



Uptivity Speech Analytics Administration Guide, v5.4

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Reference Guide

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Revision History		
Revision	Change Description	Effective Date
0	<p>Added section clarifying Analytics tag deletion:</p> <p>Note If a tag must be deleted best practice is to disable the tag, wait 10 minutes and then delete that tag. The 10minute wait will allow the tag to clear the system and not be attributed during the delete process causing a reporting error.</p> <p>Be aware deleting a tag deletes all the phrase records generated using that tag from the database. This action can drastically affect reporting. Reports that depend on historic information and comparisons will be unreliable, if that tag has been applied.</p>	2014-04-30

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Introduction

This document is for Uptivity Speech Analytics system administrators, supervisors, and managers, and assumes a basic level of familiarity with Discover, the PBX integration in use, the Windows OS, and the network in place at the customer site. It reviews:

- Requirements, installation, and configuration information for administrators.
- Indexing and search settings that can be configured by either administrators or users. These tasks require users to understand the design of their telephone network such as gate and device usage, SQL search statements, the basic theory of speech analytics, and the information needed by supervisors and management.
- Reports generated from the speech analytics data for call center supervisors, management, and clients.

For additional information, see the Uptivity document *Developing an Analytics Program*.

Notes

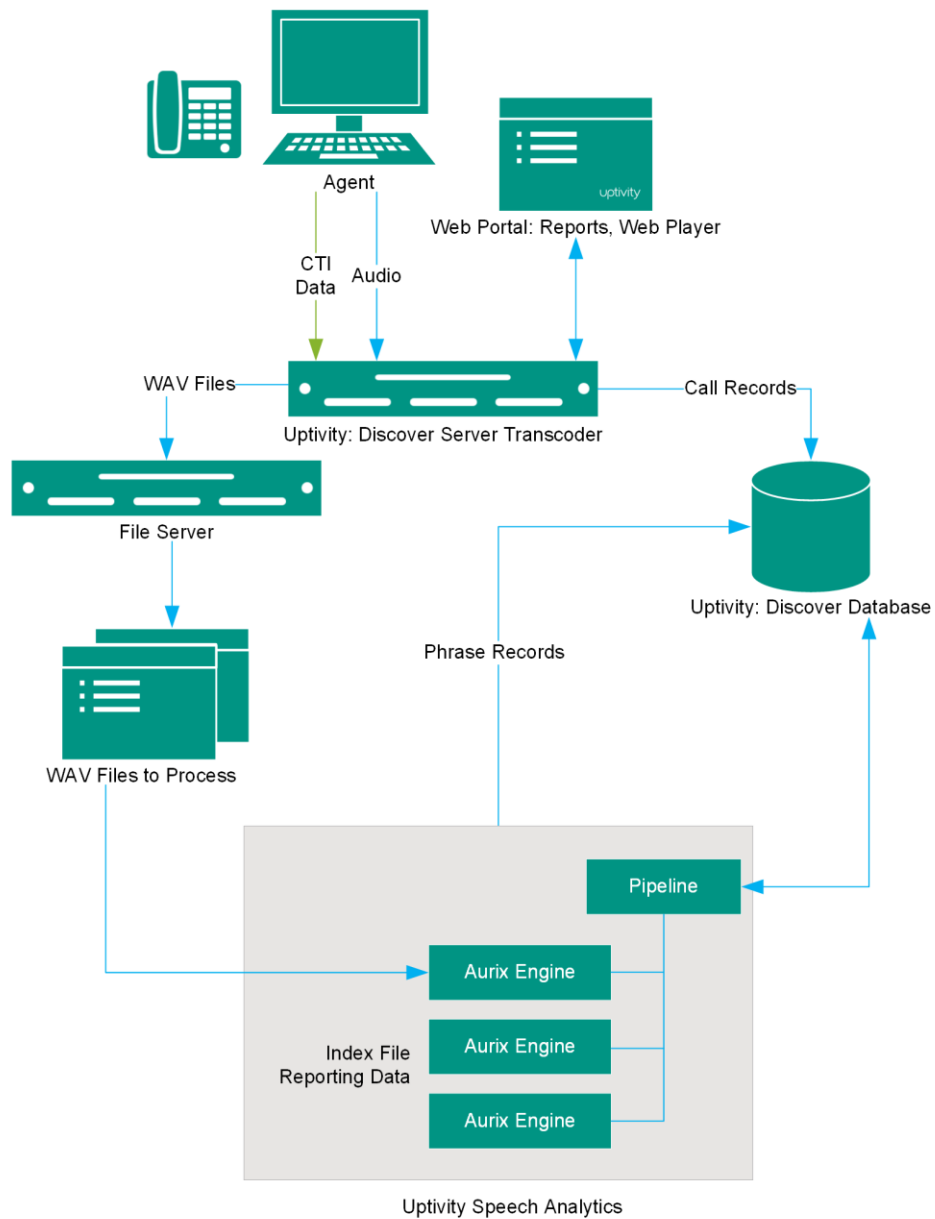
Discover allows administrators to customize field names and terminology in the Web Portal to fit your unique environment. Therefore, screen examples and field names used in this manual may differ from those seen in your implementation.

Prior to v5.4 of the Discover Software Suite, Uptivity Speech Analytics was known as cc: Analytics.

Product Technical Overview

Uptivity Speech Analytics is a phonetics-based speech analytics solution that identifies phonemes (i.e., the smallest unit of sound) in call recordings. United States English speech consists of 40 phonemes. United Kingdom English speech consists of 44 phonemes. The five phonemes "g r e i d ei" sound like "Grade A" or "Grey Day". Speech analytics compares the phonemes to search key words and phrases and generates reports based on the search results.

This diagram illustrates the product's components and their interactions.



Component	Function
Discover Server	<p>Includes the Discover recorder that records the audio and creates the raw call audio files. Manages the writing of files to the file server. Creates call record files in the database.</p> <p>The Transcoder creates two call audio WAV files from the raw files. One file is used for QA and reporting; the other file is used for speech analytics.</p>
Discover Database	<p>Stores call records associated with call audio WAV files. Used to track which call audio files are ready for processing by the speech search engine and which ones have been processed.</p> <p>Stores phrase records created by the speech search engine and associated with a call record. Phrase records contain:</p> <ul style="list-style-type: none"> • Call recording ID • Tag ID • Phrase matched • Confidence of match • Start time of phrase in call record • End time of phrase in call record • Whether call audio file search/indexing has been started or completed
File Server	Location of call audio WAV files with content that is analyzed.
Uptivity Speech Analytics Server	<p>Pipeline component polls the database for new call audio files for processing. Selects the new call audio files to be indexed. Calls are checked only once to determine if they should be indexed. If the call selection criteria changes, older calls that were already checked will not be rechecked. The call selection, indexing, and searching processes are continuous. During periods of heavier call traffic, there will be more audio files waiting to be indexed and searched, and they will be processed during periods of lower call traffic.</p> <p>Manages workloads of speech search engines.</p>
Aurix Speech Search Engine	<p>Indexes (i.e., translates) call audio WAV files' speech into phonemes and writes the phonemes to an index file. One index file is created for each audio file per language. For example, if calls include both US English and Mexican Spanish, the engine can be configured to generate an index file for each language.</p> <p>Searches index files for analytic phrase tags and creates phrase records in the database.</p> <p>Call audio files are translated and indexed only once. If the phrase analytic tags are changed after the first search, the search engine searches the index files, not the call audio files.</p> <p>If the indexing/searching process is interrupted, the engine starts over on the audio file on which it was working when the interruption occurred.</p>

Component	Function
Web Portal	Speech Analytics is administered via the Discover Web Portal. The portal is also used for reporting and using the Web Player.
Reports	Reports are generated from phrase records. Reports are managed and viewed through the Discover Web Portal. The Analytics server is also managed through the portal.
Web Player	Analytics data can be viewed by supervisors and managers when they play call recordings through the Discover Web Player. Call recordings can be sorted using an Analytics Tag Cloud. Tags, confidence levels, and phrases appear with call recordings when they are replayed.

Languages Supported

Valid language codes are:

- 1033 – U.S. English
- 2057 – U.K. English
- 2058 – Mexico Spanish

The appropriate language packs and audio models are installed during the installation process.

Stereo Audio Recordings

Stereo audio recordings greatly improve the performance of the analytics engine, as crosstalk (parties talking at the same time) can be isolated. Within a stereo audio recording, the caller's audio is recorded on one discreet channel for the audio file, and the PBX audio is stored on the other channel. This allows the recording engine to separate the crosstalk.

Stereo recordings are available on all Uptivity Recording integrations with the exception of:

- Avaya DMCC including Single Step Conference, Multiple Registration, and Service Observe
- ShoreTel TAPI WAV
- eOn Service Observe
- Any recording method using a service observe code via T1

Exception Reporting

Speech Analytics can identify what is and what is not said. The exception reports track what is not said. Exception reporting can generate a lot of data depending on the number of speech tags and phrases used and whether agents do or do not use the tags. An accurate estimate of the potential size of the data collected is impossible. Therefore, exception reporting is not enabled by default and should be enabled only after consulting with an Uptivity Solution Engineer.

This scenario illustrates the difference in data collected. A customer has 1,000 calls per day. The customer uses 30 tags.

- 3 tags are found in each call
- 27 tags are not found in any calls.
- Without exception reporting 3,000 tag records are created. With exception reporting an additional 27,000 tag records are created for exceptions.

Requirements

Hardware

Hardware requirements vary depending on the number of calls processed and data storage and retention needs. Hardware specifications are determined by the Uptivity Sales Engineering team during the sales process.

General hardware guidelines include:

- Speech Analytics *must* be installed on its own server. This requirement is due to the CPU usage required to index and analyze.
- A separate file server is usually needed for storing the call audio files and index files.
- Discover is installed on a different server; the database, Web Portal, reporting, and other services are installed and operate from that server.
- For optimal data transfer rates, Speech Analytics should be placed on the same network switch where the Discover audio files are stored.

Software

Uptivity Speech Analytics requires the following software:

- Windows Server 2008
- Microsoft SQL Server 2008 with SQL Server Reporting Services. R2 requires SP1. Microsoft SQL Server 2012 SP1. Speech Analytics does not support SQL Express.
- Languages require the appropriate language pack and audio models to be installed as part of the installation process.

License

A Speech Analytics license must be purchased in addition to the Discover license to enable the product features.

Install and Configure Speech Analytics Server

Windows Server Tasks

Perform these tasks on the Windows server hosting Speech Analytics.

Installation

Note See the *Discover by Uptivity Installation Guide* for additional information.

Speech Analytics installation uses Discover installation files. During this installation setup process, you must specify information for the server hosting Discover, such as IP address and database name. Have this information available before you start the installation. The Uptivity database must be installed prior to installing Speech Analytics.

To install Speech Analytics Server:

1. Run the Uptivity server setup file.
2. On the **Custom Setup** screen, select **Analytics** under **Server Modules**.
3. Select the languages that the speech search engines will use and click **Next**.
4. Complete the remaining steps of the installer.
5. Click **Finish**.

Register Service

Open a Command Prompt window on the Windows server. Change to the \Recorder directory where the Uptivity software was installed and run the following command:

```
cc_analytics.exe -svcinst -autostart
```

If successful, the Command Prompt will print the message "Service Installed." You will be returned to the working directory prompt.

Configure INI

The server's cc_analytics.ini file must be created manually during the installation process. It must be placed in the same directory as the executable. The INI filename should always match the name of the executable it configures. Following is an example output of a configuration file, with important settings detailed on the right. . Any settings in the INI file which are not included in the list below should be deleted.

[settings]	
ident=1	Ident of the analytics module. Only needed in environments with multiple analytics servers.
uncmapremote0=\\servername\path uncmaplocal0=e:\path	Remote/local mapping. Only needed if analytics audio files are located on the analytics server itself (rather than in the regular call location) as the analytics path in the Transcoder settings will be a UNC path.
purgedays=5	Days until .idx analytics file are purged. This is needed if the analytics audio files are located on the analytics server itself. If the files are in the regular call location, the normal archive action will handle the .idx files.
maxblockpercentage=75	Maximum percentage of blocked threads before the analytics module will stop and restart. Setting this too low can cause the module to restart more often.
relatedCoreList=1,2,3	Core Ident(s) that the analytics module will analyze calls for. Only needed in multiple analytics server environments (see Ident of the analytics module settings above).
commandtimeout=	Sets the amount of time to wait (in seconds) before timing out commands. Useful in environments with high number of request timeouts or latency.
settagpresence=false	Do NOT change this setting unless specifically told to do so by an Uptivity Solution Engineer. This setting controls creation of data for the exception reports. Set to <code>true</code> to enable.

[pipeline]	
tagreadfrequencysec=180	How frequently in seconds tags are re-read. Setting this too low can cause a high number of database hits.
maxqueue size=10	Controls the number of call audio recordings that can be in the processing queue at one time. This should be set to 2 or 3 times the number of CPU cores.
workthreaddelay=30000	Time to sleep (in milliseconds) between querying for new items/items to reprocess. Setting this too low can cause a high number of database hits.
[aurix]	
analyzerthreads=4	Set this value to the host machine's number of CPU cores
languagecode=1033,2058	Language codes to be used for analytics processing. Only needed if using more than one language.
localWorkDirectory=d:\aurix_temp	Directory to use for local work. This is only needed if the analytics audio files are located on another server (rather than on the analytics server itself -- see Remote/local mapping settings above). When using this setting, the drive must be a local drive and should not be used for any other purpose than analytics.

Speech Analytics uses the Discover database. In the typical installation, the Discover `settings.ini` file contains the necessary database settings and is created one directory above the `cc_analytics.exe` or in `c:\program files\callcopy`.

Web Portal Tasks

Create a Server Node

The Analytics machine must be added as a node in the Discover Web Portal. See the *Discover by Uptivity Administration Manual* for additional details on this topic and the Comet Daemon.

To add a Server Node:

1. Click the **Administration** tab and expand **System Settings** in the left navigation menu.
2. Click **Server Nodes**.
3. Click **Add Node**.
4. Enter a meaningful **Name** for the Server Node.
5. Enter the hostname or IP address of the Server Node.
6. Click **Save Node**.

Edit the CometDaemon

When a server node is created, a corresponding CometDaemon is created. The CometDaemon manages connections between the Discover Service Manager and the Discover services on the node. Most of the settings are left at the default but a couple of items must be added manually.

To edit the CometDaemon:

1. Click the **Administration** tab and expand **Web Portal Settings** in the left navigation menu.
2. Click **CometDaemon**.
3. Click the triangle for a **Server Node/CometDaemon** to view the settings.
4. In the **Allowed Subnets Session** field, enter the IP address of the Web Portal used to access the node for this daemon.
5. Click **Save**.

Add the Application to the Service Manager

To add the Analytics service to the Service Manager:


1. Click the **Administration** tab and expand **Tools** in the left navigation menu.
2. Click **Service Manager**.
3. Click **Add Server**.
4. On the new server line, enter the Server Node **Name** and **IP Address**.
5. Click **Save**.
6. Expand the Server Node and click **Add Application**.
7. Under **Application**, enter the name of the service: cc_analytics.exe. It must be entered exactly as the name EXE.
8. Select **Yes** from the drop-down list under **Auto-Restart**.
9. Enter any applicable **Parameters**.
10. Click **Save**.

Configure the Transcoder

Note For additional information about the Transcoder, see the *Discover by Uptivity Administration Manual*.

The Transcoder must be configured to create WAV files for Speech Analytics. The Transcoder will create a very high quality stereo PCM WAV audio file for each recording in addition to the one created for QA and other needs. These instructions assume that a Transcoder has already been configured for normal recording file storage and that only these additional steps must be taken.

To edit the Transcoder:

1. Click the **Administration** tab and expand **Recorder Settings** in the left navigation menu.
2. Click **Transcoder**.
3. Click the  icon on the right side of the Transcoder to be used.
4. In the **Create Analytics** field, select **Yes** from the drop-down list.
5. In the **Analytics Keep Days** field, enter the number of days the WAV files will be retained on the file server.

Note This setting creates an archive action that will purge the files. Files can also be managed using the Discover Archiver, which offers more options.

6. In the **Analytic Storage Path** field, enter the UNC path name of the directory to which the WAV files will be written.
7. Click **Save**.

Recording Schedules

Call recording schedules have a Speech Analytics setting. This setting must be **Yes** in order for the stereo PCM WAV audio file to be created.

Security and Archiving

User Permission Settings

Depending on the tasks they will perform, Discover users must be granted these permissions:

- **Allow Analytics View:** Allows the user to view Speech Analytics data for calls played in the Web Player.
- **Allow Analytics Management:** Allows the user to manage Speech Analytics configuration
- **Allow Viewing Analytics Reports:** Allows the user to run and view reports on Speech Analytics.

Auditing

Auditing is managed through Discover and the Audit Report. See the *Discover by Uptivity Reporting Manual* for additional information.

Encryption

WAV and index files used by the speech search engine are not encrypted – if they were, the analytics engine would not be able to read them. Uptivity recommends that these files be stored on a volume that has been encrypted.

Archiving and Purging

An index file is a phonemic transcript of the call audio. Therefore, the WAV files created for the Speech Analytics engine can be purged after the index files are created. Uptivity recommends archiving the index files rather than purging them. If the index files are purged, they cannot be searched for new tag phrases. Index files are approximately one-third the size of the original WAV file.

The call audio WAV and index files can be archived using the Discover Archiver. If index files are archived and moved, then they will not be analyzed for speech tag phrases because the search engine will no longer have access to them. See the *Discover by Uptivity Administration Manual* for additional information.

Configure Indexing and Searching

Once installed, Speech Analytics must be configured for indexing and searching. These settings control what words and phrases the speech search engine looks for in the call audio WAV files. All of these tasks are performed in the Discover Web Portal.

Manage which Call Audio Files Are Analyzed

The speech search engine uses the analytic criterion items to identify the call audio files for indexing and searching. The list criteria are compared against call records in the Discover database, and the audio files associated with the selected records are translated and indexed. Call records are checked to be indexed only once.

All calls will be indexed and analyzed if no criteria are specified.

Ineffective call selection criteria can fail to identify all calls that should be analyzed or analyze calls that are not relevant to your effort. This situation can cause:

- Inaccurate (too low or too high) numbers reported for compliance, process improvement, and agent assessment.
- Missed opportunities for improvement or discovery.
- Unnecessarily slow indexing and searching of calls and generation of reports.

Call selection criteria can be based on:

- Language.
- Client (some clients may want information tracked or monitored while others do not).
- Purpose or function such as compliance, security, or quality training.

Call selection criteria and the number of criteria items depends on how agents are organized and how calls are directed over the telephony network. For example, all Mexican Spanish calls may be received via one queue or telephone number, or calls for a client that requires a script may be directed to specific agents.

One criteria item can be created and the expression text edited to select all needed call audio files. This approach can avoid the problem of having to check different items to see if the desired calls are being analyzed. Some users find it easier to manage multiple criteria items based on language, client, or purpose. The number of criteria items is one of many factors that affect indexing speed; there is no simple way to determine what effect the number may have on processing.

Create an Analytic Criteria Item

Available Identifiers :				
<i>recordid</i>	<i>agentid</i>	<i>deviceid</i>	<i>devicealias</i>	<i>ani</i>
<i>dnis</i>	<i>sgroup</i>	<i>gate</i>	<i>user1</i>	<i>user2</i>
<i>user3</i>	<i>user4</i>	<i>user5</i>	<i>user6</i>	<i>user7</i>
<i>user8</i>	<i>user9</i>	<i>user10</i>	<i>user11</i>	<i>user12</i>
<i>user13</i>	<i>user14</i>	<i>user15</i>		

To create or edit an analytic criteria item:

1. Click the **Administration** tab and then click the **Add-Ons** sub-tab.
2. Expand **Analytics** in the left navigation menu and click **Analytic Criterion List**.
3. Click **Add**.
4. Enter a meaningful **Name** for the list (you may have lists to identify calls for specific clients, products, or languages).
5. Select a **Language Code** from the drop-down list. This field is required.
6. Using **Available Identifiers**, enter an expression to specify audio file selection criteria. An expression can be no more than 255 characters.
7. Click **Save**.

For example, `deviceid!=0` would index all audio files. Similarly, `gate==1` would index all audio files for calls that came through Gate 1. You can combine multiple identifiers using the operators shown in the following table.

Notes

`recordid` represents the call record in the Discover database. Other identifiers may or may not be usable, depending on the data your telephony service passes to Discover when calls are recorded.

When ANI or DNIS are used in the criterion, the numerical value should be in quotes to make it a string comparison (`dnis=="6207"`) instead of an integer comparison (`dnis==6207`). Otherwise, if the DNIS is too long, the analytics engine may stall trying to store the integer and generate errors.

The `user#` identifiers are the custom terms specified on the Terminology page. Values specified on that page do not appear in the identifiers list, so you must know what terms match which user#. See the *Discover by Uptivity Administration Manual* for additional information on the Terminology page.

Conditional Operators		Boolean Operators	
==	Equal to	&&	Boolean AND operator
!=	Not equal to		Boolean OR operator
>	Greater than	()	Parenthesis used for grouping and precedence
<	Less than		
>=	Greater than or equal to		
<=	Less than or equal to		
' or "	Both single and double quotes can be used to signify strings in expressions.		

Edit or Delete Analytic Criteria Items

Analytic Criteria : Add			
Title	Language Code	Expression	Actions
Client: Orange	1033 - U.S. English	gate==1 agentid>=100	Edit Delete
Test 1	1033 - U.S. English	gate=='1' user4=='company ABC'	Edit Delete

Pages : 1 Go To Page : 1 of 1 Go

Analytic Criteria List items can be edited or deleted as needed, and the changes are applied to the call selection process after the change is made. Calls that were already checked for selection are not rechecked using the new criteria.












To edit an item:

- Click the **Edit** button and make the necessary changes, then click **Save**.

To delete an item:




- Click the **Delete** button, then click **OK**.

Manage Analytic Tag Groups

Analytic Tag Group List		Add
Name		
Geography	 	
Lead source	 	
Product Interest	 	
Property information	 	
Scheduling	 	
Script Adherence	 	

The Speech Category Summary and Speech Category Trending reports use tag groups to search for and organize data. Other reports use analytic tag groups to organize how tags appear on reports.

To view tag groups:

- Click the **Administration** tab and then click the **Add-Ons** sub-tab. Expand **Analytics** in the left navigation menu and then click **Analytic Tag Groups**. From this list, you can:
 - Click the **Add** button to create a new group, then enter a name for the group and click the  icon.
 - Click the  icon to change the name of a group.
 - Click the  icon to delete a group. Deleting a group does not affect the tags in that group. However, if a report is based on a group, then that report will no longer get data.

Manage Analytic Tags

Analytic tags specify the words and phrases the speech search engine will look for in index files. The search process is continuous as long as new calls and index files are created. After they are created, analytic tags can be enabled/disabled but not edited.

Analytic tags also populate the Analytic Tag Cloud in the Discover Web Player. If you create a large number of call tags, or one particular tag occurs very frequently, the Tag Cloud may not display correctly. As a best practice, Uptivity recommends nightly indexing of the SQL tag data tables.

Analytic Tag List				
Name	Start Date	End Date	Phrases	Enabled
Company ABC Name	8/28/2011	9/3/2011	ABC;Absolute Brilli..	Yes
Geography	8/25/2011	8/25/2011	coral springs;pompan..	Yes
Lead source	8/25/2011	8/25/2011	how did you hear abo..	Yes
Product Interest	8/25/2011	8/25/2011	free estimate;save s..	Yes
Product Name	8/28/2011	9/3/2011	Quest;tablet;ellipsi..	Yes
Property information	8/25/2011	8/25/2011	two story;upstairs,t..	Yes
Scheduling	8/25/2011	8/25/2011	weekend;morning;aft..	Yes
Script Adherence	8/25/2011	8/25/2011	save with insulation..	Yes

Create a Tag

To create a tag:

1. Click the **Administration** tab and then click the **Add-Ons** sub-tab.
2. Expand **Analytics** in the left navigation menu and then click **Analytic Tag List**.
3. Click **Add**.
4. Configure the Analytic Tag Settings
5. Click **Save**.

Analytic Tag Settings

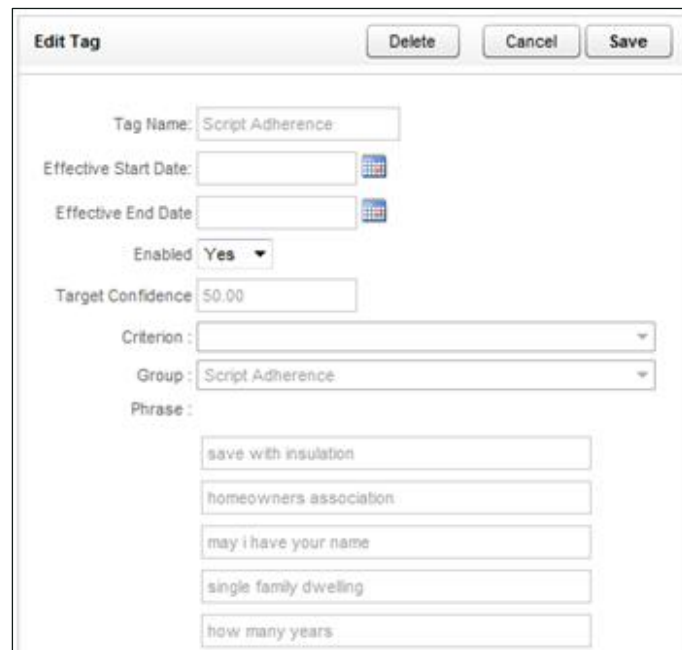
- **Tag Name:** Names should reflect the words being searched or the purpose of the search.
- **Effective Start/End Dates:** Enter Effective Start/End Dates to have the engine search in index files for phrases in calls that occurred during an interval of time. For example, a client may have a timed promotion and wants calls for that promotion analyzed. If no Start/End Dates are specified, all index files are searched. An alternative is to Enable/Disable a tag after it is created. If no Start/End Dates are entered, the tag can be enabled/disabled forever.
- **Target Confidence:** Confidence level is a numeric percentage that represents the likelihood the phrase identified actually matches the searched-for phrase. The speech search engine assigns a confidence level to every phrase it finds. If a phrase's confidence level is below the target, it is not included in the results.
- **Criterion:** Optional field. If no criterion is specified from the drop-down list, the tag will be applied to all calls analyzed.

Configure Indexing and Searching

- **Group:** Optional field. Select a group from the Tag Groups if this tag will be associated with other tags. If no group is specified, the tag will not appear on some reports.
- **Phrases:** Enter a search phrase. Click **Add** to enter additional phrases. Click the red X to delete a phrase. This field is limited to 255 characters including spaces. If you need additional phrases, you must create additional tags.

Note The graphic below has approximately 230 characters. You can use Microsoft Word's Word Count function to identify the number of characters.

Enable/Disable/Delete a Tag



After a tag has been created, it can be enabled, disabled, or deleted. To perform these tasks:

- Click the **Administration** tab and then click the **Add-Ons** sub-tab. Expand **Analytics** in the left navigation menu and then click **Analytic Tag List**. Double-click the desired tag.

Uptivity recommends you do *not* delete tags in most cases. Deleting a tag deletes from the database all the phrase records generated using that tag. This action can drastically affect reporting. Reports that depend on historic information and comparisons will be unreliable. Generally, tags should be disabled rather than deleted.

If the tag is needed sometimes but not always, it should be Enabled/Disabled.

Note If a tag must be deleted best practice is to disable the tag, wait 10 minutes and then delete that tag. The 10minute wait will allow the tag to clear the system and not be attributed during the delete process causing a reporting error.

Be aware deleting a tag deletes all the phrase records generated using that tag from the database. This action can drastically affect reporting. Reports that depend on historic information and comparisons will be unreliable, if that tag has been applied.

Index File Naming Conventions

Index files are named using these conventions:

- Files using US English: *audiofilename.idx*
- All others: *audiofilename.countrycode.idx*

Analytics Reporting

Speech Analytics reports are accessed through the Reporting tab of the Discover Web Portal. Ad hoc reports can also be created for Speech Analytics from this tab. See the *Discover by Uptivity Reporting Manual* for additional information. To view available reports:

- Click the **Reporting** tab and expand **Printable Reports** in the left navigation menu, then click **Analytics Reporting**.

The Analytics Reporting page lists the types of reports that can be created. The Date Created column shows the date that the template for the report type was created in the system.

Analytics Reporting		
Filter:	<input type="text"/>	<input type="button" value="Search"/>
Report	Description	Date Created
Analytics Speech Tag Frequency	The Frequency with which Speech Tags Appear Over a Time Interval	5/24/2011
Speech Category Summary	Overview of the frequency with which speech tags in particular categories appear in a time interval.	5/24/2011
Speech Category Trending Report	Displays the speech category tag counts and how they change over time.	5/24/2011
Speech Tag Detail	Details of the Calls in Which a Particular Speech Tags Appear	5/24/2011

Reporting Criteria

You can use these criteria to specify the data included in a report. The criteria available vary by report.

- **Start/End Date:** Searched calls will have occurred during this date range.
- **Category List, Tag List, Tag Categories:** Tag groups
- **Tag Category, Speech Tag, Speech Tags/Tags:** Speech search tags
- **Tag/Tag Text:** Phrases in analytic tags.
- **Tag Status:** Enabled/Disabled.
- **Agents**
- **Agent Status/Status:** Active/Inactive.
- **Groups:** Discover Groups.
- **Skill Group/Skill Group List**
- **Gates**
- **Caller's Phone#**
- **Dialed Phone#**
- **Reporting Interval:** Daily, Weekly, Monthly or Yearly intervals.

Analytics Speech Tag Frequency Report

This report shows the frequency that speech tag phrases/text occur over a time interval.

- **Tag Count:** Number of times a tag text/phrase was identified. Tag Count may be greater than Number (#) Calls because a tag may occur multiple times in a call.
- **# Calls:** Number of calls in which a tag phrase occurred at least once.
- **Observed Percentage:** Percentage of calls during the specified time frame in which the tag phrase occurred.
- **Daily Occurrence:** Average number of times a tag phrase occurred per day in the specified time frame.
- **Average Confidence:** The speech search engine records a confidence level for each tag it identifies. This number averages the confidence for each tag record.



Analytics Speech Tag Frequency

For Monday, July 25, 2011 to Thursday, August 25, 2011

Tag Name	Tag Text	Tag Count	# Calls	Observed Percentage	Daily Occurance	Avg. Confidence
Script Adherence	homeowners association	5497	5497	100.0%	171.78	78.96
Script Adherence	single family dwelling	3349	3349	60.9%	104.66	78.01
Lead source	service magic	2205	2205	40.1%	68.91	80.01
Scheduling	weekend	2192	2192	39.9%	68.50	59.06
Scheduling	morning	1101	1101	20.0%	34.41	53.62
Lead source	coupon	1101	1101	20.0%	34.41	56.83
Product Interest	free insulation upgrade	1101	1101	20.0%	34.41	50.34
Product Interest	save some money	1101	1101	20.0%	34.41	78.70
Geography	pompano beach	1101	1101	20.0%	34.41	59.33
Script Adherence	thank you for calling	1100	1100	20.0%	34.38	67.48
Property information	total square footage	1047	1047	19.0%	32.72	62.36
Scheduling	Saturday	1047	1047	19.0%	32.72	50.29
Lead source	online form	1047	1047	19.0%	32.72	51.29
Product Interest	injection foam	1047	1047	19.0%	32.72	100.00

Speech Category Summary Report

This report shows an overview of the frequency with which a speech tag group/category's speech tags appear in a time interval.

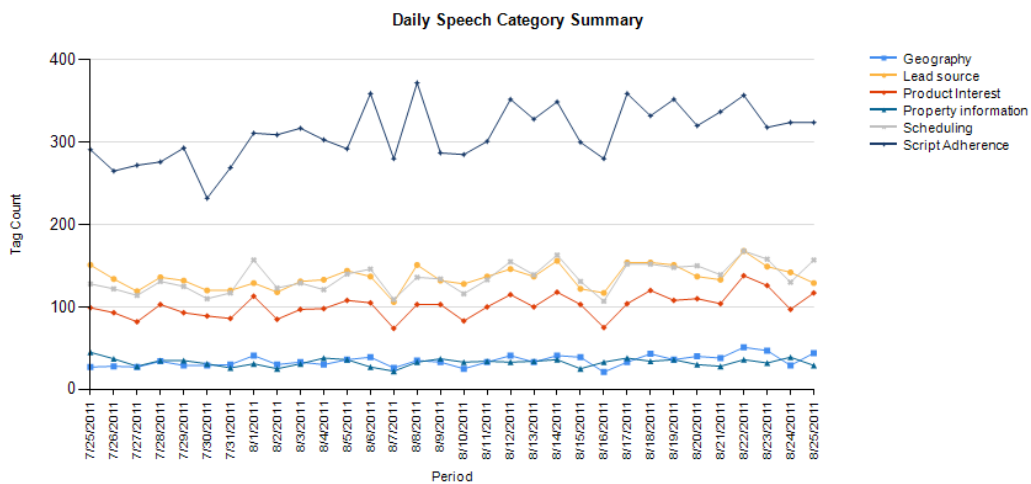
- **Tag Category:** Tag Group.
- **Tags Observe:** Number of times a tag was identified. Tag Count may be greater than Number (#) Calls because a tag may occur multiple times in a call. In the sample report shown, Script Adherence tag occurred 9946 times. In the Analytics Speech Tag Frequency sample report, Script Adherence tag phrases occurred 5497 ('homeowners association'), 3349 ('single family dwelling'), and 1100 ('thank you for calling') for a total of 9946 occurrences.
- **Calls with Tags:** Number of calls in which a tag phrase occurred at least once.
- **Observed Percentage:** Percentage of total calls selected for indexing during the specified time frame in which the tag occurred.
- **Daily Occurrence:** Average number of times a tag occurred per day in the specified time frame.
- **Average Confidence:** The speech search engine records a confidence level for each tag it identifies. This number averages the confidence for each tag record.



Daily Speech Category Summary

For Period Encompassing Monday, July 25, 2011 to Thursday, August 25, 2011

Selected Agent Status: Active



Tag Category	Tags Observed	Calls With Tag	Observed Percentage	Daily Occurance	Avg. Tag Confidence
Geography	1101	1101	20.0%	34.41	59.33
Lead source	4353	3306	60.1%	136.03	67.26
Product Interest	3249	2148	39.1%	101.53	76.10
Property information	1047	1047	19.0%	32.72	62.36
Scheduling	4340	3239	58.9%	135.63	55.54
Script Adherence	9946	5497	100.0%	310.81	77.35

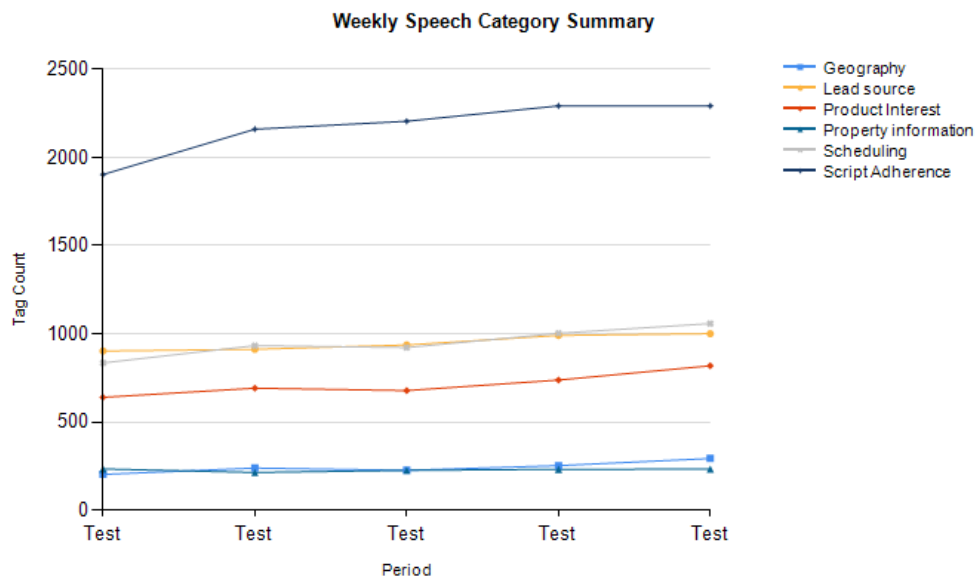
Speech Category Trending Report

This report shows, by category and by time period, the frequency that speech tags occur.

- **Period:** A day, week, month or other period.
- **Tag Count:** Number of times a speech tag occurred in analyzed calls for that period.
- **Total Calls Tagged:** Number of calls selected for speech analytics indexing for a time period.
- **Observed Percentage:** Percentage of total calls selected for indexing during the specified time frame in which the tag occurred.

Weekly Speech Category Trending Report

For Period Encompassing Monday, July 25, 2011 to Thursday, August 25, 2011



Tag Category: Geography			
Period	Tag Count	Total Calls Tagged	Observed Percentage
10/10/2011	293	1275	23.0%
10/10/2011	253	1267	20.0%
10/10/2011	226	1204	18.8%
10/10/2011	239	1184	20.2%
10/10/2011	203	1068	19.0%
	1214	5998	20.2%

Tag Category: Lead source			
Period	Tag Count	Total Calls Tagged	Observed Percentage
10/10/2011	768	1275	60.2%
10/10/2011	759	1267	59.9%
10/10/2011	711	1204	59.1%
10/10/2011	698	1184	59.0%
10/10/2011	669	1068	62.6%
	3605	5998	60.1%

Speech Tag Detail Report

This report shows details of the calls in which particular speech tags appear.



Speech Tag Detail

For Monday, July 25, 2011 to Thursday, August 25, 2011

Selected Tag Text:

Record ID: 42104	Category: Script Adherence	Tag Text: single family dwelling
Agent: ZAMORA, MABLE	ANI: 6142631837	DNIS: 8881234567
Time: 8/25/2011 11:09 PM	Duration: 00:03:57	Gate: Customer Care
Section Start: 85	Section End: 86	Confidence: 65.4%
		Target Confidence: 50.0%
Record ID: 42104	Category: Script Adherence	Tag Text: homeowners association
Agent: ZAMORA, MABLE	ANI: 6142631837	DNIS: 8881234567
Time: 8/25/2011 11:09 PM	Duration: 00:03:57	Gate: Customer Care
Section Start: 137	Section End: 138	Confidence: 68.5%
		Target Confidence: 50.0%
Record ID: 42104	Category: Scheduling	Tag Text: weekend
Agent: ZAMORA, MABLE	ANI: 6142631837	DNIS: 8881234567
Time: 8/25/2011 11:09 PM	Duration: 00:03:57	Gate: Customer Care
Section Start: 234	Section End: 234	Confidence: 56.3%
		Target Confidence: 50.0%

Speech Tag Exception Detail Report

This report shows a list of calls in which specific speech tags did *not* occur. This report is useful for script adherence or policy compliance.



Speech Tag Exception Detail

For Period of Monday, July 25, 2011 to Thursday, August 25, 2011

Selected Skill Groups: East Agents

Speech Tag Name	Agent Name	Record ID	Time Recorded	Call Duration
Company ABC Name	ANTHONY, LAWANDA	5921	7/27/2011 2:27 PM	372.00
Company ABC Name	ANTHONY, LAWANDA	17116	8/5/2011 1:05 PM	372.00
Company ABC Name	ANTHONY, LAWANDA	39895	7/25/2011 7:45 AM	372.00
Company ABC Name	BAUER, GUADALUPE	1080	8/7/2011 2:20 PM	464.00
Company ABC Name	BAUER, GUADALUPE	6546	8/22/2011 7:41 PM	464.00
Company ABC Name	BAUER, GUADALUPE	28107	8/18/2011 12:40 AM	255.00
Company ABC Name	BAUER, GUADALUPE	46611	8/21/2011 6:23 AM	237.00
Company ABC Name	DANIEL, OFELIA	1101	7/25/2011 11:15 PM	464.00
Company ABC Name	DANIEL, OFELIA	6860	8/17/2011 1:35 AM	491.00
Company ABC Name	DANIEL, OFELIA	25376	8/16/2011 11:32 AM	372.00
Company ABC Name	ELLISON, LESLEY	14278	7/28/2011 7:17 PM	491.00
Company ABC Name	ELLISON, LESLEY	49634	8/25/2011 12:49 AM	491.00

Speech Tag Exception Summary Report

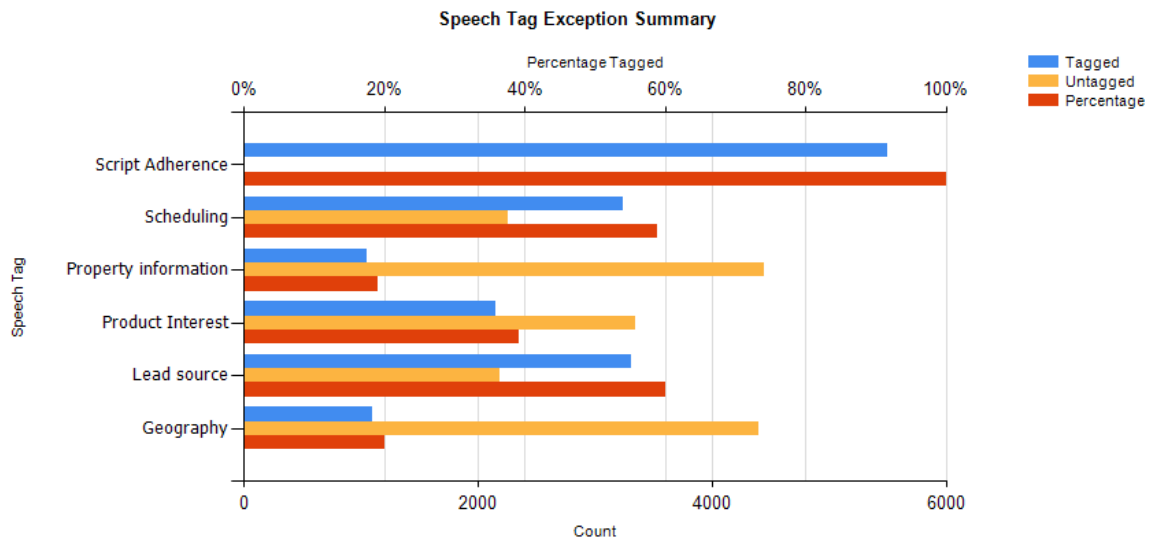
This report summarizes the number of calls that did and did not have specified speech tags. This report is useful with other exception reports for tracking script adherence or policy compliance.

- The blue bar represents the number of calls with the speech tag.
- The amber bar represents the number of call without the speech tag.
- The red bar represents the percentage of calls with the speech tag.



Speech Tag Exception Summary

For Period of Monday, July 25, 2011 to Thursday, August 25, 2011



Speech Tag Name	Number of Calls Tagged	Number of Calls Untagged	Percent of Calls Tagged
Geography	1101	4396.00	20.0%
Lead source	3306	2191.00	60.1%
Product Interest	2148	3349.00	39.1%
Property information	1047	4450.00	19.0%
Scheduling	3239	2258.00	58.9%
Script Adherence	5497	0.00	100.0%

Speech Tag Frequency Summary Report

This report shows the frequency with which speech tags appear over a time interval.

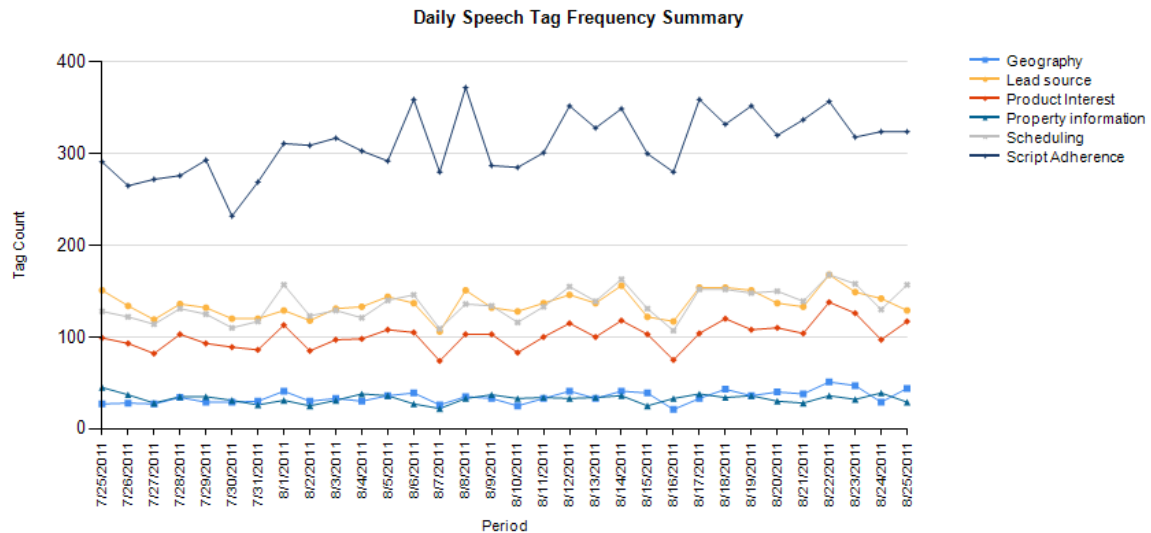
- **Tag Category:** Tag group
- **Speech Tag:** Speech tag
- **Tags Observed:** Number of times a tag was identified. Tag Count may be greater than Number (#) Calls because a tag may occur multiple times in a call.
- **Calls with Tag:** Number of calls in which a tag phrase occurred at least once.
- **Observed Percentage:** Percentage of total calls selected for indexing during the specified time frame in which the tag occurred.
- **Daily Occurrence:** Average number of times a tag occurred per day in the specified time frame.
- **Average Confidence:** The speech search engine records a confidence level for each tag it identifies. This number averages the confidence for each tag record.

Daily Speech Tag Frequency Summary

For Period Encompassing Monday, July 25, 2011 to Thursday, August 25, 2011

Selected Agent Status: Active

Selected Tag Status: Active



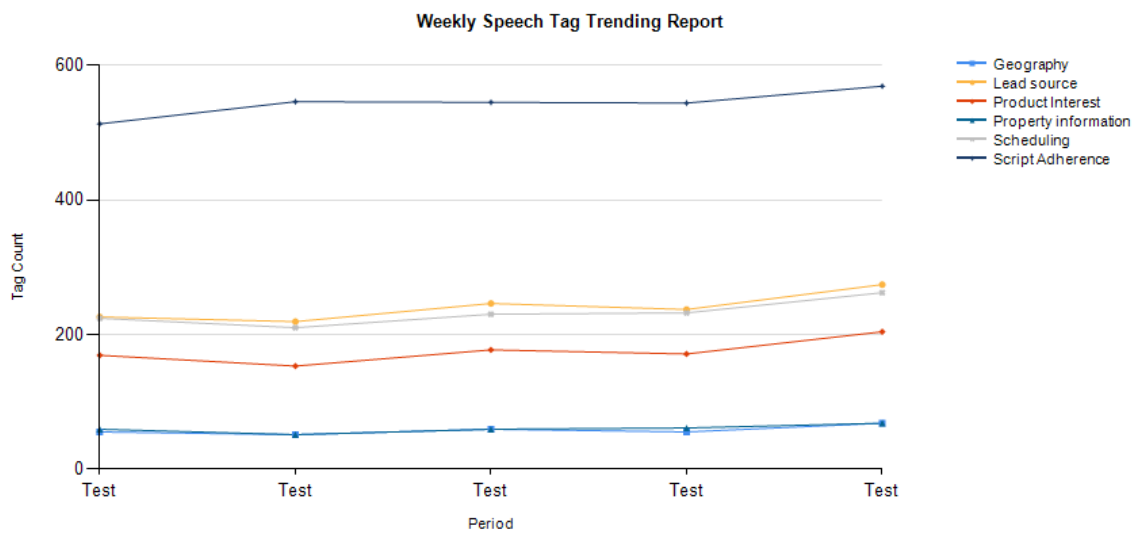
Tag Category	Speech Tag	Tags Observed	Calls with Tag	Observed Percentage	Daily Occurance	Avg. Tag Confidence
Geography	Geography	1101	1101	20.0%	34.41	59.33
Lead source	Lead source	4353	4353	79.2%	136.03	62.70
Product Interest	Product Interest	3249	3249	59.1%	101.53	76.35
Property information	Property information	1047	1047	19.0%	32.72	62.36
Scheduling	Scheduling	4340	4340	79.0%	135.63	54.32
Script Adherence	Script Adherence	9946	9946	180.9%	310.81	74.80

Speech Tag Trending Report

This report shows the speech tag counts for a selected category and how they change over a time interval.

- **Period:** A day, week, month time period.
- **Tag Text:** Text/phrases specified for a tag.
- **Calls Tagged:** Number of calls with the specified speech tag phrase/text.
- **Total Calls:** Number of calls selected for speech analytics.
- **Observed Percentage:** Number of calls tagged/Total Calls

 **Weekly Speech Tag Trending Report**
For Period Encompassing Monday, July 25, 2011 to Thursday, August 25, 2011



Category:		Geography			
Tag Name:		Geography			
Period	Tag Text	Calls Tagged	Total Calls	Observed Percentage	
Test	Geography	55	283	19.4%	
Test	Geography	51	291	17.5%	
Test	Geography	59	301	19.6%	
Test	Geography	55	299	18.4%	
Test	Geography	68	323	21.1%	
Total:		288	1497	19.2%	

Category:		Lead source			
Tag Name:		Lead source			
Period	Tag Text	Calls Tagged	Total Calls	Observed Percentage	
Test	Lead source	167	283	59.0%	
Test	Lead source	168	291	57.7%	

About Uptivity

What boosts the bottom line for any company with a contact center? How about getting the best that every agent can deliver from their first day on the job and constantly optimizing contact center management and performance? Only Uptivity gives you the tools you need to continuously improve every aspect of each step of every agent's life cycle and enhance customer satisfaction. You get exactly what you need thanks to a modern, integrated, and easy-to-use suite of tools that offers a unified system for performance management, workforce management, speech analytics, and call recording. Unparalleled customer service and support from our in-house staff combine with a better bundle for a better value, and a lower total cost of ownership.

Headquartered in Columbus, Ohio, and on the Web at www.uptivity.com.