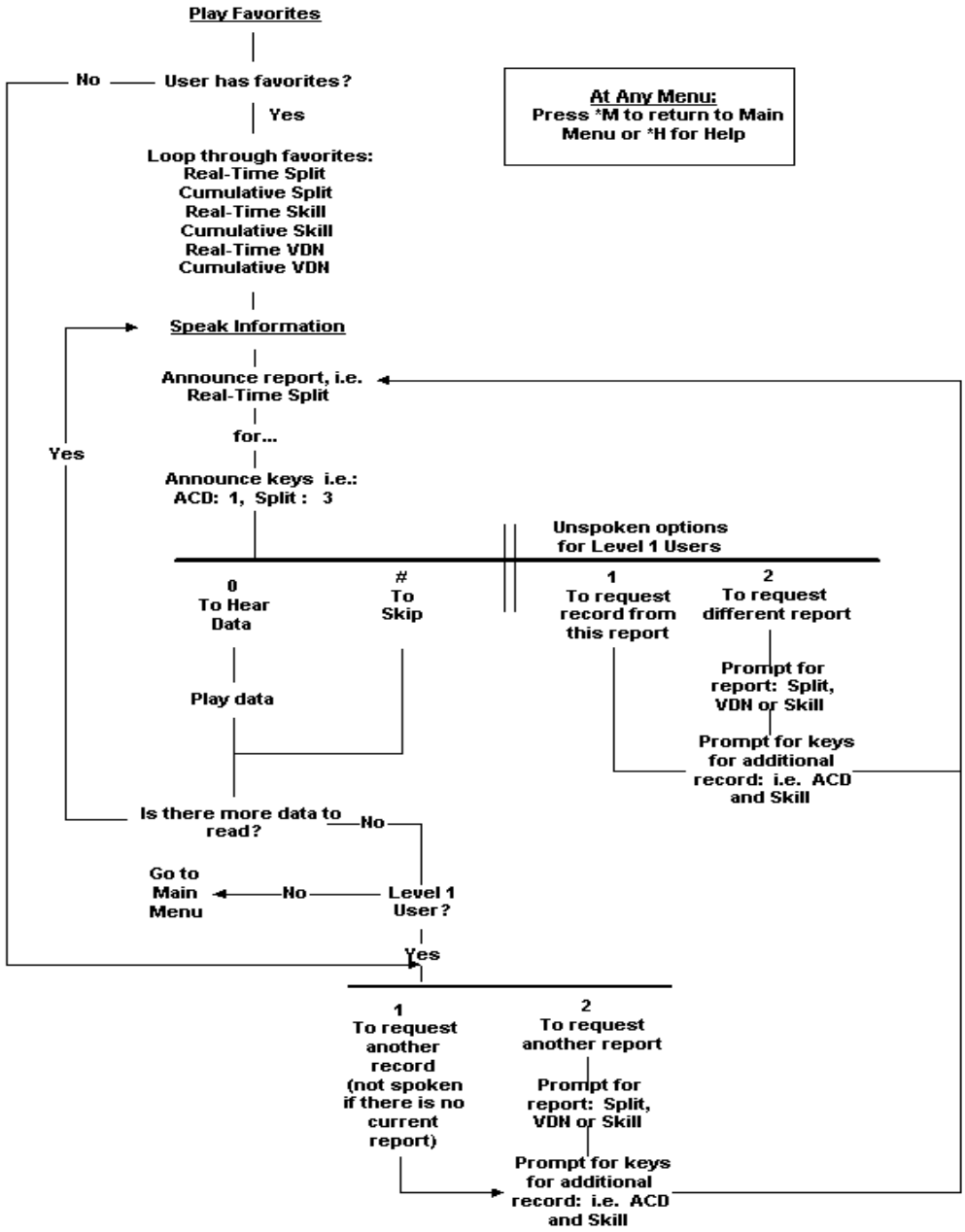

Figure 4-2. User Information Request Script Callflow, Part 2

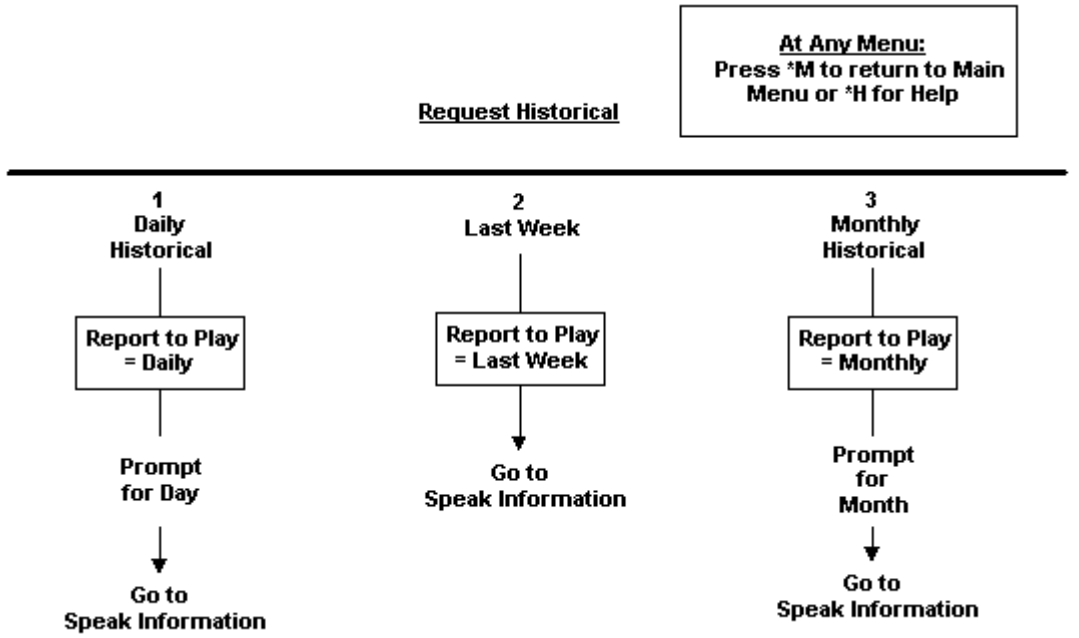

Figure 4-3. User Information Request Script Callflow, Part 3

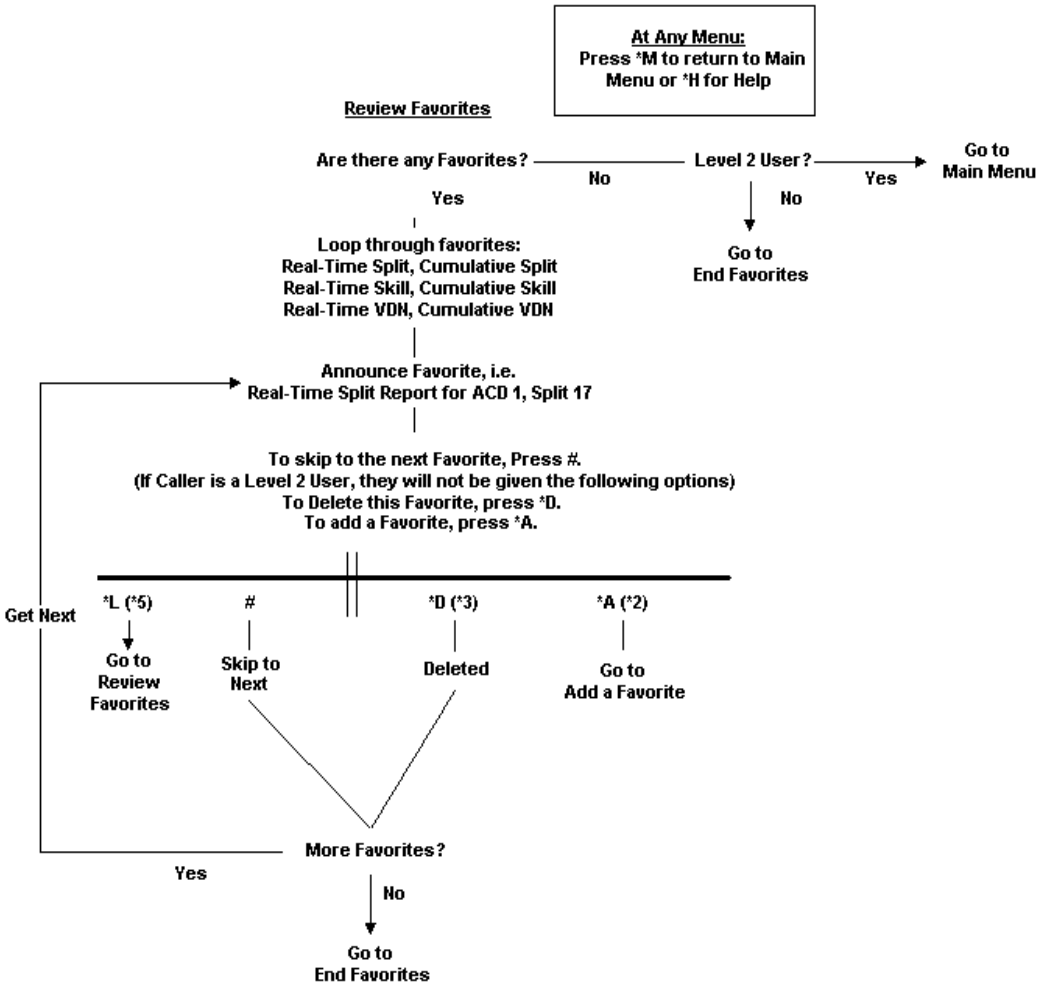

Figure 4-4. User Review Favorites Script Callflow

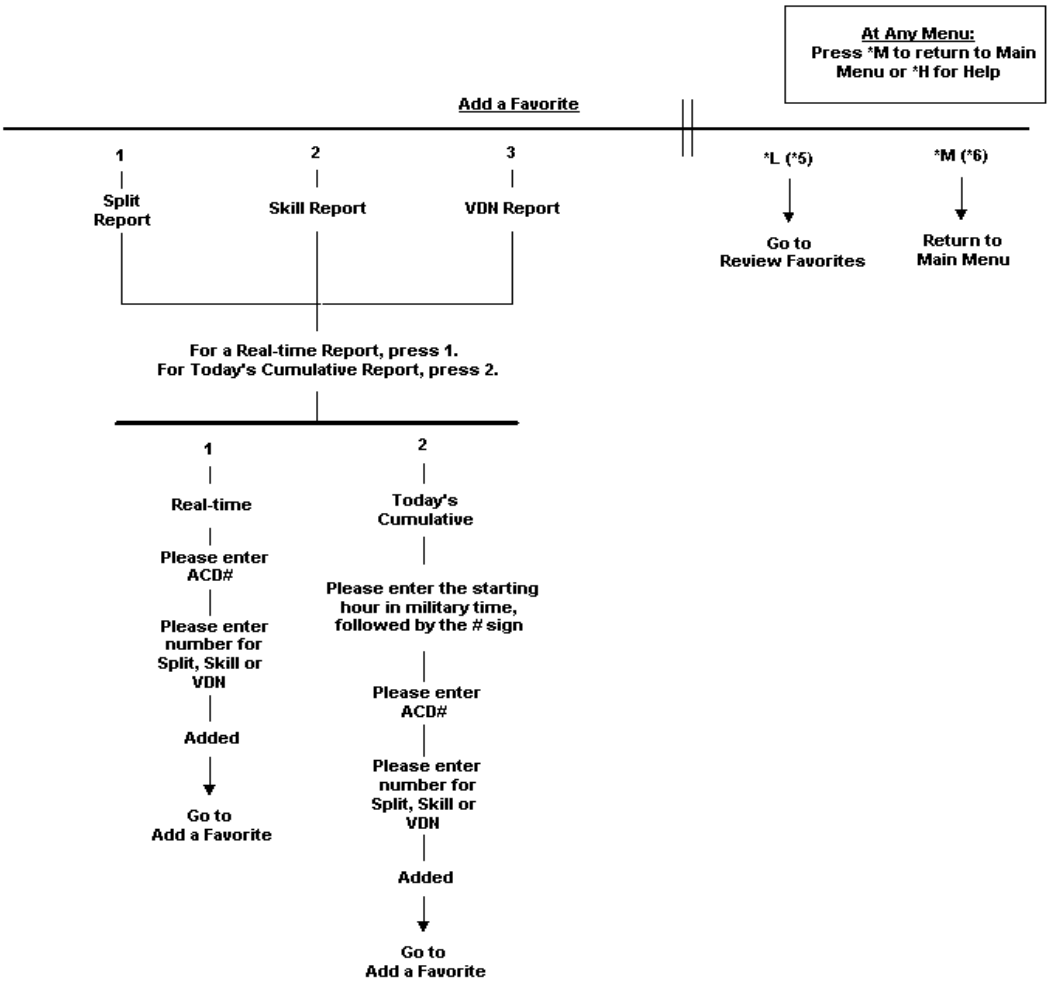

Figure 4-5. User Add Favorites Script Callflow

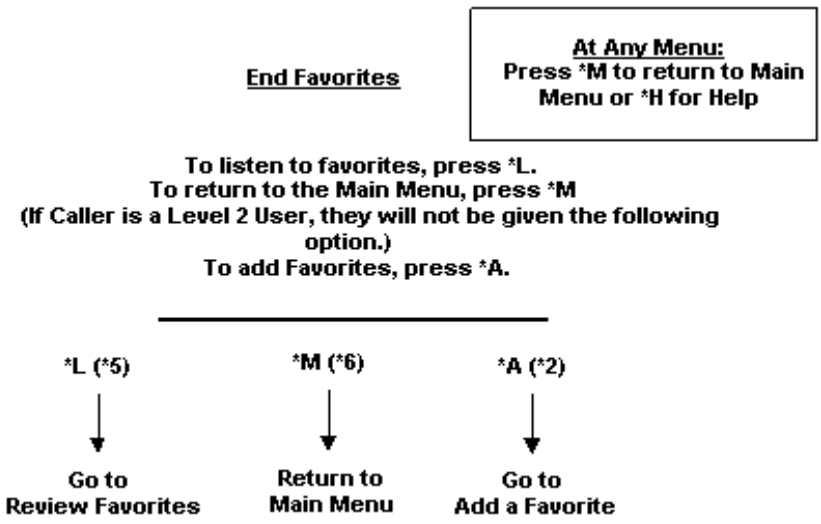

Figure 4-6. User Change Favorites Script Callflow

Web Browser Interface

Through the web interface the user, if Level 1, is able to change or view their favorites, modify their profile, and change their password. Accessing this information is done through any web browser that supports HTTP 1.0.

To access the interface, type the URL in the following format:

http://*machine_network_name or IP address*/webvru/vstats

Example:**http://mercury/webvru/vstats**

If you are not sure of the network name of your machine, type **uname -n**
This command displays the network name of the machine.

The system prompts for an ID (or name) and password on the initial screen. Once these are confirmed, the system displays a menu of choices (Figure 4-7):

- Favorites (Change Favorites for Level 1 users, View Favorites for Level 2 users)
- User Profile
- View Favorites Data
- Change Password

To access help and descriptions of each of the first three menu items, click on the HELP button. The help menus relate directly to the user level.

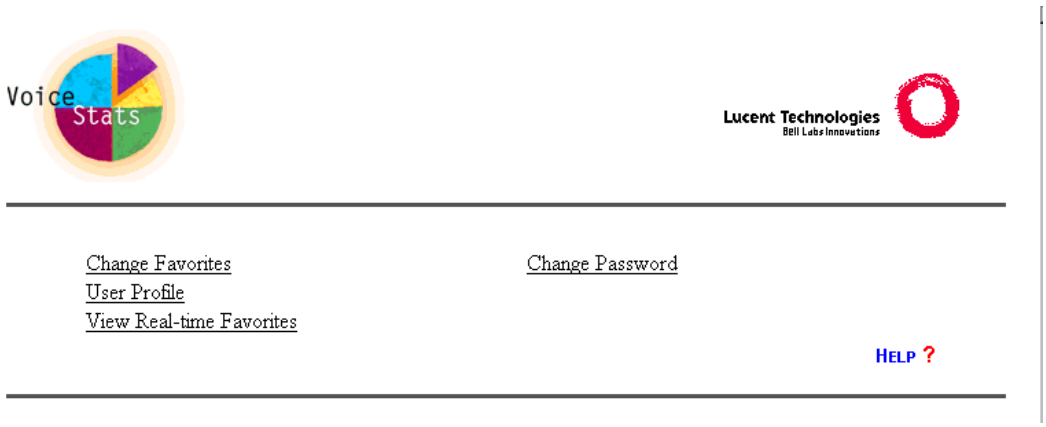

Figure 4-7. Web Browser Interface Main Menu, Level 1 User

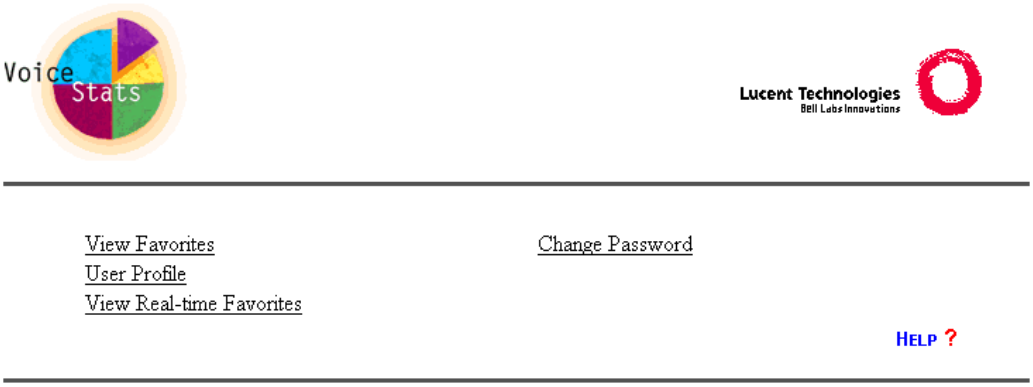

Figure 4-8. Web Browser Interface Main Menu, Level 2 User

Change Favorites

The Change Favorites option is available to a Level 1 user. This form displays the user's current favorite selections at the bottom (Figure 4-9). The user can modify their favorites in the following way:

- Add or delete a favorite
- Specify a report type (real-time, cumulative, or both)
- Specify sort factors (split, skill, or VDN)
- Specify factor values (split, skill, VDN numbers; multiples can be entered by separating the choices with commas)
- Specify a start time

> **NOTE:**
> Start time is used only with a cumulative report. See "Real-Time Reports" in Chapter 2, "Understanding the VoiceStats System", for more information.

After all choices are made, the user clicks on the SUBMIT button to initiate the change.

The system responds with the Change Favorites Confirmation Form (Figure 4-10) to show the status of the requested changes.

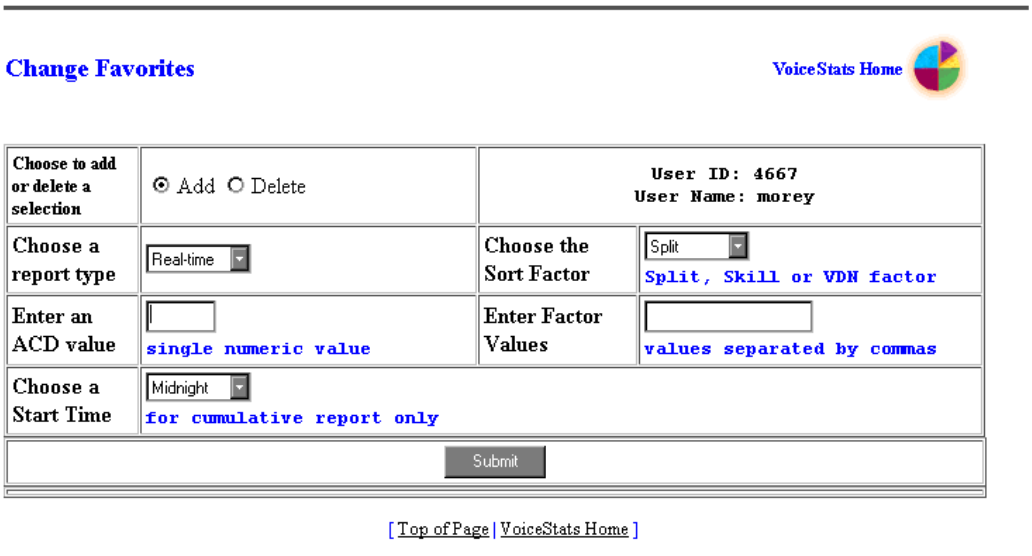

Figure 4-9. Web Browser Interface Change Favorites Form, Level 1 User

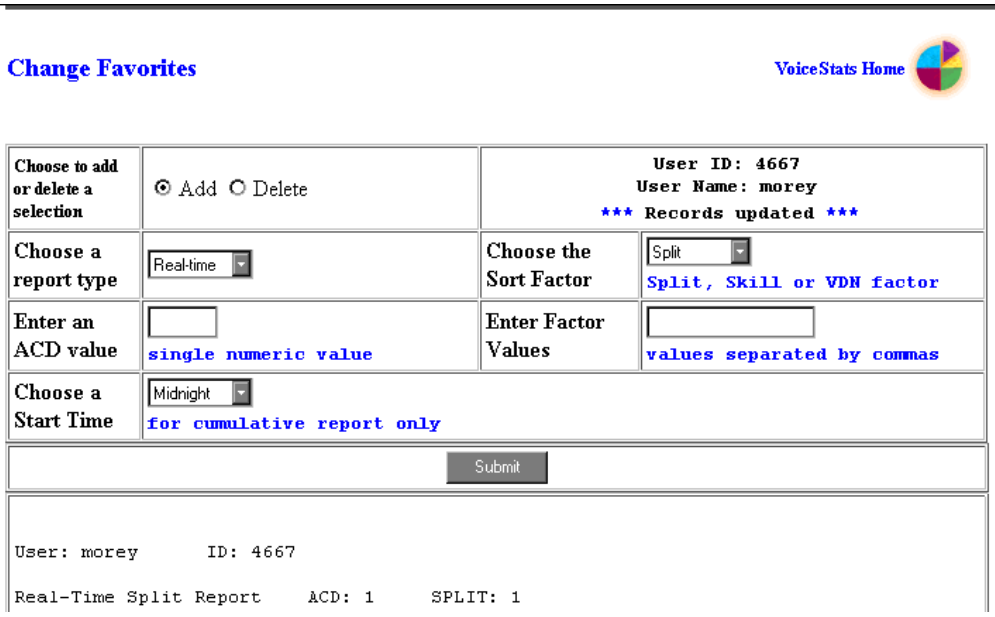

Figure 4-10. Web Browser Interface Change Favorites Confirmation Form, Level 1 User

View Favorites

The View Favorites form is available to Level 2 users. Level 2 users may not change their favorites.

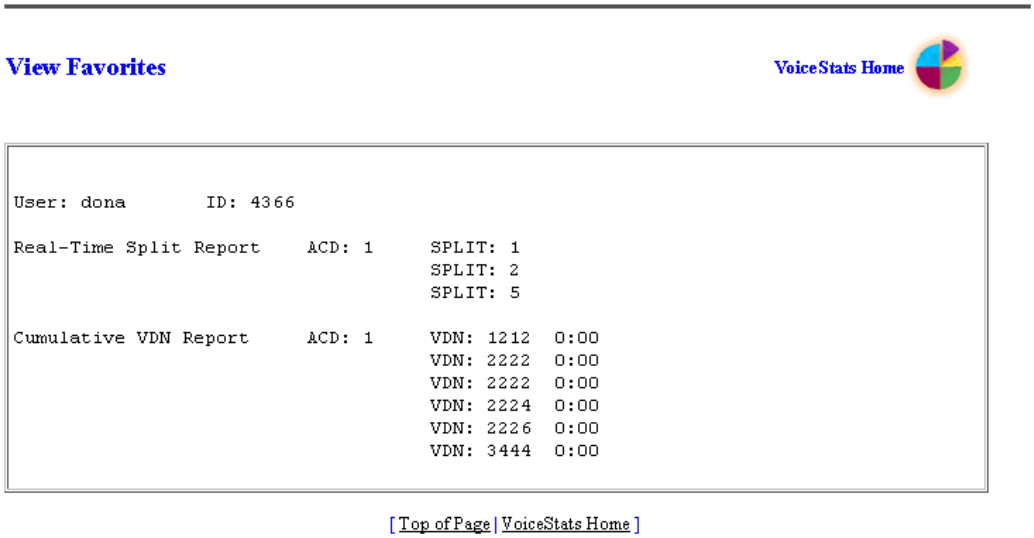

Figure 4-11. Web Browser Interface View Favorites Form, Level 2 User

User Profile

The Change User Profile form allows the user to change/select the data items to hear when calling the VoiceStats application. The available data items, such as Calls Waiting or Abandoned Calls, are associated with the VoiceStats reports.

When choices are complete, the user clicks the SUBMIT button and the profile is immediately updated. The system displays a confirmation screen with the profile updates (Figure 4-13).

NOTE:
If the user does not enter a profile, the system uses the default profile defined by the system administrator.

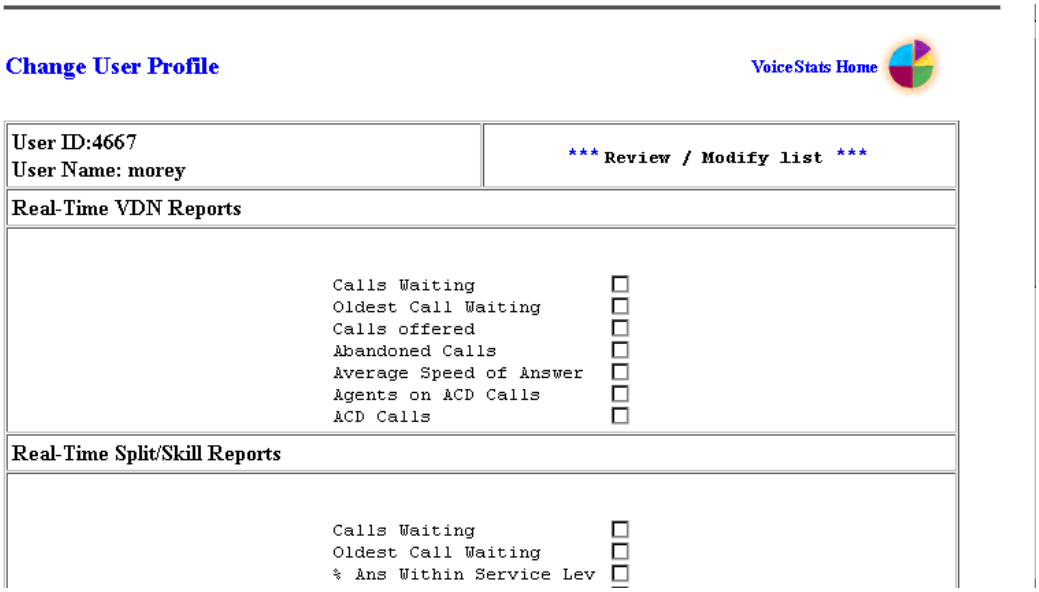

Figure 4-12. Web Browser Interface Change User Profile Form

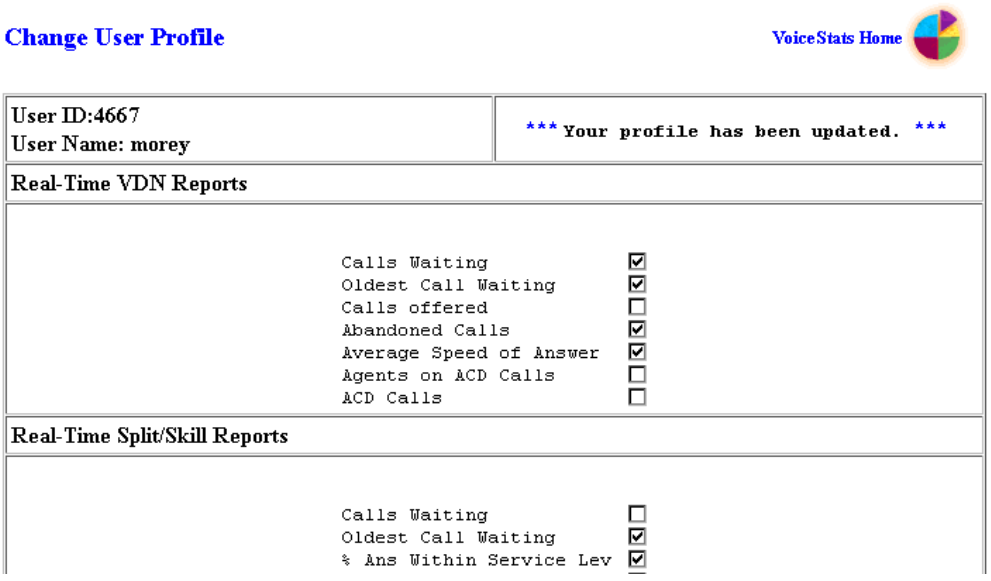

Figure 4-13. Web Browser Interface Change User Profile Confirmation Form

Real-time Favorites

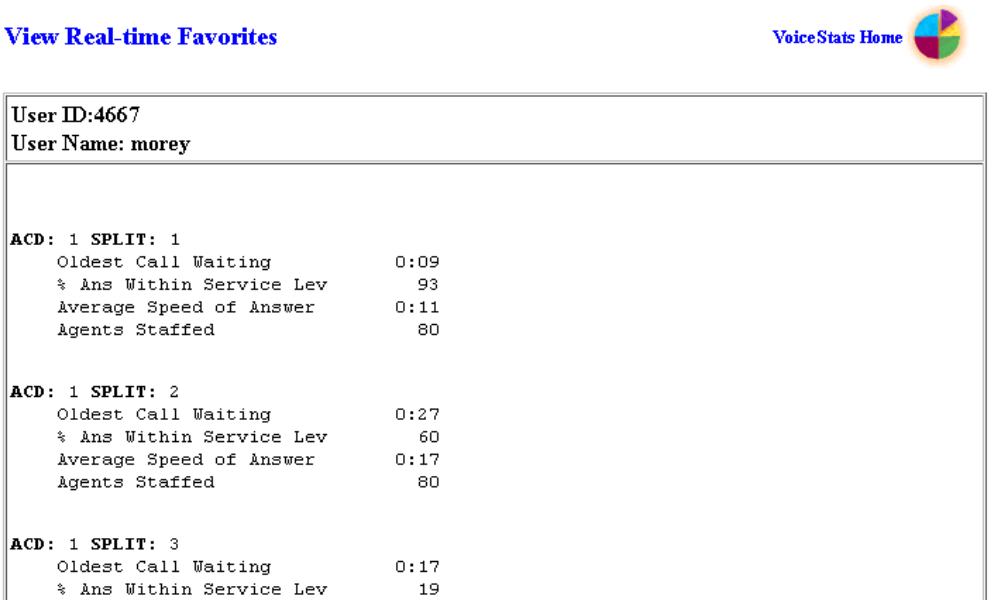

Figure 4-14. Web Browser Interface View Real-Time Favorites Form

Change Password

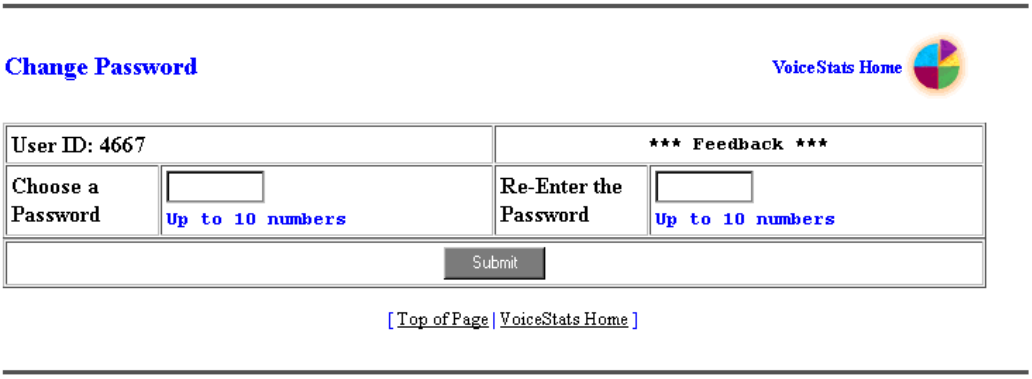

Figure 4-15. Web Browser Interface Change Password Form

System Administration

Telephone Interface

The touch-tone administration script can be used when the VoiceStats System administrator wishes to add a new user, delete an existing user, change an existing user's password or security level, or change the administration password over the phone.

The system administration login is 878287 (vstats). The password after installation is 878287. The Main Menu options allow the administrator to:

1. Add a new user or change an active user's password or level
2. Delete an existing user
3. Change the Admin password
4. Administer a user's favorites

To access the administration script, the system administrator places a call to the channel on the voice system to which the vs_admin script is assigned.

Once the system administrator enters the proper login and password, they will be presented with the main menu:

- "To add a user or change a user's password or level, press 1".
- "To delete a user, press 2".
- "To change the administration password, press 3".
- "To administer a user's favorites, press 4".

Option 1 – Add or Change a User

The administrator will be prompted for a user ID.

If the user ID is already defined, the administrator will have the option to change the user's password (valid passwords are between 4 and10 digits) or security level.

If the user ID is not defined, it is assumed a new user is being added and the administrator is prompted for a password and security level.

Option 2 – Delete a User

The administrator is prompted for an ID.

If the entered ID exists, the administrator is asked if they really want to delete the user.

If the administrator responds positively, the user is removed and the administrator receives confirmation.

If the administrator enters an invalid ID, they will be reprompted.

Option 3 – Change the Administration Password

The administrator will be prompted to enter the new password twice. If the two entries match, the administrator will be informed the password has been changed. If not, the password will not be changed.

NOTE:
The administration password can **ONLY** be changed from the Touch Tone Interface, not from the Web Interface. The Touch Tone change updates the Touch Tone Interface password but not the Web Interface password. A cron job, using the **vs_in_sync** command, is run every night at 8:37 PM to synchronize the passwords. The administrator can type the **vs_in_sync** command at the command line to immediately update the Web Interface password.

Option 4 – Administer User Favorites

The administrator is prompted for a valid user ID. Once the ID is confirmed, the administrator will hear, one by one, the user's current favorite selections. After hearing each single favorite the administrator will be prompted with the following options:

- Skip to next *
- Delete the selection * 3 (* D)
- Add a new favorite * 2 (* A)

At any point while listening to the user's favorites the administrator can enter the touch tones for the above options as well as * 6 (* M) to return to the Main Menu and * 5 (* L) to start listening to the favorites again from the beginning.

Callflow for System Administration

Figure 4-16 illustrates the callflow for system administration.

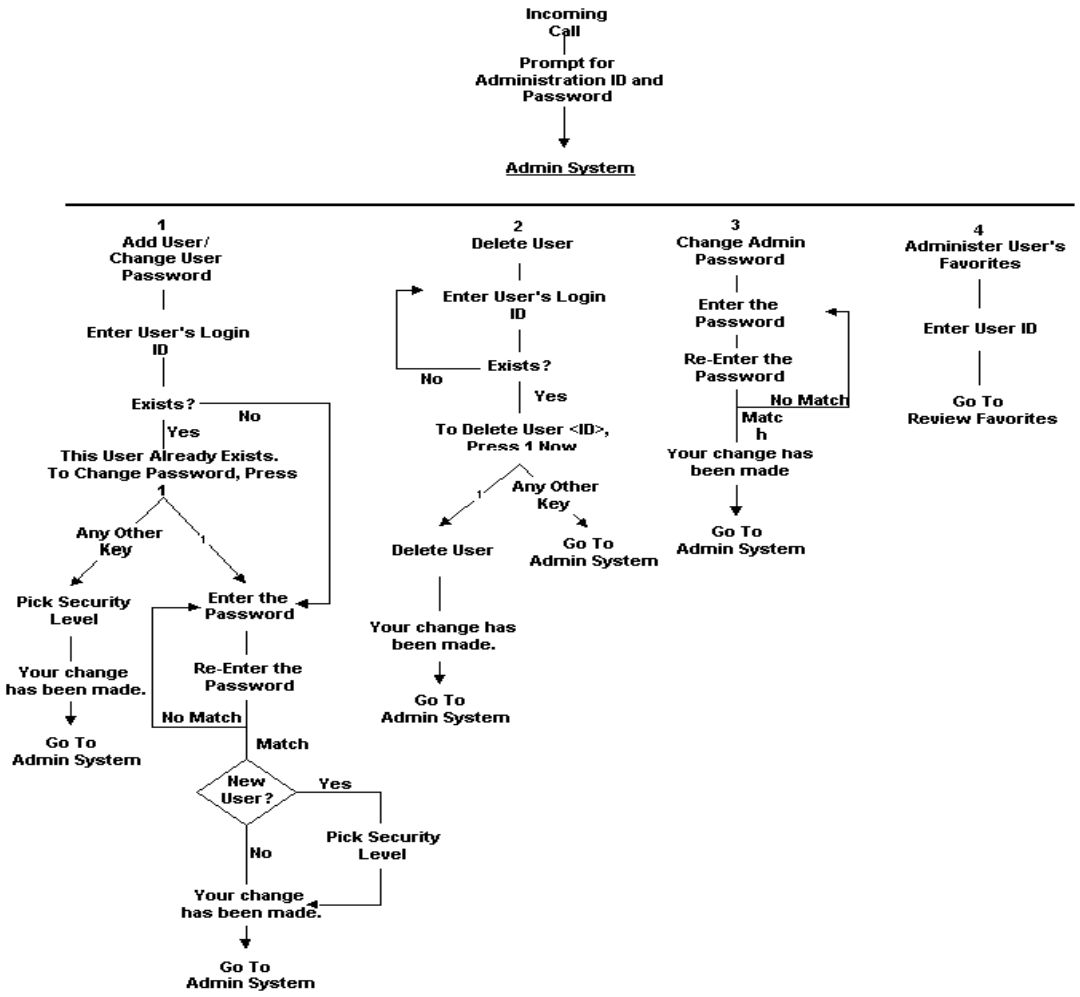

Figure 4-16. VoiceStats System Administration Callflow

Web Browser Interface

The initial screen requests the administration login and password. Once these are verified, the main menu form is displayed. The administrator can return to the main menu by clicking the VoiceStats HOME button, or access help by clicking the HELP button. The choices from the main menu are:

- Administer Users
- Administer Favorites
- User Profile
- VoiceStats Reports
- VoiceStats Server

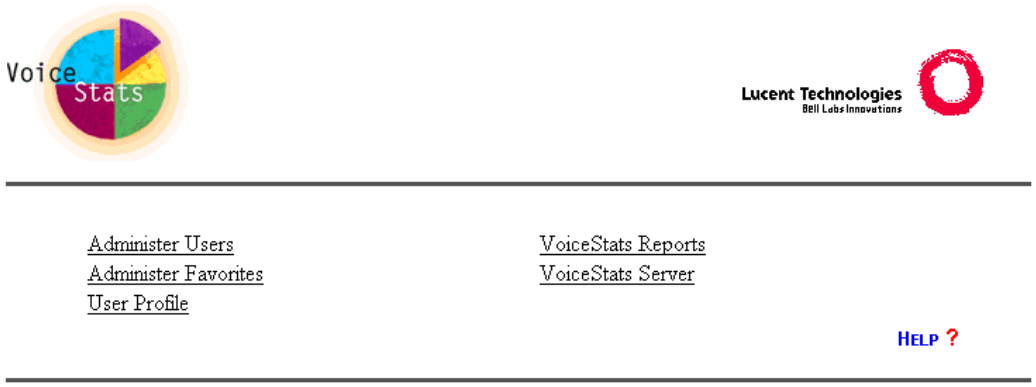

Figure 4-17. Web Browser Interface Administration Main Menu Form

Administer Users

Administrator specifies choices for the following items:

- Add/Change or Delete
- User ID (between 4 and 10 digits)

  NOTE:
  Recommend use of extension number for User ID

- Password (up to 10 digits)
- User security level (default is level 2):
  - Level 1 or level 2 (default)
  - Username (up to 40 characters)

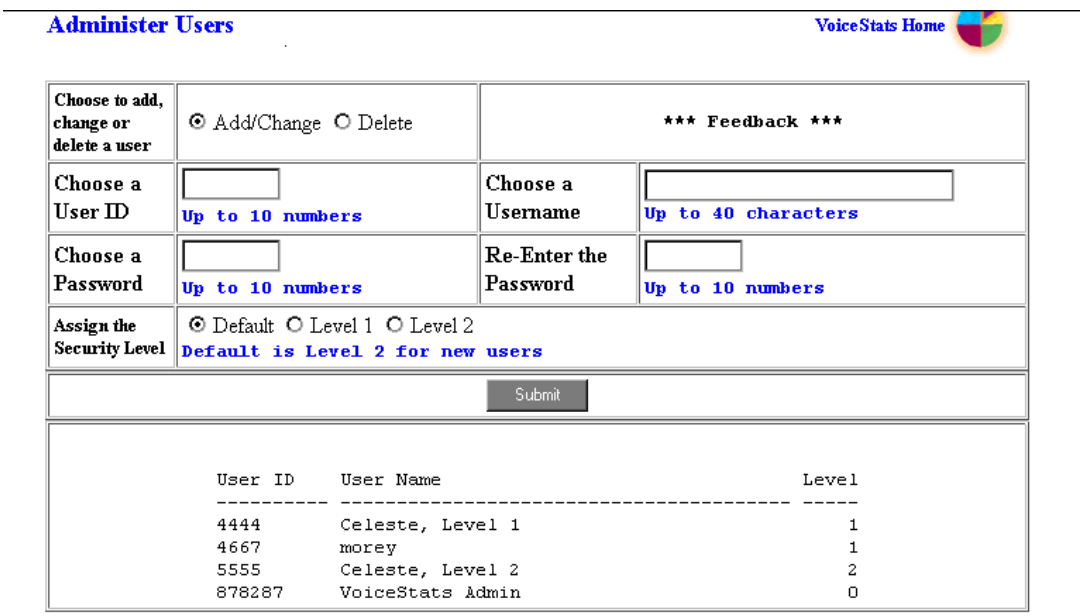

Figure 4-18. Web Browser Interface Administer Users Form

Once the choices are made, the administrator clicks the SUBMIT button. A feedback box will show what actions were taken.

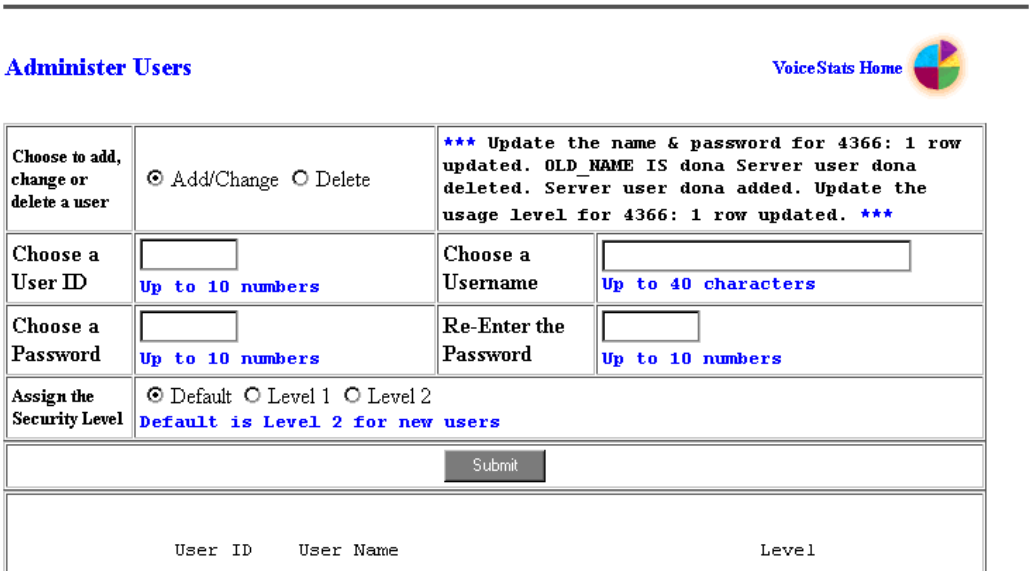

Figure 4-19. Web Browser Interface Administer Users Confirmation Form

A report is displayed below the form showing a list of all the currently defined users.

Administer Favorites

- The system prompts for the ID for whom the favorites are being defined. The administrator can alter the favorites for both Level 1 and Level 2 users.

  NOTE:
  Remember that a Level 1 user can alter their own favorites.

- The administrator selects the ACD, report type, split, skill, or VDN and clicks the SUBMIT button when the choices are completed.
- A report below the form shows the selected user's favorites and is updated as the changes are made.

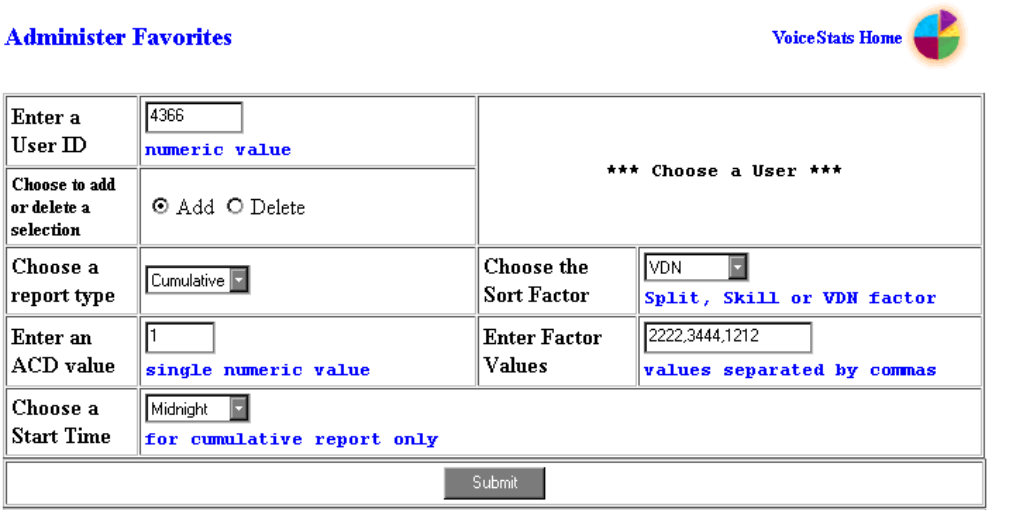

Figure 4-20. Web Browser Interface Administer Favorites Form

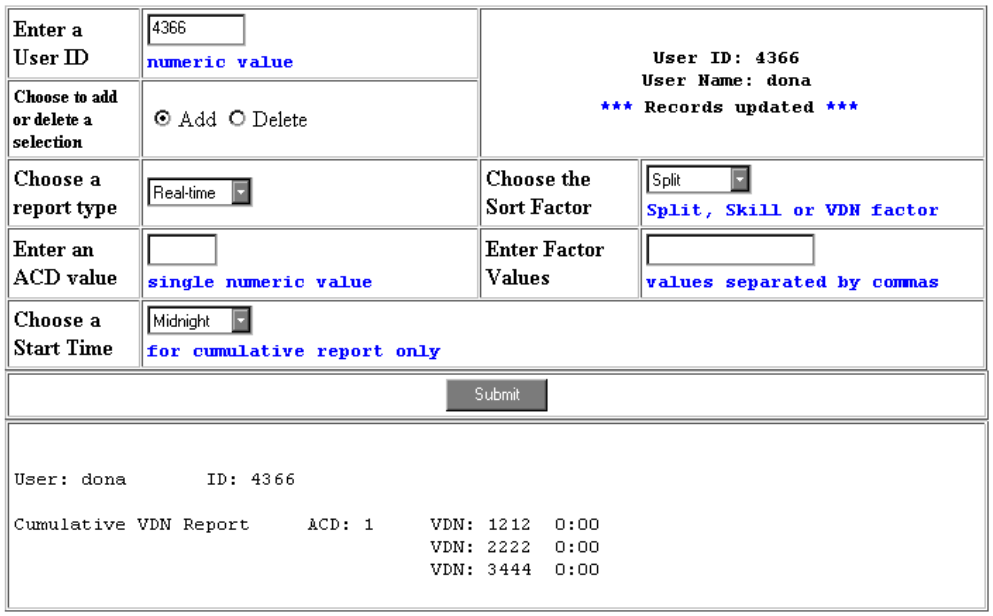

Figure 4-21. Web Browser Interface Administer Favorites Confirmation Form

User Profile

The system prompts the administrator for the ID of the user for which the profile is being defined. By entering 'default' as the user ID the administrator can modify a default profile to be used by all users who have not customized their profile.

After the changes are made, the administrator clicks the SUBMIT button and the updates are shown. A feedback box will confirm that the profile has been changed.

Complete list of profile items:

- Real-Time VDN Reports
  - Calls Waiting
  - Oldest Call Waiting
  - % Answered Within Service Level
  - Calls Offered
  - Abandoned Calls
  - Average Speed of Answer
  - Agents on ACD Calls
  - ACD Calls
- Real-Time Split/Skill Reports
  - Calls Waiting
  - Oldest Call Waiting
  - % Answered Within Service Level
  - Calls Offered
  - Abandoned Calls
  - Average Speed of Answer
  - Agents Available
  - Agents Staffed
  - Agents on ACD Calls
  - ACD Calls
- Historical Reports
  - Calls Offered
  - Percent Answered
  - ACD Calls
  - % Answered Within Service Level
  - Calls Answered Within Service Level

— Percent Abandoned

— Abandoned Calls

— Average Abandoned Time

— Time Waited Before Abandoned

NOTE:
Remember both Level 1 and 2 users can alter their own profile via the web interface.

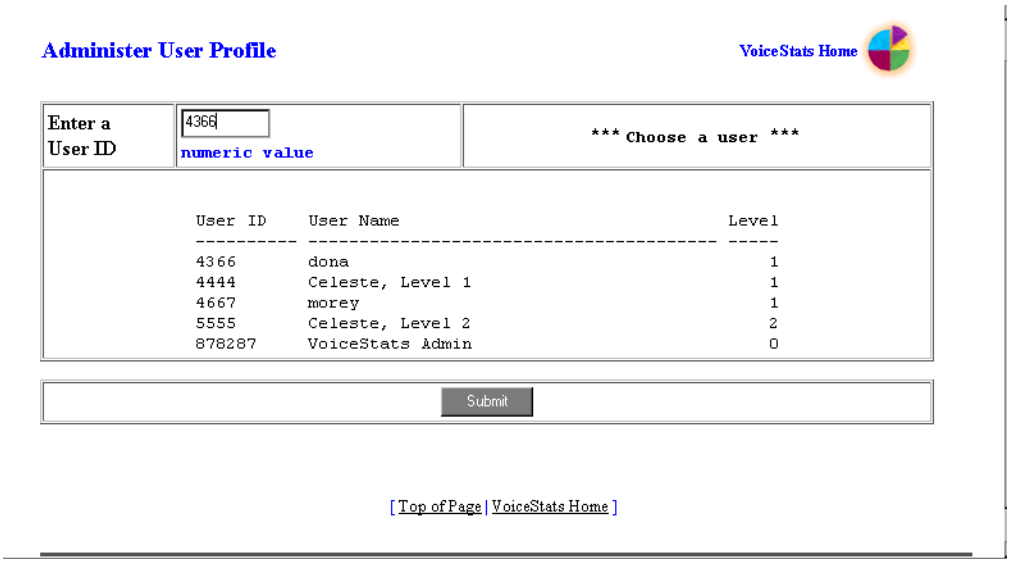

Figure 4-22. Web Browser Interface Administer User Profile Form

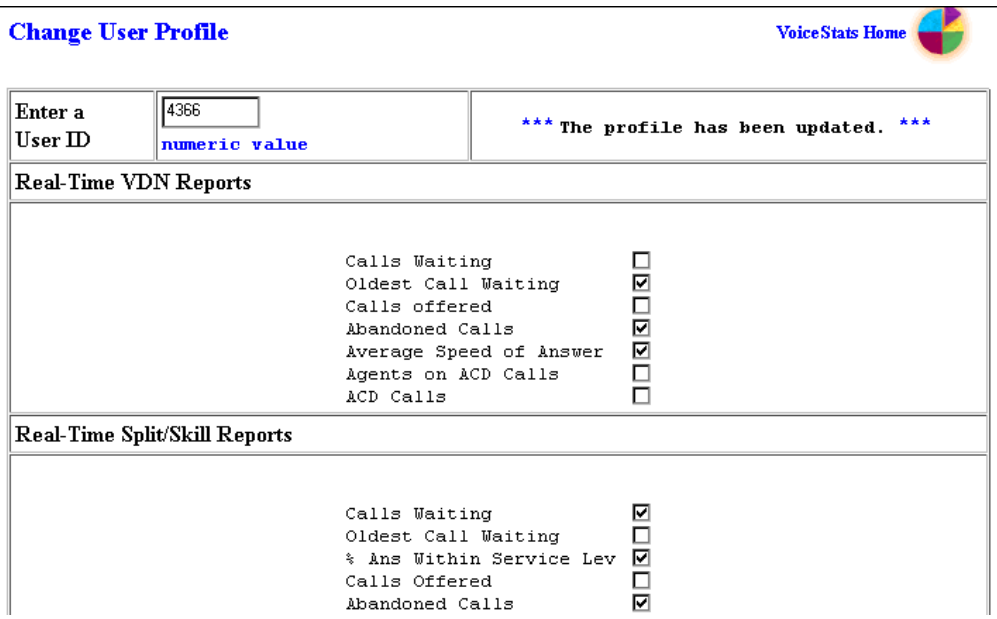

Figure 4-23. Web Browser Interface Change User Profile Confirmation Form

VoiceStats Reports

Menu options for VoiceStats Reports are:

- Users
- User Profiles
- User Favorites
- Report Definitions
- VoiceStats Usage

NOTE:
These reports are not identical to CMS reports.

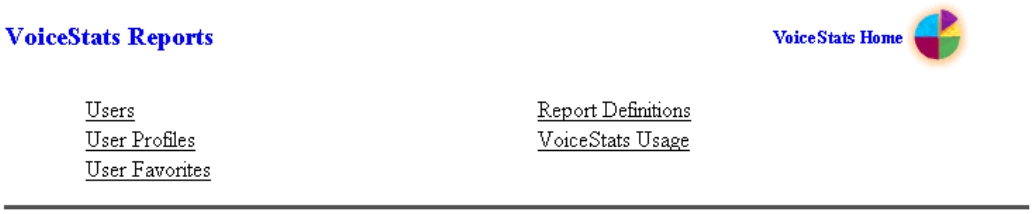

Figure 4-24. Web Browser Interface Administration Reports Main Menu

A description of each report follows:

Users Report

Shows all currently defined users and their levels.

NOTE:
To view reports as a different user, you must begin a new session of your Internet browser.

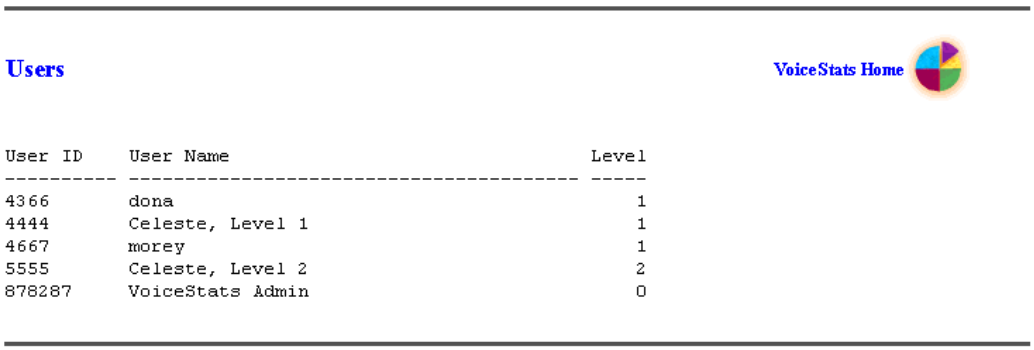

Figure 4-25. Web Browser Interface Users Report Form

User Profiles Report

Shows all currently defined profiles including the default profile.

Figure 4-26. Web Browser Interface User Profiles Report

User Favorites Report

Shows all currently defined user favorite selections.

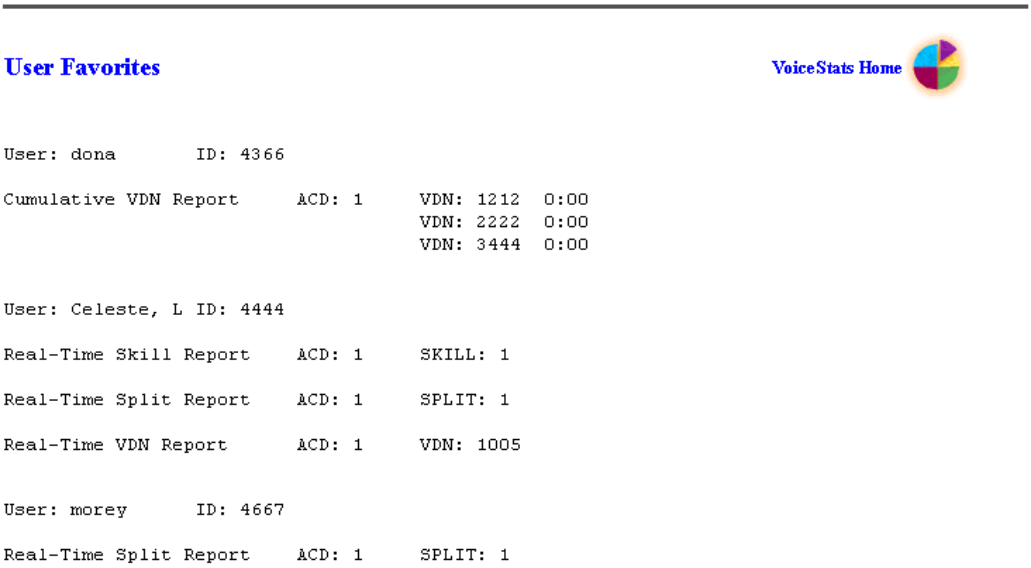

Figure 4-27. Web Browser Interface User Favorites Report

Report Definitions Report

Lists a detailed description of all the CMS reports supported by VoiceStats. The report includes an item description, ID, and phrase NX number for each item included in each report.

Report Definitions VoiceStats Home

Report: HIST_SKL_D

Field	Item Description	Item ID	Phrase NX
1	ACD	ACD	3000
2	Skill	SKILL	3032
4	Percent Answered	PCT_ANS	3034
5	ACD Calls	ACDCALLS	3006
3	Calls Offered	OFFERED	3005
6	% Ans Within Serv Lev	PCT_SVL	3035
8	Percent abandoned	PCT_ABN	3036
10	Average Abandoned Time	AVABNTIME	3037
11	Time Waited Before Abn	ABNTIME	3030
0	Hist Daily Skill Report	HIST_SKL_D	3022
9	Abandoned Calls	ABN	3007
7	Calls Ans Within Serv Lev	ACCEPTABLE	3029

Figure 4-28. Web Browser Interface Report Definitions Report

VoiceStats Usage Report

The administrator can pick a day of the week and see a report for that day showing VoiceStats web interface and touch tone usage.

Example:

```
VoiceStats Usage
Fri 05/02/97 Machine turtle Run 05/03/97 05:41 AM V1.0

IVR Access:16 Requests
Web Access:8 Requests

Main Menu                    5
Admin Main Menu              4
Administer Users             3
Request Historical Data      3
Unauthorized                 3
Add New User                 2
Request Last Week Hist Data  2
Request Additional Data      1
Request Daily Historical Data 1
```

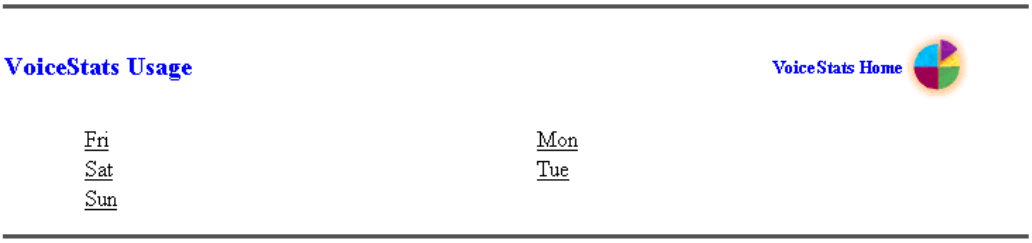

Figure 4-29. Web Browser Interface VoiceStats Usage Report (partial week)

VoiceStats Server

VoiceStats Server main menu items are:

- About VoiceStats Server
- Access for Today
- Errors for Today
- Historical Reports

Figure 4-30. Web Browser Interface VoiceStats Server Main Menu

The sections below describe each report.

About VoiceStats Server Report

This report describes the server and how it is used, and also shows the Apache License agreement.

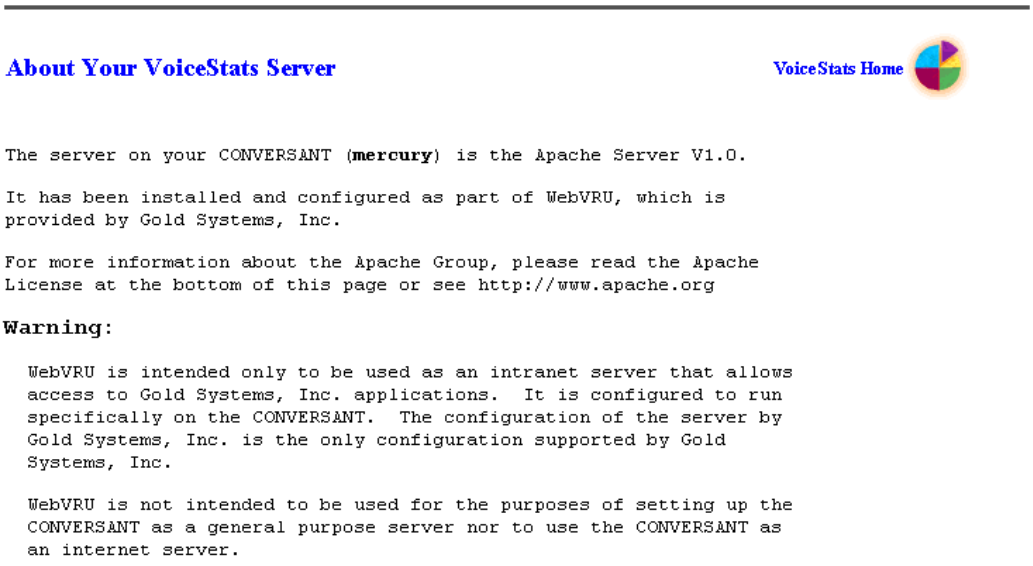

Figure 4-31. Web Browser Interface About VoiceStats Server Report

Access for Today Report

This report displays the server access log report for the current day.

VoiceStats Server Access Today VoiceStats Home

Reporting on Server log: access_log

WebVRU Server Access: 28/May/1997:07:36:44 - 28/May/1997:12:10:43

Invalid User	Hits
4444	1
5555	1
Celeste	2
morey	1
Unknown	8
VoiceStats Admin	2
vstats	2

Host with Invalid User	Hits
baptist	14
bullwinkle	3

Invalid User (Host)	Hits

Figure 4-32. Web Browser Interface VoiceStats Server Access Today Report

Action	Hits
/icons/gold_help.gif	7
/icons/gold_home.gif	12
/icons/luclogo.gif	4
/icons/voice_stats.gif	4
/webvru/infocus	8
/webvru/infocus/+-c+cmd,WebVRU+Server+Access+Today,,$WEBVRU/utils/ac	1
/webvru/infocus/+-c+dir,combined,,/usr/add-on/reports/centralized/co	1
/webvru/infocus/+-c+dir,combined,,/usr/add-on/reports/centralized/co	1
/webvru/infocus/+-c+dir,frog,,/usr/add-on/reports/centralized/frog/c	2
/webvru/infocus/+-c+dir,frog,,/usr/add-on/reports/centralized/frog/c	4
/webvru/infocus/+-c+dir,gumby,,/usr/add-on/reports/centralized/gumby	1
/webvru/infocus/+-c+dir,gumby,,/usr/add-on/reports/centralized/gumby	1
/webvru/infocus/+-c+dir,turtle,,cca,../reports	1
/webvru/infocus/+-c+dir,turtle,,counts,../reports	2
/webvru/infocus/+-c+file,Jul,,./Jul,../reports/cca	1

Figure 4-33. Web Browser Interface VoiceStats Server Access Today Report, Page 2

Errors for Today Report

This report displays the server error log for the current day.

VoiceStats Server Errors Today VoiceStats Home

```
Reporting on Server log: error_log

WebVRU Server Errors: Tue May 27 23:13:01 1997 - Wed May 28 11:50:21 1997

Host with error # Times
--------------- -------
baptist               7
bullwinkle            2

Host (Message)                                                # Times
------------------------------------------------------------ -------
baptist (access to /webvru/vstats failed)                           7
bullwinkle (access to /webvru/vstats failed)                        2

Server Error Reason                                           # Times
------------------------------------------------------------ -------
user 4444 not found                                                 1
user 5555 not found                                                 1
user Celeste not found                                              2
user morey not found                                                1
```

Figure 4-34. Web Browser Interface VoiceStats Server Errors Today Reports

Historical Reports

Historical reports give the administrator the option to view access and error log reports for any day in the last complete week.

Example of screen text:

```
VoiceStats Server Historical Reports

      Access.Wed  Access.Fri  Access.Sun
      Errors.Wed  Access.Fri  Errors.Sun
      Access.Thu  Access.Sat
      Errors.Thu  Errors.Sat
```

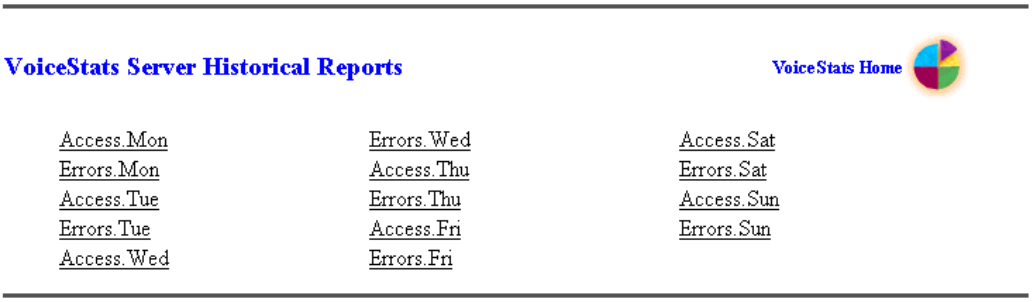

Figure 4-35. Web Browser Interface VoiceStats Server Historical Reports Menu

VoiceStats Server Software Administration

The web server has two levels of administration. The first administration level is the server administration, which defines how the Apache Server behaves on your voice system. In most cases, the configuration provided automatically by the VoiceStats server software is correct, but you can limit who can access your web-based applications by fine-tuning it for your specific network environment.

CAUTION:

You should not change these settings unless you completely understand the consequences and are prepared to support the changes.

The configuration of the Apache Server includes Basic Authorization, which means that it will require a valid user ID and password before anyone can access a web-based application on your voice system.

The second administration level is maintaining the user logins and passwords.

CAUTION:

Your voice system should not be used as a general-purpose web server or to provide web applications to a large community of users. The system administrator should restrict administration to users for whom those features are appropriate.

Server Configuration

For security reasons, configuring the Apache Server cannot be done using a web browser, but must be done while logged into the voice system as **root**. This takes advantage of the added security that already exists on your voice system, and insures that only a user with **root** access can change the configuration of your web server.

The Apache Server is configured through entries in a set of text files, located in the **$WEBVRU/conf** directory. These files are:

Table 4-1. Apache Server Text Files

File Name	Description
httpd.conf	This configuration file sets up the general attributes for the Apache Server.
access.conf	This configuration file sets up the types of requests that are allowed and who may access them.
srm.conf	This configuration file sets up how Web applications should be referenced and how the resulting information should be formatted.

Please refer to the Apache web site (**http://www.apache.org**) for complete details on each field in these files, but follow the guidelines listed below when making changes.

General Attributes Configuration File

Table 4-2 describes those fields in the **httpd.conf** file that have static (or specific) settings for running on a voice system.

CAUTION:

You should not change these settings unless you completely understand the consequences and are prepared to support the changes.

Table 4-2. Static Field Descriptions in the httpd.conf file

Field	Setting	Description
ServerType	standalone	Server runs as a daemon process and limits itself to the MaxClients, MaxSpareServers, and MaxRequestsPerChild settings. Your server must run in *standalone*, because if it ran as *inetd*, a new copy of the server would be started for each new request from a user. This would cause the system to be overrun with processes and would negatively affect your voice system's ability to process calls. It could also easily crash your voice system, so do not change this setting from the default of *standalone.*
User	nobody	Sets the UNIX ID of the server. The *nobody* user has no permissions, which means that anyone requesting information from the server will also have no permissions on your UNIX machine. Only those commands that have specifically been set up by installing VoiceStats software with a web-based interface can be accessed.
Group	nobody	Sets the UNIX group for the server. Like the User setting of *nobody,* the Group setting of *nobody* has no UNIX permissions on your UNIX machine. Only those commands that have specifically been set up by installing VoiceStats software with a web-based interface can be accessed.
ServerRoot	/usr/add-on/webvru	The root directory of the server. All relative paths are taken as relative to this directory. The environment variable WEBVRU is set to this directory and WebVRU installs all of its files and subdirectories under this directory.

Continued on next page

Table 4-2. Static Field Descriptions in the httpd.conf file — *Continued*

Field	Setting	Description
ErrorLog	logs/error_log	The path for the server's error log. It is relative to ServerRoot and so the **error_log** file is in the **$WEBVRU/logs** directory. This directory also contains the historical error logs, and both the current access log and the historical access logs.
PidFile	data/httpd.pid	Sets the file name in which the initial server daemon process logs its process ID (PID). It is relative to the ServerRoot and so the **httpd.pid** file is under the **$WEBVRU/data** directory.
Timeout	300	Sets the Timeout value of the server to 300 seconds (that is, 5 minutes) to avoid server overload due to half-completed browser connections.
MinSpareServers	2	Sets the minimum number of idle child server processes that the parent daemon server runs. This is purposely set to a low value so that your web server will only use a small number of processes on the voice system. The combination of this setting of 2, the MaxSpareServers setting, and the MaxClients setting of 5, keeps the number of httpd server processes, to between 3 and 6. This includes the parent server and every child server.
MaxRequestsPerChild	30	Sets the maximum number of requests that a child server process handles. Once it has taken care of this number of requests, it will die. This limits the amount of accidental memory leakage and helps reduce the number of processes running on the voice system when the server load is low. At the same time, a number that is too low will cause additional system load associated with continually restarting server processes, so you should not change this setting.

Continued on next page

Table 4-2. Static Field Descriptions in the httpd.conf file — *Continued*

Field	Setting	Description
StartServers	2	Sets the number of initial child server processes started by the parent daemon server process.This is purposely set low so that your web server will only use a small number of processes on your voice system.

The following table describes those settings in the **httpd.conf** file that you may wish to change in order to fine-tune your server configuration to better match your specific network environment. If you do change the server configuration, you must restart the server with the **restart_server** utility.

CAUTION:

You should not change these settings unless you completely understand the consequences and are prepared to support the changes.

Table 4-3. Changeable Field Descriptions in the http.conf File

Field	Setting	Description	Recommendation
Port	80	Sets the network services port number that the server process checks for http requests.	You should use Port 80, the standard system number. However, if you change this server port, be sure to administer the **/etc/services** file correctly. (See "Pre-Installation Steps" in Chapter 3, "Installing VoiceStats", for more information.)

Continued on next page

Table 4-3. Changeable Field Descriptions in the http.conf File — *Continued*

Field	Setting	Description	Recommendation
MaxSpareServers	5	Sets the maximum number of idle child server processes that the parent daemon server allows to run. This is purposely set to a low number so that your web server will only use a small number of processes on the voice system. The combination of this setting at 5, and the MinSpareServers setting of 2, and MaxClients setting of 5,will keep the number of httpd processes to between 3 and 6. This includes the parent server and all the child servers.	You may decrease this number if you would like to further limit the number of resources given to running web-based front-end applications on your voice system. It should not be less than 2, which is the setting for MinSpareServers.
MaxClients	5	Sets the total number of child server processes that the parent daemon server will run. This is the maximum number of simultaneous requests that will be supported. It is purposely set to a low number so that your web server will only use a small number of processes on your voice system. If more than 5 requests are received, they will wait until one of the child server's processes has finished handling its current request, and then be processed. The combination of this setting at 5, and the MinSpareServers setting of 2, and the MaxSpareServers setting of 5, will keep the number of httpd processes, to between 3 and 6. This includes the parent server and all the child servers.	You may decrease this number if you would like to further limit the number of resources given to running web-based front-end applications on your voice system.

The Access Configuration File

The access configuration file (**access.conf**) sets up the security for specific directories available to the server. Each directory configuration begins with **<Directory *directoryname*>** and ends with **</Directory>**. The lines in-between specify how that directory can be accessed and by whom. The details for each setting are explained below. We recommend that the only changes made to these settings are to further restrict access as an added security measure. Examples of how you might do this are also given below. If you do change the server configuration, you must restart the server with the **restart_server** utility.

<Directory /usr/add-on/webvru/cgi-bin>

This directory references where the code running a VoiceStats Web-enabled front end application resides. Each different VoiceStats software package will have its own command and will install it automatically in this directory. To access the application, the user enters **http://*machine*/webvru/command**.

For instance, to run InFocus Reports from a browser on a voice system named *cvis1*, a user would specify **http://cvis1/webvru/infocus** as the address or location to their browser. If the same voice system also had VoiceStats installed, the user would specify a location of **http://cvis1/webvru/vstats** to run that application.

The following list shows the lines from the **access.conf** file that limit access to the **/usr/add-on/webvru/cgi-bin** directory:

- `AuthType Basic`

  This tells the server that it should verify requests with a user ID and a password.

  ⚠ CAUTION:
  Do not change this, it is required for security.

- `AuthName CONVERSANT Access`

  This string is used by the browser when it prompts the user to enter their ID and password for Basic server authorization. Since this string is for display purposes only, you may change it if you want. We recommend that if you do, also test it with all the commonly used browsers at your site to make sure the wording makes sense in each environment.

- `AuthUserFile /usr/add-on/webvru/data/web_users`

  This is the file where user IDs and passwords are stored. The passwords are encrypted. The WebVRU **server_passwd** command can be used to administer them while logged on to your voice system as **root**. Do not change this setting. The **server_passwd** utility can only administer the passwords that are in the **$WEBVRU/data/web_users** file, so if you change it, you will not be able to administer the IDs and passwords.

  NOTE:
  The user IDs for your Apache Server are not the same as a user login name on your voice system. They are administered separately, so if you wish to reuse the same IDs, make sure you administer the passwords for both server access and access at the UNIX level.

- `AuthGroupFile /usr/add-on/webvru/data/web_groups`

  This file assigns users to a group. The first field on each line is the group name, followed by a colon. The rest of the line lists the users in that group. A group may be specified with more than one line; the users listed on each line are all considered part of the same group. To change the group settings, edit this file. **WebVRU** installs the group file with the user “daily” set up in the group reports by default (if you have the InFocus report application). This is the group that is allowed access to the InFocus Reports web-based interface and was included to give an example of the correct format.

- `Options ExecCGI`

  This allows the command in this directory to be run by the server when requests are made by a user through their browser. Do not change this setting, it is required for running the VoiceStats related software application commands.

- `<Limit GET POST>`

  This limits the method for passing form parameters between the browser and the server and also allows additional limits to be set up for the directory. Do not change this line.

- `require valid-user`

  This indicates to the server which users are allowed to access this directory only if they have been verified by the Basic Server Authorization. All VoiceStats related applications reside in this directory, and rely on the Basic Server Authorization, so you should not change this line.

- `allow from all`

  This limits the hosts that can access this directory. The default is to allow any host to access the commands in this directory, as long as they are a valid user. One very good way to fine-tune your server is to restrict the hosts that can access this directory. To do this, add the following line right under this one:

  ```
  deny from all
  ```

  Then change the allow line to list only those hosts that you would like to give access to instead of the word all. The host name(s) can either be names, IP addresses, or partial IP addresses. For instance, the lines

  ```
  allow from cactus 111.11.11

  deny from all
  ```

  will only allow the host called cactus or any host with an IP address beginning with 111.11.11 to access the web front-end applications in this directory. All other hosts will be denied access.

- `</Limit>`

The other directories that are in the access configuration file are:

- Directory **/usr/add-on/webvru/icons**

  This is the directory where the files containing the icons are stored. You may follow the guidelines listed above for tightening access to this directory by adjusting the allow and deny settings. WebVRU includes the standard Home and Help icons, which are **.gif** files. Any software that includes those **.gif** files will install its HTML files under this directory.

VoiceStats/Silent Sentry Interface

5

NOTE:
You must have INTUITY CONVERSANT Version 7.0 system software, and purchase the VoiceStats/Silent Sentry Interface package to use this interface.

The VoiceStats/Silent Sentry Interface links VoiceStats to Silent Sentry. This feature allows a user to set up and administer thresholds so when a threshold is met in VoiceStats, Silent Sentry will notify the user. The report thresholds are the level above or below which an event is true or will take place. For example, you can set up the Interface to notify you when the number of calls in queue exceeds five. It is accessible from the VoiceStats Main Menu on the web interface (see Figure 5-1).

Vstats Spy

The Interface uses a new spy, called vstats_spy. The vstats_spy monitors the thresholds which were set up in the thresholds section of VoiceStats. (You can administer this spy from the CONVERSANT command line, but not from the Web Interface.) However, if you deactivate this spy you will disconnect the Interface itself.

The commands to check the status of the vstats spy, and to turn it on and off are:

- **vstats_spy_status**
- **vstats_spy_on**
- **vstats_spy_off**

If this spy discovers that a threshold is met, it creates a Silent Sentry event in the events table. It will create a new event for every threshold. Silent Sentry performs an action as defined by this event. (Refer to the Silent Sentry manual for more information.)

Administration

The Interface administration has two levels, administrator and user. Administrators can change all users' thresholds, while users can only access their own. The screens will appear different, depending on whether you are logged in as Administrator or User.

Figure 5-1. VoiceStats Administrator Main Menu: Link to Interface

Figure 5-2. VoiceStats User Main Menu: Link to Interface

NOTE:
Order of Installation: In order for this Interface to work properly, you must install the software in the following order:

1. VoiceStats (including WebVRU)
2. Silent Sentry
3. VoiceStats/Silent Sentry Interface

NOTE:
Prerequisite: To use this Interface successfully, users should have a solid understanding of and previous experience with both VoiceStats and Silent Sentry.

Logging in to the Interface

Users can log in to the Interface as either Administrator or User. The User Name for Administrators is: VoiceStats Admin, Password: 878287. Type this exactly as shown. You can set up users through the VoiceStats Main Menu, Administer Users option. (For more details on how to do this, refer to page 4-19.)

Administer Thresholds

When logged in as Administrator, you will first see the screen below, Administer Thresholds (Figure 3). Choose the user whose thresholds you wish to administer. Only users who have been set up in VoiceStats will show up on the list of users. A user's favorites and profiles must also have been previously set up in VoiceStats.

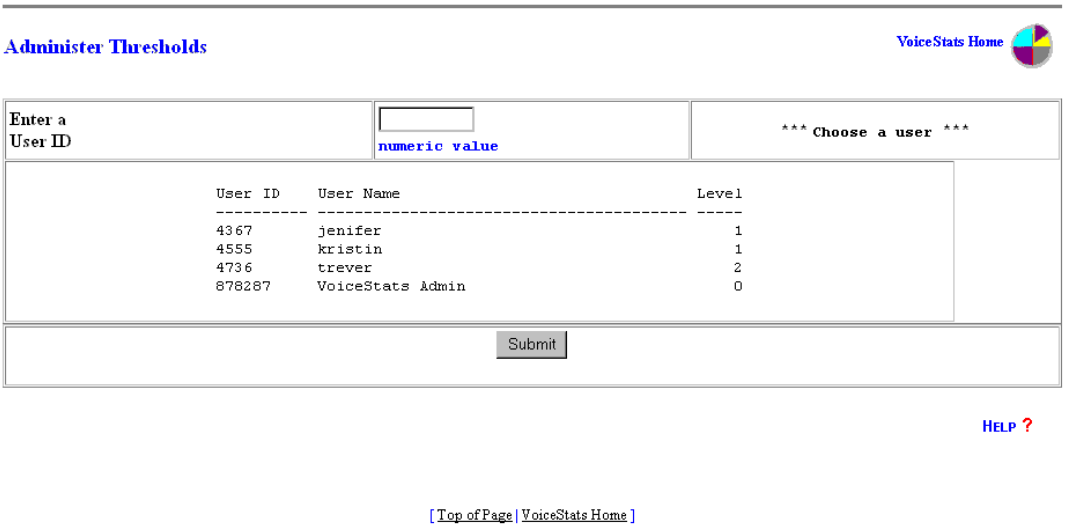

Figure 5-3. Administer Thresholds

Administrator versus User Features

When logged in as a user, you will not have access to the screen above, Administer Thresholds (Figure 5-3). You will only be able to view the Change Thresholds screen below (Figure 5-4). The information will be displayed for the specific user that is logged in. (This screen, Figure 5-4, will be the second screen Administrators can view and will display information for the user which was selected in the Administer Thresholds screen above.) The upper right-hand corner of all screens will display the current user and prompt you as to what action is occurring.

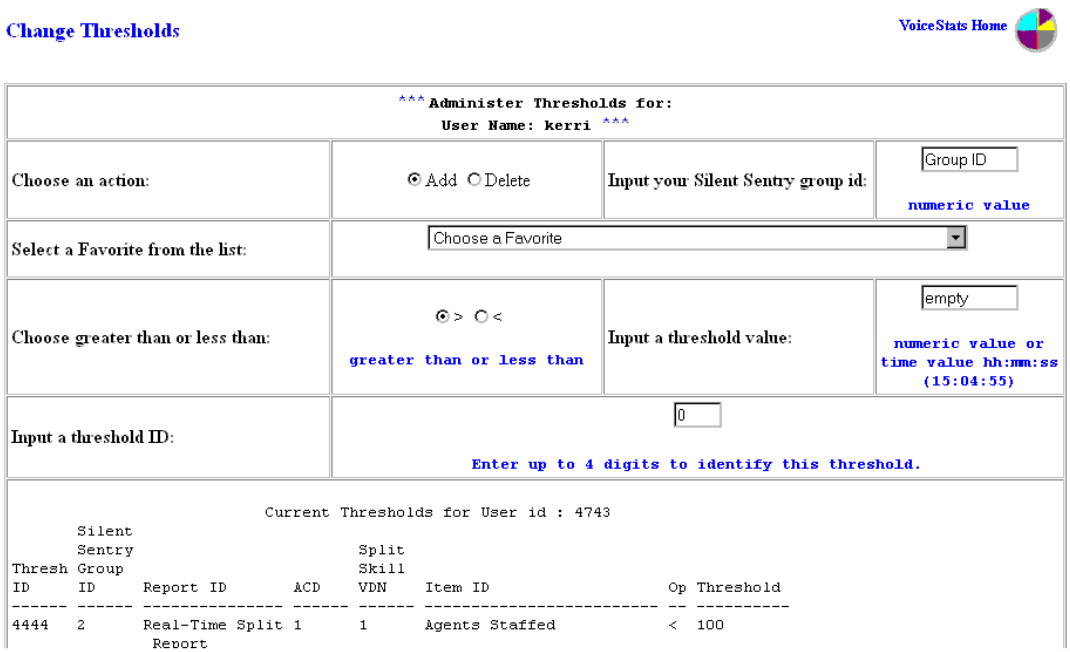

Figure 5-4. Change Thresholds

Change Thresholds

- Choose an Action: Choose to either add or delete a particular threshold. A threshold must exist in the threshold list before it can be deleted.

  NOTE:
  In order to change the threshold or user favorites, you must first delete the threshold and then add it again with the new information.

- Input Silent Sentry Group ID: A number which identifies your group - originally set up in the Silent Sentry Contacts Table (see the Silent Sentry User Manual for more details). Be sure to delete the existing default words, Group ID.
- Select a Favorite from the list: This pull down menu will display all the reports for this particular user which were selected as Favorites in the User Profile setup in VoiceStats.
- Choose greater than or less than: This value is contingent upon how you set up the next field, the threshold value. Select whether or not you wish to be notified when the threshold is greater or less than the value you choose.

- Input a Threshold Value: This value must be either numeric, a real number, or in military time, depending on the kind of report threshold you are administering. Be sure to delete the default word, empty, and to use the correct number style for each report. For example:
  - 50% or .50 should be entered as: 50
  - 4:30 p.m. should be entered as: 16:30:00
  - 8 agents staffed should be entered as: 8
- Input a Threshold ID:This is a unique four digit number you assign to a particular report when initially setting up the thresholds. When you are notified by Silent Sentry, it will use this ID number to represent that particular report. You will need to keep track of which ID numbers you have assigned to which thresholds. Be sure to delete the default number, zero.

  NOTE:
  If notified by pager, a series of six 9's will precede the four digit threshold ID number as a default. For example, you have selected 1010 as the Threshold ID for when calls in queue exceeds five. When this threshold is reached, you will be paged with the message: 999 999 1010. However, if certain identifiers are set up in page mapping, the nine's are replaced by the assigned number.

- At the very bottom of the screen, a report will be displayed showing the selected user's current thresholds. This report is updated as the changes are made.

VoiceStats Administration Details

6

This chapter describes the directory structure, Real-Time and Historical report formats, and Oracle database tables for VoiceStats. It is intended to be read by the VoiceStats system administrator or anyone providing technical support for the VoiceStats system. The information provided here is most useful if you have at least some voice system and UNIX experience.

Utilities

The VoiceStats Utilities are listed below. The commands are located in **$VSTATS/utils** and **$WEBVRU/utils**. Commands with a '*' by them must be run from the login ***root***.

Table 6-1. VoiceStats and WebVRU Utilities

Command	Description
about_apache	Displays the Apache licensing agreement and VoiceStats web server warning and usage.
access.webvru	Reports all the previous day's activity information for the access server log.
errors.webvru	Reports all the previous day's activity information for the error server log.
reset_server_logs	Does the cleanup on the server log files. Moves all the data to a daily file.
restart_server *	Stops and restarts the Apache server.

Continued on next page

Table 6-1. VoiceStats and WebVRU Utilities — *Continued*

Command	Description
start_apache *	Starts the Apache server.
stop_apache *	Kills the Apache server process.
update_favs	Allows addition or deletion of user favorites from the VS_FAVS table. Run 'update_favs -?' for syntax.
update_user	Allows addition, deletion, modification of a VoiceStats user definition. The add command modifies the user. Run 'update_user -?' for syntax.
vs_describe	Produces a report showing a detailed list of the Oracle tables used by VoiceStats.
vs_show_rep_def	Produces a report showing a detailed list of the CMS reports used by VoiceStats.
vs_show_user_favs	Produces a report showing a list of all users' favorites. If a user ID is passed in as an argument only that user's favorites are listed.
vs_show_user_profiles	Produces a report showing a list of all users' profiles. If a user ID is passed in as an argument only that user's favorites are listed.
vs_show_users	Produces a report showing a list of all defined VoiceStats users.
cms1_off	Turns off the **cms1dip**.
cms1_on	Re-enables the **cms1dip**.
cms1_set_login	Changes the CMS login used by the **cms1dip**.
restart	Restart the access DIP.
vs_usage	Produces a report showing VoiceStats usage information.
vs_web_usage	Produces a report showing VoiceStats web interface usage information.

Continued on next page

Table 6-1. VoiceStats and WebVRU Utilities — *Continued*

Command	Description
vs_backup	Does backups of the VoiceStats tables that contain user information, favorites, and profiles to floppy or to a file. The table names are VS_DEF_USER, VS_FAVS, and VS_PROFILE.
vs_restore	Restores the VoiceStats tables that contain user information, favorites, and profiles from the floppy or file created with the **vs_backup** utility. The table names are VS_DEF_USER, VS_FAVS, and VS_PROFILE and they are replaced with the data from the backup.
check_restart	Kills the **check_for_new** process and then allows it to respawn. This clears out the log file for **check_for_new**. This process is run once a day from the **vs_in_sync** cron job to keep the **ch_new.out** from growing too large.

VoiceStats DIPs

VoiceStats uses two DIPs to allow the voice system to access the CMS data. These scripts are the Access DIP and the CMS DIP. Both DIPs must be running for VoiceStats to properly access the CMS information.

Access DIP

This Access DIP, **vs_accessdip**, reads ASCII flat files containing CMS data. The data is moved from the CMS machine to a data file on the voice system. The Access DIP retrieves this data for the VoiceStats Information Request application, **vs_inf_req**.

The **check_for_new** process on the voice system runs constantly and it watches for the data coming from the CMS machine.

Every 30 seconds, the **check_for_new** process looks for the data and moves the data from the **/usr/add-on/vstats/data/incoming** directory into the file, **/usr/add-on/vstats/data/realtime.data**.

For cumulative and Historical reports, the Access DIP gives the VoiceStats Information Request script access to the data in the **HIST_*.out** files generated by the CMS DIP. The timeout for receiving the historical and cumulative data has been set to 30 seconds.

CMS DIP

The CMS DIP, **cms1dip**, accesses historical CMS data by running the requested report remotely on the CMS machine. The appropriate report is run on demand when a user requests historical information.The DIP executes the **cms1_stub** command remotely to run the report on the CMS machine.

The CMS DIP saves the resulting data for the report in an ASCII flat file in the **/usr/add-on/vstats/data/incoming** directory. The file name starts with **HIST_**, and ends in **.out**, the middle part of the name is based on the sorting factor (SPLIT/SKILL, or VDN). Example: **HIST_VDN.out**

VoiceStats runs one instance of the DIP upon installation. If there are many VoiceStats users requesting historical reports and response seems slow, up to 2 more instances of the DIP can be run.

To run multiple instances of the CMS DIP:

1. Edit the **/etc/conf/init.d/cms1_init** file and modify the following lines (these are single line entries):

G32:4:off:/user/add-on/vstats/bin/cms1dip -N cms1dip -H /user/add-on/vstats -h "r3conv" -i2 -c "/usr/add-on/vstats/cms1_stub"

G33:4:off:/user/add-on/vstats/bin/cms1dip -N cms1dip -H /user/add-on/vstats -h "r3conv" -i3 -c "/usr/add-on/vstats/cms1_stub"

2. Change the third field from off to **respawn** for the process you want to start
3. Change the CMS host name from r3conv to your host name
4. After you have edited the line(s), save and close the file.
5. You must re-build inittab.

   Enter **/etc/conf/bin/idmkinit -e /etc/conf/init.d -o /etc**
6. Enter **init q**

Directory Structure for VoiceStats

You should have an understanding of the VoiceStats directory structure (Figure 6-1) and how to navigate through the VoiceStats software.

The VoiceStats package is located under the **/usr/add-on/vstats** directory. When you log in, the **$VSTATS** environment variable will be set automatically to this directory and exported.

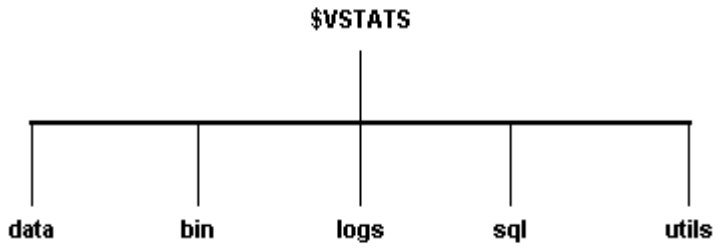

Figure 6-1. VoiceStats Directory Structure

Data Files

The **$VSTATS/data** (**/usr/add-on/vstats/data**) directory contains data files for VoiceStats. Table 6-2 describes the data files:

Table 6-2. VoiceStats Data Files

File Name	Description
Version	Current VoiceStats version number.
HIST_AAA_BX.out	Historical data retrieved from the CMS system on demand. Where AAA = SPL or VDN depending on the sort factor, B=type of report (D for daily, W for weekly, M for monthly), and X=channel number.
realtime.data	All real-time and cumulative data records. Retrieved on regular intervals.

Log Files

The **$VSTATS/logs** (**/usr/add-on/vstats/logs**) directory contains log files for the user interface activity, access DIP calls, and CMS DIP calls. These files contain both successful and failed activities for these processes and can be very useful in tracking VoiceStats problems.

User Interface Activity Log File

The **ui.out** file logs the user interface activity. The user interface is the web interface and the console interface. An example log file might look like this:

```
        args1:    vs_favorites
        args2:
   String vs_favorites Stripped vs_favorites
   Running command cgi/vs_favorites
   Checking if cgi/vs_favorites is a valid command
   Command cgi/vs_favorites ok to run
   Command rc is 0
   Exit code is 0
   Showing file /tmp/_guia005yc
   Title Change favorites
```

vs_accessdip Log File

The **access.out** file logs the access DIP calls. The access DIP takes a request for data (an ACD and split for example) and returns the correct data record to the touch tone script.

The **ch_new.out** file logs the access DIP activity concerning new data.

cms1dip Log File

The **cms1d1.out** file logs the CMS DIP calls. This DIP takes requests for historical data from the touch tone script and initiates running the requested report on the CMS machine. The data is then put in a file on the voice system and this DIP responds back to the touch tone script with the filename containing the data.

Directory Structure for Server

You should have an understanding of the web server software directory structure (Figure 6-2) and how to get around in the software.

The web server package is located under the **/usr/add-on/webvru** directory. When you log in, the **$WEBVRU** environment variable will be set automatically to this directory and exported.

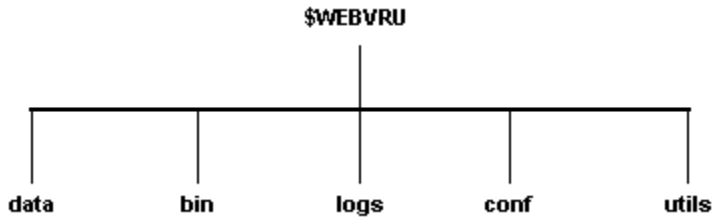

Figure 6-2. Web Server Directory Structure

Data Files

The **$WEBVRU/data** (**/usr/add-on/webvru/data**) directory contains the data files required for the web interface. Table 6-3 describes these data files:

Table 6-3. WebVRU Data Files

File Name	Description
Version	Current WebVRU version number.
apache_license	Explains Apache server license agreement.
httpd.pid	Contains the process identification number for the httpd process.
web_groups	Lists groups of authorized users having access to various web applications.
web_users	Lists authorized users with encrypted passwords.
webvru_warn	Product warning against fraud.

Log Files

The $WEBVRU logs (**/user/add-on/webvru/logs**) directory contains the following log files:

access_log Log File

This file contains all the web server access data for the current day. A cron job is run every night that moves this data to a daily access log file (**<day>.access**).

<Day>.access Log File

This file contains the web access activities for the specified day of the week. This file is created each night through the execution of a cron job that moves the activities for the current day from the **access_log** file to this file.

error_log Log File

This file contains the web server error activities for the current day. A cron job is run every night that moves this data to a daily error log file (**<Day>.error**).

<Day>.error Log File

This file contains the web server error activities for the specified day of the week. This file is created each night through the execution of a cron job that moves the activities for the current day from the **error_log** file to this file.

Cron Jobs

A UNIX cron job runs automatically based on the date or time of day. File clean up activities for VoiceStats are run every day at 11:53 PM. If you need to change this, you should choose a non-busy time.

Each night at 8:37 PM the administration passwords are synchronized using the **vs_in_sync** command through a cron job.

Each night at 11:53 PM **<Day>.access** and **<Day>.error** are created. Any activity through the web server for the remainder of the night will be part of the next day's log.

Directory Structure for CMS

The VoiceStats software package is located under the **/usr/add-on/vstats** directory on the CMS machine. This directory contains all programs and files required for VoiceStats on the CMS system.

Table 6-4 shows the files that may be created by the CMS installation procedure, depending on whether skills, splits, and/or VDNs are being monitored.

Table 6-4. CMS Report Generation Files

Shell Script	Description
.skl_cum	Instructs CMS how to run the cumulative skill report.
.skl_startup	Instructs CMS how to run the real-time skill report.
.spl_cum	Instructs CMS how to run the cumulative split report.
.spl_startup	Instructs CMS how to run the real-time split report.
.vdn_cum	Instructs CMS how to run the cumulative vdn report.
.vdn_startup	Instructs CMS how to run the real-time vdn report.

Miscellaneous Directories

Other files and directories of interest are listed in Table 6-5.

Table 6-5. Other CMS Directories and Files of Interest

File/Directory	Description
Notes	Instructions for installing VoiceStats on CMS.
REPORTS	A directory that contains the CMS Screenpainter reports.
Vstats.Remove	A program that will completely remove VoiceStats from CMS. To run, copy **.removepkg/Vstats.Remove** to **/tmp** and run it from there.
cms_Install	A program that will completely install VoiceStats on CMS.
spl_setup	A program to set up VoiceStats to monitor splits.
skl_setup	A program to set up VoiceStats to monitor skills.
vdn_setup	A program to set up VoiceStats to monitor VDNs.
cvis_Install	A program to send installation files from CVIS to CMS. This file is installed and run from the voice system.
headers	Contains header files for voice system, initially empty.

Please note that **spl_setup**, **skl_setup**, and **vdn_setup** are used by the **cms_Install** program to set up VoiceStats to monitor splits, skills, and/or VDNs. The scripts can also be executed from the command line to make corrections or to add the ability to monitor additional domains.

Report Formats on the CMS

All VoiceStats reports on the CMS system have a similar format. The sorting factors are the first items listed horizontally. The data items follow horizontally and include data item ID keywords in the header. These IDs in the header match the data item IDs in the item table described in the Oracle Database Tables section of this chapter. The sorting factors for each report also define the fields that are specified by user favorites.

Real-Time Snapshot Split/Skill Report

The sorting factors for the Split Report are ACD and Split. The sorting factors for the Skill Report are ACD and Skill. Real-time snapshots capture the information for the current reporting time interval (last 15 minutes to last hour of information). The reporting time interval is set by the CMS system administrator.

The Real-time snapshot split report, “REAL_SPL”, provides CMS data items from the csplit table. See Table 6-6 for a list of the data items. CMS data item values shown in brackets < > are standard CMS calculations.

NOTE:
In an EAS environment, skill values will be used in place of split.

Table 6-6. Real-time Snapshot Split/Skill Report Data Items

VoiceStats Keyword	Description	CMS Database Item
ACD	ACD number being reported on.	ACD
SPLIT	Split being reported on.	SPLIT
QUEUE	Total number of callers in queue.	INQUEUE+INRING
OCW	Time the oldest call has been waiting in the queue.	OLDESTCALL
SVL	Percent of calls that were answered within the service level.	100*(ACCEPTABLE/CALLSOFFERED) <PERCENT_SERV_LVL_SPL>
OFFERED	Number of calls queued to the split/skill.	CALLSOFFERED
ABN	Number of calls that were abandoned.	ABNCALLS
ASA	Average speed of answer.	ANSTIME/ACDCALLS <AVG_ANSWER_SPEED>

Continued on next page

Table 6-6. Real-time Snapshot Split/Skill Report Data Items

VoiceStats Keyword	Description	CMS Database Item
AVAIL	Current number of agents available for calls.	AVAILABLE
STAFF	Current number of agents that are logged in.	STAFFED
ONACD	Current number of agents that are on calls.	ONACD
ACDCALLS	Number of calls answered by agents.	ACDCALLS

Real-Time Cumulative Split/Skill Report

The Real-Time Cumulative split report summarizes the current day's data from a given start time until the current time. The report is taken from the hourly table(s) (hsplit). The sorting factors for split/skill reports are the same as for Real-Time snapshots.

The Real-Time Cumulative report, "HIST_SPL_H", provides CMS data items from the hsplit table. See Table 6-7 for a list of the data items. CMS data item values shown in brackets < > are standard CMS calculations.

NOTE:
In an EAS environment skill values will be used in place of split.

Table 6-7. Real-time Cumulative Split/Skill Report Data Items

VoiceStats Keyword	Description	CMS Database Item
ACD	ACD for which the data is being selected.	ACD
[1]SPLIT	Number of the split selected for this report.	SPLIT
[1]SKILL	Number of the skill selected for this report.	SKILL
OFFERED	Sum of calls queued to the split for the selected intervals.	CALLSOFFERED

Table 6-7. Real-time Cumulative Split/Skill Report Data Items

VoiceStats Keyword	Description	CMS Database Item
PCT_ANS	Sum of the percent of calls answered.	<PERCENT_CALL_ANS>
ACDCALLS	Queued ACD calls to the split/skill that were answered by an agent. Does not include direct agent calls.	ACDCALLS
PCT_SVL	Percent of calls answered within the service level.	<PERCENT_SERV_LVL_SPL>
ACCEPTABLE	Sum of the number of calls that were answered within the service level for the selected interval.	ACCEPTABLE
PCT_ABN	Percent of the sum of abandoned calls.	<PERCENT_CALL_ABN>
ABN	Total number of queued calls for each split/skill that abandoned before an agent answered. Does not include direct agent calls.	ABNCALLS
AVABNTIME	Average amount of time callers waited in queue and ringing before abandoning.	<AVG_ABANDON_TIME>
ABNTIME	Sum of the time callers waited in queue before abandoning the call, for the selected interval.	ABNTIME

1. Either Split or Skill are included in the report depending on the environment.

Real-Time Snapshot VDN Report

The sorting factors for the VDN reports are ACD and VDN. The Real-Time snapshot report contains data from the current time interval.

The Real-Time snapshot report, “REAL_VDN”, provides CMS data items from the cvdn table. See Table 6-8 for a list of the data items. Data item values shown in brackets < > are standard CMS calculations.

Table 6-8. Real-Time Snapshot VDN Report Data Items

VoiceStats Keyword	Description	CMS Database Item
ACD	ACD number being reported on.	ACD
VDN	VDN being reported on.	VDN
QUEUE	Total number of callers in queue.	INQUEUE+INRING
OCW	Time the oldest call has been waiting in the queue.	OLDESTCALL
SVL	Percent of calls that were answered within the service level.	100* (ACCEPTABLE/INCALLS)
INCALLS	Number of calls directed to this VDN.	INCALLS
ABN	Number of calls that were abandoned.	ABNCALLS
ASA	Average speed of answer.	ANSTIME/ACDCALLS <AVG_ANSWER_SPEED>
ONACD	Current number of INPROGRESS calls (ACD and non-ACD) that have been answered by an agent or a station.	ATAGENT
ACDCALLS	Number of calls answered by agents.	ACDCALLS

Real-Time Cumulative VDN Report

The real-time cumulative VDN reports from the hourly tables (HVDN) take a range of times and sum the data over the time range. The sorting factors are the same as the real-time VDN snapshots.

The real-time cumulative report, “HIST_VDN_H”, provides CMS data items from the hvdn table. See Table 6-9 for a list of the data items. Data items shown in brackets < > are standard CMS calculations.

Table 6-9. Real-Time Cumulative VDN Report Data Items

VoiceStats Keyword	Description	CMS Database Item
ACD	ACD for which the data is being selected.	ACD
VDN	VDN for which the data is being selected.	VDN
OFFERED	Sum of the number of calls directed to this VDN for the selected interval.	INCALLS
PCT_ANS	Sum of the percent of calls answered.	100*(ACDCALLS/INCALLS)
ACDCALLS	Sum of the number of calls answered by an agent for the selected interval.	ACDCALLS
PCT_SVL	Percent of calls answered within service level.	<PERCENT_SERV_LVL_VDN>
ACCEPTABLE	Sum of the number of calls that were answered within the acceptable service level for the interval selected.	ACCEPTABLE
PCT_ABN	Percent of the sum of the calls that were abandoned.	100*(ABNCALLS/INCALLS)
ABN	Sum of the number of abandoned calls for the selected interval.	ABNCALLS
AVABNTIME	Sum of the average abandon time.	<AVG_ABANDON_TIME>
ABNTIME	Sum of the time callers waited in queue before abandoning for the selected interval.	ABNTIME

Historical Information Reports

The historical reports access the CMS daily, weekly, and monthly tables.

The split, skill, and VDN reports are taken from the daily (dsplit and dvdn) tables, weekly (wsplit and wvdn) tables, and the monthly (msplit and mvdn) tables that are already summed to the appropriate interval. Times and dates are used to select the data requested, from the appropriate table.

The historical reports are sorted by the following factors, in this order:

1. ACD
2. Split
3. Skill
4. VDN

Daily, Weekly, Monthly Split/Skill or VDN Report

The daily, weekly, and monthly split/skill or VDN reports all contain the same CMS data items, taken from the appropriate CMS data tables.

The following reports use data items from the CMS data tables:

- Historical Split/Skill Reports
  - HIST_SPL_D — Historical Daily Split Report (uses the dsplit table).
  - HIST_SPL_M — Historical Monthly Split Report (uses the msplit table).
  - HIST_SPL_W — Historical Split Report for Last Week (uses the wsplit table).
- Historical VDN Reports
  - HIST_VDN_D — Historical Daily VDN Report (uses the dvdn table).
  - HIST_VDN_M — Historical Monthly VDN Report (uses the mvdn table).
  - HIST_VDN_W — Historical VDN Report for Last Week (uses the wvdn table).

Table 6-10. Historical Report Data Items

VoiceStats	Description	CMS Database Item
ACD	ACD for which the data is being selected.	ACD
[1]SPLIT	Number of the split selected for this report.	SPLIT
[1]SKILL	Number of the skill selected for this report.	SKILL
[1]VDN	Number of the VDN selected for this report.	VDN

Continued on next page

Table 6-10. Historical Report Data Items — *Continued*

VoiceStats	Description	CMS Database Item
OFFERED	Number of calls queued to the split/skill or VDN for the day, week, or month.	For splits/skills: CALLSOFFERED For VDNs: INCALLS
PCT_ANS	Percentage of calls queued that were answered.	For splits/skills: <PERCENT_CALL_ANS> For VDNs: 100*(ACDCALLS/INCALLS)
ACDCALLS	Queued ACD calls to the split/skill or VDN that were answered by an agent. Does not include direct agent calls.	ACDCALLS
PCT_SVL	Percent of calls answered within the service level.	For splits/skills: <PERCENT_SERV_LVL_SPL> For VDNs: <PERCENT_SERV_LVL_VDN>
ACCEPTABLE	Number of ACDCALLS answered within the service level for the day, week, or month.	ACCEPTABLE
PCT_ABN	Percent of the calls abandoned.	For splits/skills: <PERCENT_CALL_ABN> For VDNs: 100*(ABNCALLS/INCALLS)
ABN	Total number of queued calls for each split/skill that abandoned before an agent answered. Does not include direct agent calls.	ABNCALLS
AVABNTIME	Average amount of time callers waited in queue and ringing before abandoning.	<AVG_ABANDON_TIME>
ABNTIME	Time caller waited in queue and ringing before abandoning.	ABNTIME

1. One of the three factors: Split, Skill or VDN will be included in a report.

Telephone Interface Report

VoiceStats provides an administration report with information about the usage of the phone interface and the web interface. As a user chooses an option in either interface a record is added to the VS_USAGE Oracle table. The record includes a date and time stamp, the user ID and name, the user level, and a brief description of the action taken.

Once a day the VS_USAGE table is read and the records are formatted into a report that is available to the system administrator via the VoiceStats web interface.

The VoiceStats Script Builder scripts have Call Data Events defined for many of the same actions or events tracked by the VS_USAGE table. The call data events are included in call data reports for the voice system. For more information about these reports, see *INTUITY CONVERSANT System Version 6.0 Administration*, 585-310-591 or Version 7.0 Administration 585-313-501.

InFocus is a voice system reporting package that provides a VoiceStats compatible web interface for retrieving Call Data reports and traffic reports on the voice system. Table 6-11 shows the call data events and the corresponding VS_USAGE events tracked for reporting.

Table 6-11. Call Data Events Table

Call Data Event	VS_USAGE Description	General Description
CNT_REQUEST_FAVORITES	Request Favorites	User has requested to hear favorites, Main Menu option 2.
CNT_REQUEST_HISTORICAL	Request Historical Data	User has requested to hear historical data, Main Menu option 1.
CNT_REQ_HIST_DAILY	Request Daily Hist Data	User has requested the Daily Historical Report.
CNT_REQ_HIST_LAST_WK	Request Last Wk Hist Data	User has requested the Last Week Historical Report.
CNT_REQ_HIST_MONTHLY	Request Monthly Hist Data	User has requested the Monthly Historical Report.
CNT_REQ_ADDITIONAL_DATA	Request Additional Data	User has requested additional records after or during the playing of favorites.

Continued on next page

Table 6-11. Call Data Events Table — *Continued*

Call Data Event	VS_USAGE Description	General Description
CNT_CHANGE_FAVORITES	Change/Review Favorites	User has taken the option to review (level 2) or change (level 1) favorites.
CNT_CHANGE_PASSWORD	Change Password	User has taken the option to change their password.
CNT_ERROR_BAD_ADMIN_DATA	Error:Missing profile data	Couldn't find profile data for this user.
CNT_ERROR_BAD_ADMIN_DATA	Error: Missing favorite data	Couldn't find favorite data for this user (level 2 user).
CNT_ERROR_BAD_ADMIN_DATA	Error: Missing report data	Report data is missing.
CNT_ERROR_BAD_ADMIN_DATA	Error: Bad admin data	General data is missing.
CNT_ERROR_CMS_TROUBLE	Error: CMS not responding.	CMS system is not responding to the requests from the DIP.
CNT_ERROR_SYSTEM_TROUBLE	Error: System Trouble	System is not responding appropriately.
CNT_ERROR_CALLER_TROUBLE	Error: Caller Trouble	Caller is having trouble responding to prompts.

Server Access Log Reports

VoiceStats provides an administration report showing the usage of the web interface. This report shows user names, date and time stamps, and actions taken.

Server Error Log Reports

VoiceStats provides an administration report showing the errors that occurred during usage of the web interface. This report shows user names, date and time stamps and actions taken.

Oracle Database Tables

This section of the book describes the Oracle tables used by VoiceStats. These tables are local to the voice system and should be accessed through the VoiceStats phone interface, web interface, or utilities. These tables are not meant to be used for general administration. The intent of describing them is for documentation, support, and troubleshooting purposes only.

User Table

The system administrator needs to define users for the VoiceStats system. The ID and password are used to access the information available over the phone. The user name is used to access VoiceStats through the web interface. The level is used to determine the level of access permissions given to the user and also what information is available to each individual user. The administration for this table is done by the administrator either over the phone or through the web browser. The VS_DEF_USER table contains this data. See Table 6-12 for a description of the VS_DEF_USER table.

Table 6-12. VS_DEF_USER Table

Field Name	Description
VDU_USER_ID	User ID, up to 10 digit number, must be unique. The 4-digit phone extension number is recommended.
VDU_PSSWRD	User password/PIN number, 5-to 10-digit number.
VDU_USER_NAME	User name that appears on VoiceStats usage report. Used to access the web interface.
VDU_USER_LEVEL	Used to determine user's security Level. If Level 1, the user may select which ACDs, Splits, Skills, or VDNs (favorites) they would like information about. If Level 2, only the system administrator may specify the ACDs, Splits, Skills, or VDNs (favorites) that can be accessed by the user.

If a user is added via the system administration telephone interface, the user name is the same as the user ID.

User Favorites Table

The user input involves choosing a favorites list of reports and items they want to listen to most often. For example the user can select a favorite split to hear information about. Each favorite corresponds to a single record. A user may have many favorites and therefore many records in this table. These selections can be changed by the administrator or the Level 1 user either through the phone interface or via the web interface. The VS_FAVS table contains this data. See Table 6-13 for a description of the VS_FAVS table.

Table 6-13. VS_FAVS Table

Field Name	Description
VF_USER_ID	User ID, matching the one in the user definition table.
VF_ORDER_NUM	Reserved for future use.
VF_REPORT_ID	Identifies the type of report. REAL_SPLIT, REAL_VDN.
VF_ARGS	Used to identify the start time in cumulative Real-Time reports.
VF_L1_ITEM_ID	Name of the field used as the first level of the sorting criteria. For this release it holds the string “ACD”.
VF_L1_VALUE	Specific ACD number that has been set up for this favorite.
VF_L2_ITEM_ID	Name of the field used as the second level of the sorting criteria. For this release it holds the string “split, skill, or VDN”.
VF_L2_VALUE	Specific split, skill or VDN number that has been set up for this favorite.
VF_L3_ITEM_ID	Reserved for future use.
VF_L3_VALUE	Reserved for future use.
VF_L4_ITEM_ID	Reserved for future use.
VF_L4_VALUE	Reserved for future use.

User Data Item Profile Table

The user chooses a preferred subset of data items from the list of all data items available, and this information is found in the VS_PROFILE and VS_USAGE table. See Table 6-14 and Table 6-15 for a description of these tables.

Table 6-14. VS_PROFILE Table

Field Name	Description
VP_USER_ID	User ID.
VP_REPORT_ID	The ID for the report.
VP_ITEM_ID	The ID for the data item selected. Unique IDs are defined in the VS_MASTER Table.
VP_ORDER_NUM	The order number for this data item in the list of items selected. This number dictates the order the caller will hear the data.

Table 6-15. VS_USAGE Table

Field Name	Description
VU_UNIX_TIME	Contains the standard UNIX time.
VU_INTERFACE	Contains data about which interface was used to access VoiceStats.
VU_TIME_STAMP	Contains the date and time stamp.
VU_USER_ID	Contains the user ID of the person accessing VoiceStats.
VU_USER_NAME	Contains the user name of the person accessing VoiceStats.
VU_USER_LEVEL	Contains the permissions level of the person accessing VoiceStats.
VU_USER_ACTION	Contains data about what action the user requested.

System Tables

The VoiceStats system relies on system tables to contain all of the data items available for reports and to map numbers to names where appropriate.

Master Data Items Table

The Master Data Items table contains all possible data items that can be made available to the users. These data items are all the items from all VoiceStats CMS reports. The field descriptions for the Master Data Items table are shown in Table 6-16.

Table 6-16. VS_MASTER Table

Field Name	Description
VML_ITEM_ID	Unique ID for the data item
VML_ITEM_DESC	Description of the data item
VML_ITEM_TYPE	Identifies how to announce and how to sum if possible. Some possible values: AVERAGE, SECONDS, NUMBER...
VML_ITEM_NX	Phrase number for the phrase identifying this item to the caller

Report Data Items Table

The Report Data Items table is a list of the data items contained in each available VoiceStats report. The master list of data items table is used to populate this table with only those data items that actually exist in each VoiceStats CMS report. The field descriptions for the Report Data Items table are shown in Table 6-17.

Table 6-17. VS_REP_DEF Table

Field Name	Description
VRD_REPORT_ID	ID for the report. This ID is the directory name where the report data is located.
VRD_REP_TYPE	Used to identify the type of report. It tells us the sorting factors, for example.
VRD_ITEM_ID	Unique ID for the data item.

Continued on next page

Table 6-17. VS_REP_DEF Table — *Continued*

Field Name	Description
VRD_ITEM_DESC	Description of the data item.
VRD_ITEM_TYPE	Identifies how to announce and how to sum if possible. Some possible values: AVERAGE, SECONDS, NUMBER
VRD_ITEM_NX	Phrase number for the phrase identifying this item to the caller.
VRD_ITEM _POS	Ordered position number of this item in the report.
VRD_ITEM_SIZE	Serves two purposes. It identifies sorting factor items and gives the size of the sorting factors. If the value is non-zero, the item is a sorting factor in the report, and the value of this field is the size or width of the item. If the value is 0, this is a non-sorting factor data item.

Troubleshooting

7

This chapter describes problems and their symptoms that you may encounter with the VoiceStats system. This chapter also describes the actions recommended to determine and resolve the problem.

Installation Issues

Problem: If the **/install** directory does not exist when using the **pkgadd** command to install the VoiceStats software, the following message is displayed:

```
mount: mount-point does not exist
mount of /dev/dsk/f0t failed
```

Solution: In this case, enter the following at the UNIX prompt **mkdir /install**

The **/install** directory is used as the mount point. Once you have created it, retry the **pkgadd** command to install the package.

Problem: The CMS installation fail on the CMS machine if it is an Enterprise and the INFORMIXSERVER environment variable is not set. The VoiceStats installation automatically sets INFORMIXSERVER to the CMS machine name found in **/opt/informix/etc/sqlhosts**.

Solution: If the installation is failing and the CMS is an Enterprise CMS, verify that the INFORMIXSERVER environment variable is set on the voice system.

1. Enter **INFORMIXSERVER=name** (CMS host name)
2. Enter **export INFORMIXSERVER**

Browser Interface Issues

If the VoiceStats site is not accessible through the web server, first check for the most obvious problems from the voice system (working as the server). They are:

1. Make sure the user ID and password are correct.
   - User cannot log in.

     The password used may be incorrect. The administrator can change the password. Even if the administrator does not know the password, they have permissions to change it.
   - Administrator cannot log in.

     Call in to the phone VoiceStats administration script and test the password.
2. Check to make sure the server is up.
   a. At the voice system UNIX prompt, enter **ps_server**

      This should give you the status of the httpd process.

      OR

   b. Enter **ps -ef | grep httpd**

      If an **httpd** process is not displayed on the screen, the process is not running.

   c. Enter **start_apache**
3. Make sure the voice system is in run level 4. Enter **who -r**
4. Check the network to ensure it is up and working.

   At the voice system UNIX prompt, use the **ping** command to reach the CMS machine.

   If the ping fails, check with your network administration group and have them trace the problem.
5. Check the server IP address and make sure it is correct.
6. If you are using a browser other than Netscape Navigator (versions 2, 3, and 4) or Internet Explorer (versions 2, 3, and 4), you may have browser compatibility issues and should check with the network administrator.

If you continue to have web interface problems, complete these steps:

1. At the voice system UNIX prompt, enter **cd /$WEBVRU/logs**
2. Enter **tail access_log**
3. Enter **tail error_log**

   These logs may show why you were not successful in reaching the site. If nothing shows up in either log, the problem is occurring before you reach the server. Check with your network administrator to see if they can track the problem and correct it.
4. Try using the IP address instead of the machine name to access the web server. If this works the problem may be name resolution within the network and you should check with your network administrator to find and resolve the problem.

CMS Access Issues

The following sections describe problems in accessing CMS information.

General Access Issues

This section covers the general troubleshooting procedures. Report specific issues are covered in the following sections.

1. Log into the CMS.
2. Enter **ps -ef | grep cms1_stub**
3. If more than one process is running, kill additional processes until only one CMS process is running.

   Enter **kill -9 *PID***

   PID is the process ID for the **cms1_stub** process you are trying to kill.

   Depending on whether you are monitoring splits, skills, or VDNs, one of the following processes are executed from within the **vs_runreal** process:

   - **vs-spl** (if you are monitoring splits)
   - **vs-skl** (if you are monitoring skills)
   - **vs-vdn** (If you are monitoring VDNs)

   The **vs_runreal** process should always be running.
4. Enter **ps -ef | grep vs_runreal** to verify that the process vs_runreal is running.

   If no process is running, call your support number and report the problem to Lucent —1-800-344-9670 or 1-800-242-2121.

Cannot Access Real-Time Data

The information in this section applies to access problems through both the web interface and the telephone interface.

If you cannot access real-time data, complete the following procedure:

1. Make sure the **cms1dip** is running.

   Enter **ps -ef | grep cms1dip**
2. If there are no processes running, enter **cms1_on**
3. Enter **cd /$VSTATS/logs**
4. Enter **pg access.out**

   See if rcp is disabled.
5. Enter **pg ch_new.out**
6. If the requested data is not found:
   a. Login to the CMS with VoiceStats login ID.
   b. Use the ping command to make sure the machines are communicating.
   c. Check the **access.out** file for errors.
   d. Make sure **rexec** and **rcp** are enabled.

Busy System

The **check_for_new** script is used to check for new data every 30 seconds (default time). You can change this time to increase it if you are running VoiceStats on a very busy voice system.

The **check_for_new** file is located in the **/usr/add-on/vstats/utils** directory. Edit the file and change the SLEEP FOR FILES time parameter to increase the interval.

Cannot Access Cumulative Data

This information in this section applies to access problems through both the web interface and the telephone interface.

Problem: You get a long pause when accessing cumulative data via the telephone interface.

Solution: The pause is normal and due to the search for the data.

Problem: You do not hear the expected data.

Solution:

1. Check the validity of the data requested.
2. Check the user profile.

   NOTE:
   The default user profile is used If a custom profile has not been defined for the user.

3. Check the **cms1d1.out** and **access.out** logs located in the **$VSTATS/logs** directory on the voice system for error messages.

Cannot Access Historical Data

This information in this section applies to access problems through both the web interface and the telephone interface.

Problem: You get a long pause when accessing cumulative data via the telephone interface.

Solution: The pause is normal and due to the search for the data.

Problem: You do not hear the expected data.

Solution:

1. Check the validity of the data requested.
2. Check the user profile.

   NOTE:
   The default user profile is used If a custom profile has not been defined for the user.

3. Check the **cms1d1.out** and **access.out** logs located in the **$VSTATS/logs** directory on the voice system for error messages.

Callers are Receiving a Busy Signal

If the callers receive busy signals when trying to access the VoiceStats application:

1. Check that the switch is setup correctly.
2. Check that the channels are all in service.

A busy signal may indicate that you need to assign the application to more channels.

Parameters Worksheet

A

This appendix provides worksheets that are designed to help you determine and record the various parameters for CMS, WebVRU, and VoiceStats installation.

Use this information in conjunction with the installation procedures in Chapter 3, "Installing VoiceStats".

Table A-1. CMS Installation

Parameter	Default Value	Recommendation	Desired Value
CMS System Name	None	Enter CMS System name	
CVIS System Name	None	Enter CVIS System name	
Real-time Reports	None	Choose splits, skills, VDNs or any combination of the three based on monitoring requirements for your system.	
CMS Inter-hour Reporting Interval	None	Select 15, 30, or 60 minutes based on how often you would like the reports to be updated.	

Table A-2. WebVRU Installation

Parameter	Default Value	Recommendation	Desired Value
InFocus Login ID	None	Applies only if InFocus is installed on the system. If so, enter ‘daily’.	
InFocus Password	None	Applies only if InFocus is installed on the system. If so, enter ‘daily’.	

Table A-3. VoiceStats Installation

Parameter	Default Value	Recommendation	Desired Value
CMS System Name for cms1dip	None	Enter CMS system name (same as under CMS installation)	
Command for cms1dip	/usr/add-on/vstats/cms1_stub	Use the default value	
Channel to run vs_inf_req scripts	None	Enter channel number(s) used by callers for VoiceStats system or enter non-existent channel number if unsure.	
Password for vstats login	None	Enter 878287 (vstats)	
Reenter password for vstats login	None	Enter 878287 (vstats)	

Glossary

A

Abandoned Calls
Total number of queued calls for each split/skill that abandoned before an agent answered. Does not include direct agent calls. Database Item: ACDTIME/ACDCALLS (csplit)

Access DIP
The DIP that accesses real-time CMS data. This DIP is called **vs_accessdip**.

ACD
automatic call distribution

ACD name
Name or number of the ACD selected for this report. Database Item: ACD (csplit)

ACD calls
Queued ACD calls to the split/skill that were answered by an agent. Does not include direct agent calls. Database Item: ACDCALLS (csplit)

Agents: ACD Calls
Total number of agents connected to inbound and outbound ACD calls in each split/skill. Does not include direct agent calls. Database Item: ONACD (cagent)

Agents: After Call Work
Number of agents who are in the after call work mode for each split/skill. Database Item: INACW (cagent)

Agents: Available
Total number of agents who are available to receive ACD calls in this split/skill. Database Item: AVAILABLE (cagent)

Agents: Ringing
Current number of agents that are available and have split/skill ACD calls for this split/skill ringing. Database Item: AGINRING (cagent)

Agents: Staffed
Total number of agents staffed into this split/skill. Database Item: STAFFED (cagent)

Apache
A public domain HTTP server for UNIX. Provides HTTP services in sync with current HTTP standards.

ASA
average speed of answer

AVG_ACD_TALK_TIME

AVG_ANSWER_SPEED
Average time calls waited in queue or ringing before an agent answered. Does not include direct agent calls. Database Item: ANSTIME/ACDCALLS (csplit)

B

Browser
A nontechnical term applied to programs used primarily to view pages in the web. Internet Explorer and Netscape Navigator are the browsers VoiceStats has been certified to work with.

C

Callflow
A pictorial view of the telephone interface for the system and user administration scripts.

Calls Offered
Number of calls queued to this split/skill. Database Item: CALLSOFFERED (csplit)

Calls Waiting
The number of ACD calls waiting to be answered, in queue and ringing. Does not include direct agent calls. Database Item: INQUEUE+INRING (csplit)

CMS
call management system

CMS DIP
This DIP is used to access cumulative and historical CMS data by running the specified report remotely on the CMS. This DIP is called cms1dip

CONVERSANT
Lucent Technologies interactive voice response system.

CRON
A UNIX process that schedules jobs to be run at specific times.

Cumulative
A summarization of information from a specified start time, i. e,. 8AM, midnight, etc., up to the current time. This data is used for the Real-time Cumulative report.

cvis_menu
The standard CONVERSANT interface to CONVERSANT Script Builder scripts.

D

DID
direct inward dial

DIP
data interface process

Direct Agent Calls Waiting
Current number of direct agent calls waiting in queue or ringing. Database Item: DA_ INQUEUE+DA_INRING (csplit)

E

EAS
Expert Agent Selection. This environment groups agents according to skills and skill levels.

F

Favorites
A list of ACD, Split, Skill, VDN, chosen by the user as the areas from which they would most like data information.

H

Historical Reports
Reports on past ACD data for various agent, split, skill, or VDN activities. These reports consist of summary and percentage information on the data items chosen. There are three types of reports available. They are: Daily - reports on data for any 24 hour period since the inception of CMS reporting; Weekly - the user can request information from the previous week; Monthly - the user enters the month and year of desired data information.

HTML
hypertext markup language

HTTP
hypertext transfer protocol

I

internet
Any collection of separate physical networks, interconnected by a common protocol, to form a single logical network.

intranet
A collection of separate physical networks, interconnected by a common protocol, forming a single logical network that is local and usually restricted to an organization. Web Server is the intranet server provided with VoiceStats.

N

NX Number
The internal number that identifies a CONVERSANT phrase.

O

OCW
oldest call waiting

Oldest Call Waiting
The number of seconds the oldest call in queue or ringing has waited. Does not include direct agent calls. Database Item: DA_INQUEUE+DA_INRING (csplit)

Oracle
The relational database management system used on the CONVERSANT.

P

% Answered Within Service Level ANS_SL
Percentage of split/skill ACD calls that were answered by an agent within a predefined acceptable service level. Does not include direct agent calls. Database Item: 100*(ACCEPTABLE/CALLOFFERED) (csplit)

PIN
Used by the caller to access the touch tone or web server VoiceStats menus.

R

Real-time Reports
Report on current ACD activity on agents, splits, skills, and VDNs. There are two types of real-time reports through VoiceStats. They are: real-time snapshot - consists of data from the current hourly interval, which can be broken down into as little as 15 minute increments; real-time cumulative - consists of data from the current hourly interval, however, in this report is inclusive of a range of requested hours, i. e., 8AM to current time.

S

Security Level
The Level a user is assigned to determine what level of administration they are allowed to do. A Level 1 user is allowed to administer their own “favorites” list, and profile. A Level 2 user is only allowed to administer their own profile through the web interface. The ACD, Skill, Split, or VDN they are allowed to hear information on is determined by the system administrator.

Skill
Agents are selected by depth of subject knowledge. A skill group is not location specific because in an EAS environment the agent ID is a virtual location, not a physical port location.

Snapshot
A picture of the administration screens used for the web interfaces.

Split
Agents are not required to have or maintain a knowledge of a specific topic, or product. These agents are grouped by a community of interest (such as Accounting, Benefits, etc.). Agents in a split are tied to a physical location (the location of their phone). Database Item: SPLIT (csplit).

Standard Speech
The standard speech phrases for a CONVERSANT script. For example, the letters of the alphabet are all standard speech.

U

URL
The address used to access the web browser interface.

User
A user is any person allowed access to VoiceStats information. The users are not restricted to strictly CMS users. Supervisors are certainly part of the user community, however, users can be allowed access to certain ACDs, Splits, Skills, and VDNs, through the phone interface without concern of security issues.

User Interfaces
A touch tone or web server menu interface to VoiceStats.

V

VDN
vector directory number

VSTATS
VoiceStats

VoiceStats
VoiceStats is a software package that facilitates the quick and easy access of crucial Call Center information that is often only available to supervisors in a printed report format or through a limited number of direct terminals. This data is made available through touch tone and web interfaces.

W

WebVRU
The web interface used by VoiceStats for administration by both the system administrator and the users.

web server
An application that provides HTTP services to clients on the web. Apache is the server used by VoiceStats.

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