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INTRODUCTION 1

CMG Speech Office comprises CMG IVR and CMG VoiceMail.

This document describes CMG Speech Office maintenance and troubleshooting. The document covers server parts (CMG Speech server) as well as applications.

The following is described:

- Basic information on how a CMG Speech system operates and how it can be divided among different servers.
- Backup and restore of the CMG Speech configuration database.
- Maintenance tasks.
- Troubleshooting.

Throughout this document, the notation **<CMGSpeech>** refers to the CMG Speech installation directory.

OVERVIEW 2

This chapter contains the following sections:

- CMG SPEECH SERVICE ACCOUNT
- ARCHITECTURES AND SERVER TYPES
- CMG DEPENDENCIES

This section describes important technical considerations and presents an overview of possible CMG Speech server architectures, including server types and what logs are produced from them.

2.1 CMG SPEECH SERVICE ACCOUNT

All CMG Speech services must run under a particular windows domain user account, with the exception of installations where CMG Speech is installed on only one server.

The account must have full access to the following shares on Main servers:

- **<CMGSpeech>\Voices\UserFiles** shared as **UserFiles**
- **<CMGSpeech>\Voices\Identifier** shared as **Identifiers**
- **<CMGSpeech>\Voices\Customer** shared as **Customer**

On installations comprising CMG VoiceMail, also

- **<CMGSpeech>\Voices\Voicemails shared as Voicemails**

On some systems, shares exist also on Telephony servers, in which case the account must have full access there, too. These shares can be e.g:

- **<CMGSpeech>\Voices\Identifiers** shared as **Identifiers**
- **<CMGSpeech>\Voices\Customer** shared as **Customer**

2.2 ARCHITECTURES AND SERVER TYPES

There are several types of CMG Speech servers:

- CMG Speech Main server, also of two types:
  - CMG Speech Main database server
  - CMG Speech Main program server
- CMG Speech Telephony server
- CMG Speech components for CMG server (used on a stand-alone CMG Server)

CMG Speech servers can be combined in many different ways, as shown in Figure 1.

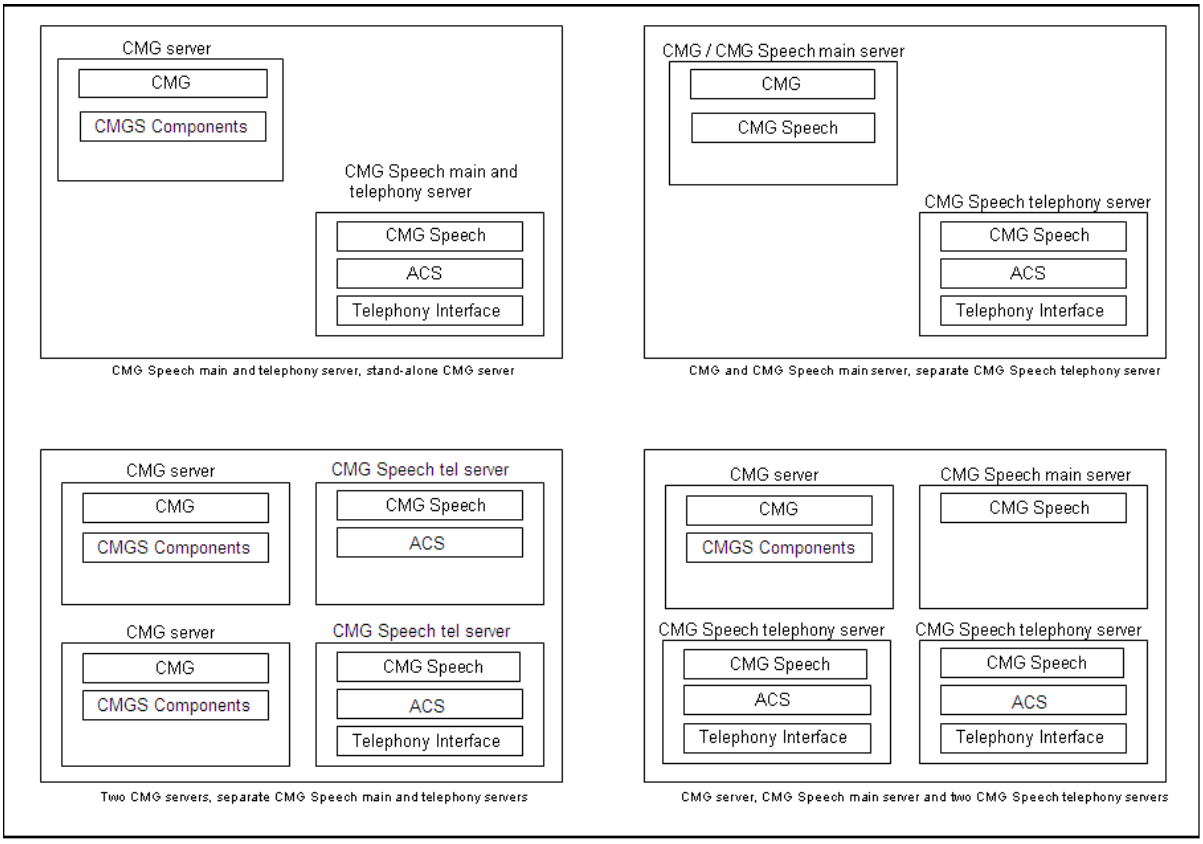


Figure 1 Possible CMG Speech Installation Configurations

In this document, when talking about server architectures, three layers are described. These layers are shown in Figure 1, and described in the following list:

- ***Telephone Interface layer*** consists of hardware/drivers or software (3rd party products) used to communicate with the telephony provider in the installation. Examples are Cisco TSPs or Aculab cards and drivers.
- ***Telephony Platform layer (ACS),*** used for all communication with the Telephony Interface layer. Only required on Telephony Servers.
- ***Telephony Application layer,*** in our case comprised of CMG Speech applications.

The following sections describe the contents and architectures of different CMG Speech servers.

2.2.1 CMG SPEECH MAIN SERVER

An example of a CMG Speech Main server is illustrated in Figure 2.

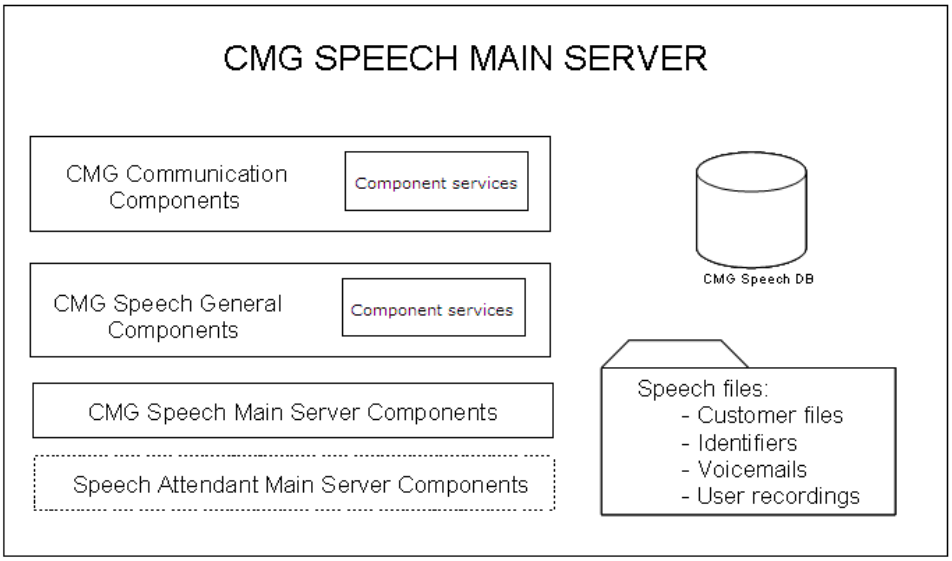


Figure 2 Contents of a CMG Speech Main Server

A CMG Speech Main server contains the following:

- ***Registry*** with information on current version and how to connect to the CMG Speech database.
- The ***CMG Speech database,*** unique in a CMG Speech installation, complete with database backup and maintenance jobs.
- The administration tool ***CMG Speech Configuration Manager (SCM).***
- Programs for ***CMG Speech database communication.***
- Programs for ***CMG Communication.***
- ***File system shares*** storing recorded and/or generated files, for example Greetings, Identifiers and so on.
- ***Maintenance jobs*** or services for generating TTS files, cleaning log files, producing dictionaries used during TTS generation and so on.

If CMG VoiceMail is installed, the following also resides in the main server:

- ***File system share*** where voicemails are stored.
- ***Maintenance jobs*** related to voicemails, for example notifications.

Note:

All CMG Speech components on all servers will be accessing the file system shares. It is important to allow access to the share to an account that all services on all servers run under. This must be a domain account.

The program components used for communication with the CMG Speech and CMG databases are mainly found in ***Component Services.***

2.2.2 IN A CMG SPEECH TELEPHONY SERVER

A CMG Speech Telephony server contains applications residing on the Aastra Connectivity Server (ACS). Because of this, ACS must be installed on these servers.

The dialogs of CMG Speech applications are executed by ACS in the form of ***State machines.***

A CMG Speech Telephony server contains the following:

- ***Registry*** with information on version and how to connect to the CMG Speech database.
- CMG Speech ***State machines.***
- Programs for executing ***External Transitions*** in the State machines, referred to as Telephony Components in the figure above.
- Programs for ***CMG Speech database communication.***
- Programs for ***CMG Communication.***
- ***Voice files*** used frequently by the call dialogs, (system voice files).
- ***CMG Speech File Manager*** service, responsible for cleaning log files.

2.2.3 IN A CMG SERVER

A CMG server is installed with the following to provide CMG Speech support:

- Speech related functions for BluStar Web.
- Programs for CMG Speech database communication.
- Programs for CMG Speech Telephony control.

Note:

There is no registry with CMG Speech database connection information. On a CMG Server, this information is configured in CMG Configuration Manager (CM).

The installed programs are used to:

- Provide CMG Speech support to CMG Web:
  - Providing database and file system support to CMG Web
  - Managing outbound calls initiated by CMG Web
- Provide CMG Speech connection to **CMG Directory Manager (DM)**
- Obtain CMG synchronization through spman **CMGVoiceSync** process

CMG Web is used by regular office users, performing the following kinds of actions:

1. **Configuring** their CMG Speech account settings. For example, changing settings, and updating voicemail states.

2. Performing **phone-related actions.** For example listening to voicemails, recording greetings, and so on.

These two tasks require connection to the CMG Speech database.

CMG Directory Manager (DM) is used by company personnel administrators to administer user settings, including some CMG Speech account settings. This requires CMG Speech Database access through CMG Speech components.

The **CMGVoiceSync** program in **spman** is responsible for propagating changes in the CMG database to CMG Speech. This requires CMG Speech database access through CMG Speech components.

2.3 CMG DEPENDENCIES

CMG Speech requires a CMG system. CMG provides, among other, the following functionality:

- Activities
- User data
- Synchronization of user data
- Transmission of notifications (including Message Wait indicator)
- Original call information in Attendant client popup

2.3.1 ACTIVITIES

Information about a user's current activity status is fetched from the CMG database. Activities registered over the phone are stored directly in CMG.

Activity registration over the phone is provided by CMG IVR (using the Administration dialog).

2.3.2 USER DATA

Extensions and mobile or pager numbers for users are read online from the CMG database. Names and alternative names in CMG are used to create TTS prompts.

2.3.3 SYNCHRONIZATION OF USER DATA

When important changes are made for CMG users (for example, a user being deleted), these are propagated to CMG Speech. This is done by the ***CMGVoiceSync*** process in **spman.**

If CMG VoiceMail is installed, a minor synchronization takes place in the other direction. This is done by the CMG Speech service ***CMG Speech CMG Synchronizer.***

2.3.4 TRANSMISSION OF NOTIFICATIONS (INCLUDING MESSAGE WAIT INDICATOR)

If CMG VoiceMail is installed, it uses CMG to send notifications to inform users that they have new voicemails. Notifications can be sent through all available message systems in CMG, that is, E-mail, text messages (SMS), pagers, and so on. CMG can also activate/deactivate the Message Wait indicator on a phone.

The ***Mitel CMG Voicemail Notifier*** service is responsible for registering the messages that are to be sent in CMG. Once in this service, regular CMG processes handle the rest of the delivery.

2.3.5 ORIGINAL CALL INFORMATION IN ATTENDANT CLIENT POPUP

When CMG Speech transfers a call to an attendant, the original call information might be lost, depending on the telephony protocol used. To enable the Attendant client to retrieve the original call information and present a correct screen popup for a transferred call, CMG Speech can store the original call information in the CMG database.

This functionality is provided by the ***CMGSpeechSrv*** process, which is a built-in part of the CMG Server and runs as one of the ***spman*** processes. For information on how to configure this, please refer to *Virtual Reception Installation and Configuration Guide [1].*

ADMINISTRATION 3

CMG Speech Configuration Manager (SCM) is the tool used to administer CMG Speech. SCM is a .NET web application installed on the CMG Speech Main program server. Open an internet browser with the following address:

`<CMGSpeechMainServer>\CMGSpeechCM.`

For detailed information on configuring CMG Speech, see document *Virtual Reception Installation and Configuration Guide [1]* and *CMG Speech Configuration Manager - Administrator's Guide [3].*

MAINTENANCE 4

This chapter contains the following sections:

- BACKUP AND RESTORE
- MAINTENANCE
- COMMON MAINTENANCE TASKS

There is several automated maintenance tasks performed in a CMG Speech system. If a failure happens, these tasks need to be completed with a few additional tasks (moving the backups to a safe location) to make sure the system can be completely restored.

4.1 BACKUP AND RESTORE

CMG Speech includes a number of backup and maintenance jobs, running in SQL Server Agent on the CMG Speech Main Database Server. These jobs handle backup and maintenance of the CMG Speech database and of the registry on the current machine. The jobs are the following:

- CMG Speech Backup.
- CMG Speech Registry Backup.
- CMG Speech SaveLog.
- CMG Speech System Backup.

If the CMG Speech Main server is installed on a different server than CMG, all jobs above are created when CMG Speech is installed. If the server is shared, the Registry and System backup jobs are performed by the CMG system.

Standard SQL server routines are used to perform these tasks. The backup files will be stored in SQL Servers default backup directory.

4.1.1 CMG SPEECH BACKUP

CMG Speech Backup is an SQL Server Agent job, configured to run daily at 01.30. It is split up in the following two steps:

- Backup and maintenance tasks performed on the CMG Speech database.
- Backup of the CMG Speech database transaction log.

4.1.1.1 Maintenance and Backup of CMG Speech database

Back up the CMG Speech database, and click **Next** to continue.

The first configuration step is shown in Figure 3.

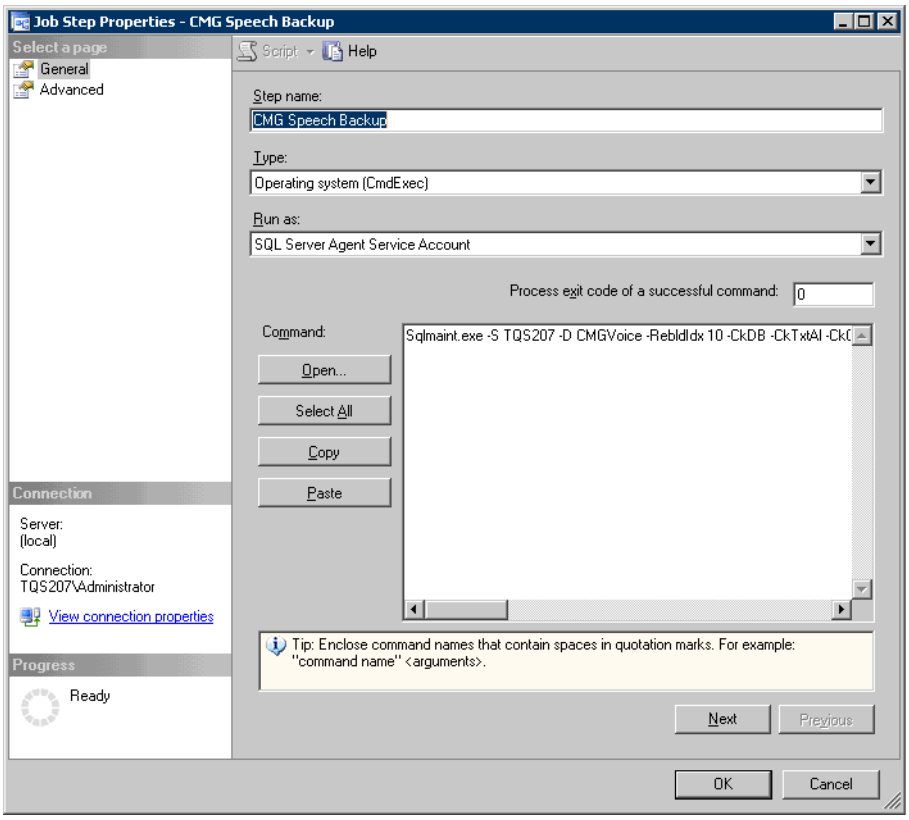


Figure 3 CMG Speech Database Backup

The SQL server program **SQLMAINT.EXE** is used. The parameters are:

-S <ServerName>Server name

-D CMGVoiceDefines which database to use.

-S <ServerName>Server name

-RebldIdx 10 Rebuilds the index and leaves 10% free space.

-CkDBControls if the extent structure is OK. Check data and index pages against allocation units.

-CkTxtAlControls if the allocations of the text fields is OK.

-CkCatControls the consistency of the system tables.

-BkUpOnlyIfCleanThe system dumps the database only when the control checks are OK.

-VrfyBackupSpecifies that RESTORE VERIFYONLY be run on the backup when it completes

-BkUpMedia DISKDefines the backup media that shall be used.

-BkUpDBDirectory where the backup files are stored.

-BkExt dmpFile extension of backup file will be .dmp

-DelBkUps 5 DAYSThe backup will be kept for 5 days.

-WriteHistoryAdds a history entry for each maintenance action performed

-RptDirectory and name of the log file.

-DelTxtRpt 3WEEKSDeletes text reports in the report directory after three weeks.

4.1.1.2 Backup of the Transaction Log

The second step of the CMG Speech backup contains backup of the CMG Speech transaction log. Configure according to Figure 4, and click **Next** to continue.

A Transact-SQL command is used:

backup tran CMGVoice to disk='c:\Microsoft SQL Server\MSSQL\Backup\CMGSpeechtran.dmp' with init

With init specifies that a previously stored file will be overwritten.

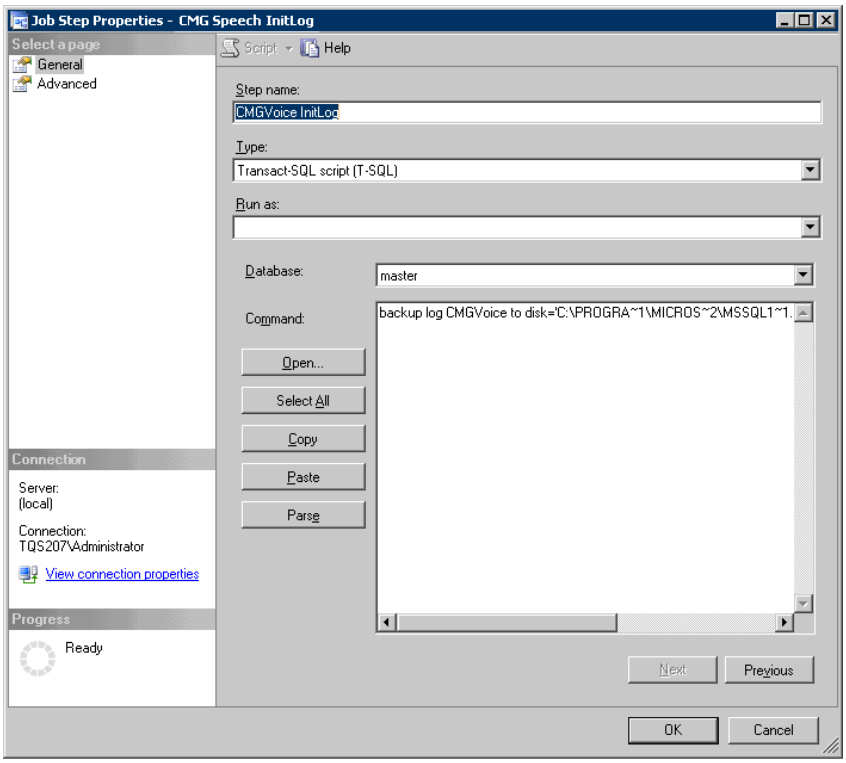


Figure 4 CMG Speech Transaction Log Backup

4.1.2 CMG SPEECH SAVELOG

A backup of the CMG Speech transaction log is taken every night by the CMG Speech Backup job. In addition, the job CMG Speech SaveLog will dump the transaction log to disk every 4th hour between 05.32 and 23.59. It is configured as follows:

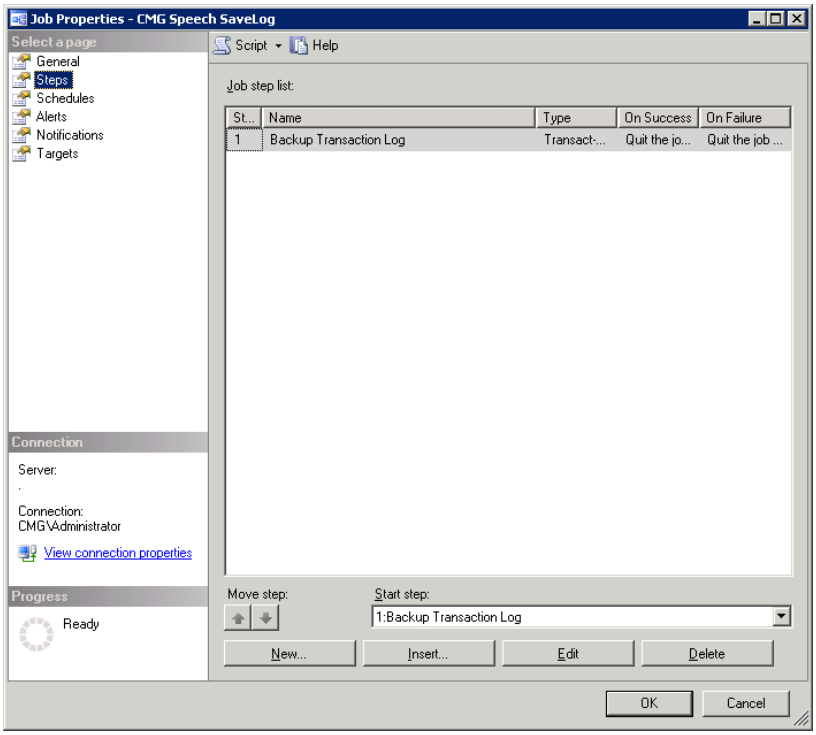


Figure 5 CMG Speech Transaction Log Backup Every 4th hour

For a description of the command used, see the CMG Speech backup job (section 4.1.1.2).

4.1.3 CMG SPEECH REGISTRY BACKUP

Note:

This job will not be created when CMG Speech shares the server with a CMG system.

The registry backup is scheduled to run every night at 01.15. The job creates a backup copy of the registry key `HKEY_LOCAL_MACHINE\SOFTWARE\Netwise.`

The backup file `niceregbkup.txt` will be stored in the SQL backup directory `<Microsoft SQL Server>\MSSQL\Backup.`

The registry backup step looks as follows:

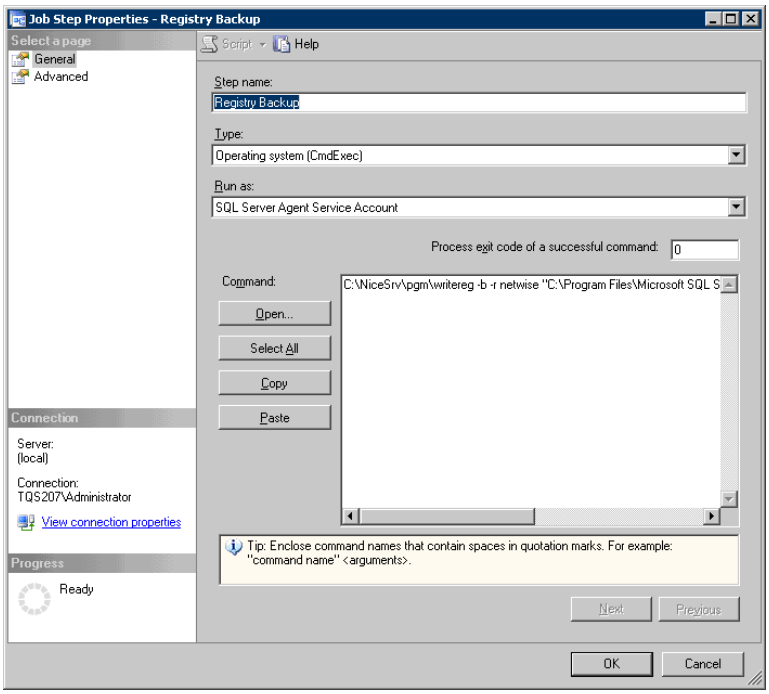


Figure 6 Registry Backup

The program writereg, distributed with CMG Speech, is used to create the backup file. Figure 7 shows possible writereg parameters.

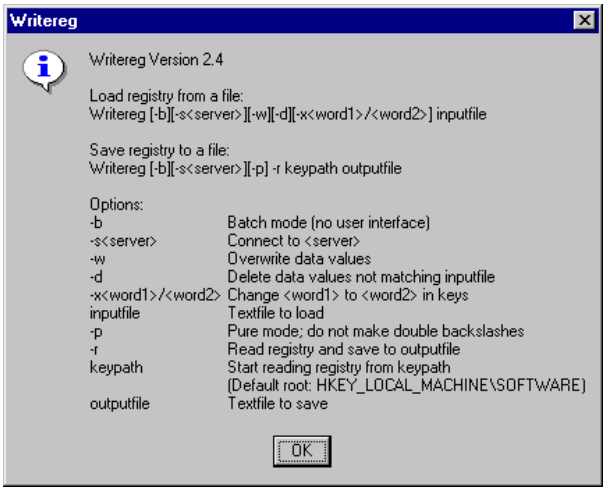


Figure 7 Writereg Parameters

4.1.4 ADDITIONAL TASKS

The files created by the backup jobs must be copied to some media different from the local disk. Also, all directories containing voicemails, user's personal recordings and customized voice prompts must be backed up. Such files are stored in the directory **<CMGSpeech>\Voices**

The following directories on a CMG Speech Main server should be backed up:

Directory	Server type
<Microsoft SQL Server>\MSSQL\Backup	CMG Speech Main (database) server
<CMGSpeech>\Voices	CMG Speech Main (program) server

To reduce backup space the subdirectory `<CMGSpeech>\Voices\system` can be omitted, since it contains only prerecorded system files that can be reinstalled at any time.

4.1.5 RESTORING THE CMG SPEECH DATABASE

Provided you still have one of the dump files from a backup occurrence, use the SQL Server Management Studio or equivalent to restore it.

Note:

When restoring the CMG Speech database, it is possible that the database login used by CMG Speech no longer has adequate access to the database.

To verify if the database login still has access to the database after restore, do the following:

1. Determine the database user used to access CMG Speech by looking at the registry, under `HKLM/SOFTWARE/Netwise/CMGVoice/8.1/Databases`. The value `CMGVoiceUser` is the name of the database login used by all CMG Speech programs.
2. On theMain database server, start **Query Analyzer** using for example **Start -> Programs -> Microsoft SQL Server -> SQL Query Analyzer** (procedure varies depending on SQL version).
3. Log in as the CMG Speech database user and select the **CMGVoice** database.
4. Write and execute the clause

   ```
   exec vsp_GetUserGroups
   ```
5. Verify that you get a result and not a rejection from the database.
6. If rejected and cannot execute the clause, close and re-open QA, and then log in as sa or another database administrator account. Again, select the **CMGVoice** database.
7. Write and execute the clause

   `exec vspi_grantrightstouser 'nice'` replacing 'nice' with the database user account specified for CMG Speech.

4.2 MAINTENANCE

A number of maintenance tasks concerning CMG Speech are performed:

- CMG (to CMG Speech) synchronization
- CMG Speech (to CMG) synchronization
- TTS Generation
- Propagation of appointed files from Main to Telephony server(s)
- File management
- Cleanup of log files
- Time zone offset calculation
- Notification management (only if CMG VoiceMail is installed)
- Voicemail cleanup (only if CMG VoiceMail is installed)

These tasks are performed in different ways, that is, by dedicated services or as SQL Server Agent jobs.

4.2.1 CMG SYNCHRONIZATION

CMG Speech is automatically synchronized with changes in CMG by a process in **spman** called **CMGVoiceSync,** running on the CMG server. The process continuously detects all changes made to CMG users and (if they have any impact on CMG Speech) propagates those to the CMG Speech database.

For information on logging and troubleshooting the CMGVoiceSync process, please refer to CMG documentation.

4.2.2 CMG SPEECH SYNCHRONIZATION

CMG Speech updates CMG with information on active voice mailboxes daily at 05:00. This is done by a service on the CMG Speech Main server called **CMG Speech CMG Synchronizer.**

4.2.2.1 LOGGING

Logs for CMG Speech -> CMG synchronization are found in the directory `<CMGSpeech>\Logs\CMGSync` directory, and named `VoiceCMGSync_<YYYYMMDD>.log` (where `<YYYYMMDD>` is replaced with year, month and day).

4.2.2.2 Configuration

Configuration of CMG Speech synchronization is made partly in **CMG Speech CM,** and partly in the registry under the key

<HKLM>\Software\Netwise\CMGVoice\78.1\CMGSync

These are the possible settings:

SETTINGS	LOCATION	DESCRIPTION
Log Level	SCM	Configured in **CMG Speech CM -> System Settings -> Log Levels.** State an appropriate log level for the **CMG Synchronizer** object.
CompleteSyncAt	Registry	The configured time when mailbox synchronization with CMG is performed. A text value that must have the form **HH:MM**
RunOnceCompleteSync	Registry	If 1, complete CMG mailbox synchronization will be performed within the next 5 minutes, after which the flag is set to 0 again. DWORD value which must be 0 or 1.

4.2.3 TTS GENERATION

Every night at 03:15, CMG Speech automatically generates TTS (Text-To-Speech) files for CMG Speech user's names and for company departments. This task is performed by the **CMG Speech TTS Generator** service, running on the CMG Speech Main (program) server.

4.2.3.1 LOGGING

Logs for TTS generation are found in the `<CMGSpeech>\Logs\CMGVoiceTTS` directory, and named `CMGVoiceTTS_<YYMMDD>.log`, where `<YYMMDD>` is replaced with year, month and day.

4.2.3.2 Configuration

Configuration of TTS generation is made in the registry under the key **<HKLM>\Software\Netwise \CMGVoice\8.1\NetwiseTTS\1.0**

These are the possible settings:

SETTING	LOCATION	DESCRIPTION

TimeToRun	Registry	The configured time when TTS generation is performed. A text value that must have the form **HH:MM**
RunOnceNow	Registry	If 1, TTS generation will be performed immediately when the service is restarted, after which the flag is set to 0 again. DWORD value which must be 0 or 1.
LogPath	Registry	Path where the log files are placed. Text value.
LogDetailLevel	Registry	Log level ranging from 0 (errors / warnings) to 7 (debug)

4.2.4 PROPAGATION OF APPOINTED FILES FROM MAIN TO TELEPHONY SERVER(S)

Every night at 04:15 (one hour after TTS files have been generated), CMG Speech copies voice files from the Main program server to all Telephony servers for which there is a propagation path configured in CMG Speech CM. This means that these files may be played locally.

Path Propagation is performed by the **CMG Speech File Manager** service, running on the CMG Speech Main (program) server.

4.2.4.1 Logging

If produced, logs for Path Propagation are found in the `<CMGSpeech>\Logs\FileManager` directory, and named `NWVoiceFileMgr_<YYMMDD>.log`, where `<YYMMDD>` is replaced with year, month and day of the day's date.

4.2.4.2 Configuration

Configuration of Path Propagation is made partly in CMG Speech CM (SCM) and partly in the registry under **HKLM>\Software\Netwise\CMGVoice\8.1\FileManager.**

These are the possible settings:

SETTING	LOCATION	DESCRIPTION

Propagation path	SCM	Configured in **CMG Speech CM -> User Groups -> Paths.**For each telephony server, make sure a **Propagation Path** is specified for Identifier and Customer files. This path should be a share on the telephony server, to which the CMG Speech Service Account has full access.
Log Level	SCM	Configured in **CMG Speech CM -> System Settings -> Log Levels.** State an appropriate log level for the **Path Propagator** object.
RunOncePathProp	Registry	If 1, Path Propagation will be performed within the next 5 minutes, after which the flag is set to 0 again. DWORD value which must be 0 or 1.
PathPropagationAt	Registry	The configured timewhen Path Propagation is performed. A text value that must have the form **HH:MM**

4.2.5 FILE MANAGEMENT

File management in CMG Speech is a continuous task aiming to reduce file system access to shares on the CMG Speech Main server to programs running on the Main server or on Telephony servers. File Management physically removing files (that is, voicemails or greetings) that are deleted, and physically copying them when they are forwarded from one user to another. These tasks are performed by the **CMG Speech File Manager** service, running on the CMG Speech Main (program) server.

4.2.5.1 Logging

If produced, logs for File Management are found in the `<CMGSpeech>\Logs\FileManager` directory, and named `NWVoiceFileMgr_<YYMMDD>.log`, where `<YYMMDD>` is replaced with year, month and day.

4.2.5.2 Configuration

Configuration of File Management is made in **CMG Speech CM** (SCM). These are the possible settings:

SETTING	LOCATION	DESCRIPTION
Log Level	SCM	Configured in **CMG Speech CM -> System Settings -> Log Levels.** State an appropriate log level for the Speech File Manager Service object.

4.2.6 CLEANUP OF LOG FILES

Every night at 01:00, CMG Speech automatically cleans log files older than a configurable number of days. This is done to ensure that disk space is not over-consumed by extensive logging.

Log file cleanup is performed by the **CMG Speech File Manager** service on CMG Speech Main and Telephony Servers.

4.2.6.1 Logging

If produced, logs for Log Cleanup are found in the `<CMGSpeech>\Logs\FileManager` directory, and named `NWVoiceFileMgr_<YYMMDD>.log`, where `<YYMMDD>` is replaced with year, month and day of the day's date.

4.2.6.2 Configuration

Configuration of Log File Cleanup is made partly in **CMG Speech CM** (SCM), and partly in the registry under

`<HKLM>\Software\Netwise\CMGVoice\8.1\FileManager`

These are the possible settings:

SETTING	LOCATION	DESCRIPTION
Log Level	SCM	Configured in **CMG Speech CM -> System Settings -> Log Levels.** State an appropriate log level for the Log File Cleaner object.

LogFilesLingerDays	SCM	Configured in **CMG Speech CM -> User Groups -> General Settings,** possibly per User Group.Integer value stating the amount of days log files are allowed to linger in the system before being removed.
LogFilesRemove EmptyFld	SCM	Configured in **CMG Speech CM -> User Groups -> General Settings,** possibly per User Group.Boolean value stating whether or not empty folders under the log path are removed.
RunOnceLogClean	Registry	If 1, the Log File cleanup will be performed within the next 5 minutes, after which the flag is set to 0 again. DWORD value, must be 0 or 1.
LogFileCleanupAt	Registry	The configured time when Log File Cleanup is performed. A text value that must have the form **HH:MM**
SearchPathX	Registry	Apart from the regular log directory on the local server, other directories may be specified by creating numbered registry entries (that is, SearchPath1, SearchPath2 and on) that are also considered when the log file cleanup executes.
DaysToKeepX	Registry	Matching SearchPathX; for the path matching the same index, these are the number of days log files are kept.

4.2.7 TIME ZONE OFFSET CALCULATION

To speed up adjusting activity return dates according to different time zones, there is a work table in the CMG Speech configuration database which is populated with applicable time zone GMT offsets. This population occurs during installation, when SQL Server is restarted or at the beginning of a new year.

Time zone offset calculation is an SQL Server Agent job on the CMG Speech Main (database) server.

No logs are produced and there are no possible configurations.

4.2.8 NOTIFICATIONS

Note:

Only applicable on installations with CMG VoiceMail.

CMG Speech checks for new voicemails every 10 seconds. If there are new voicemails that have not yet been notified, all associated notifications are carried out. This task is performed by the **CMG Speech Notifier** service, running on the CMG Speech Main (program) server.

4.2.8.1 Logging

Logs for Notifications are found in the directory `<CMGSpeech>\Logs\CMGVoicemailNotify.` The logs is named `CMGVoicemailNotify_<YYMMDD>.log` (where `<YYMMDD>` is replaced with year, month and day).

4.2.8.2 Configuration

Configuring notifications is described in document *[1] Virtual Reception Installation and Configuration Guide.*

Logs are configured in **CMG Speech CM** (SCM) using these settings:

SETTING	LOCATION	DESCRIPTION
Log Level	SCM	Configured in **CMG Speech CM -> System Settings -> Log Levels.** State an appropriate log level for the Notifier object.

4.2.9 VOICEMAIL CLEANUP

Note:

Only applicable on installations with CMG VoiceMail.

CMG Speech automatically makes sure that disk space is not consumed by lingering voicemails that individual users forget to remove after they have listened to them. This is done by enforcing two rules, which is done every night at 0500:

- When a voicemail is read, it is deleted after a given (configurable) number of days.
- Deleted voicemails are allowed to linger in the person's waste basket for another (configurable) number of days; after that, it is permanently deleted.

This task is performed by the **CMG Speech File Manager** service on the CMG Speech Main (program) server.

4.2.9.1 Logging

Logs for Voicemail Cleanup are found in `<CMGSpeech>\Logs\FileManager`, and named `NWVoiceFileMgr_<YYMMDD>.log`, where `<YYMMDD>` is replaced with year, month and day.

4.2.9.2 Configuration

Configuration of voicemail cleanup is made partly in **CMG Speech CM** (SCM), and partly in the registry under

`<HKLM>\Software\Netwise\CMGVoice\8.1\FileManager`

These are the possible settings:

SETTING	LOCATION	DESCRIPTION
Log Level	SCM	Configured in **CMG Speech CM -> System Settings -> Log Levels.** State an appropriate log level for the Voicemail **cleaner** object.

VMailsLingerDays	SCM	Configured in **CMG Speech CM -> User Groups -> General Settings,** possibly per User Group.Integer value stating the amount of days that pass before read voicemails are deleted.
DelVMailsLingerDays	SCM	Configured in **CMG Speech CM -> User Groups -> General Settings,** possibly per User Group.Integer value stating the amount of days that deleted voicemails are allowed to linger in the users waste basket before being permanently removed.
RunOnceMsgClean	Registry	If 1, Voicemail Cleanup will be performed within the next 5 minutes, after which the flag is set to 0 again. DWORD value which must be 0 or 1.
MsgCleanupAt	Registry	RegistryThe configured time when Voicemail Cleanup is performed. A text value that must have the form **HH:MM**

4.3 COMMON MAINTENANCE TASKS

This section describes tasks related to common maintenance, for example changing windows account's passwords or server names.

4.3.1 RENAMING A SERVER OR CHANGING IP-ADDRESS

CMG and CMG Speech must be updated when servers in an existing installation change names or IP addresses.

Note:

A server can be of several types at the same time.

4.3.1.1 Renaming a CMG Speech Main Database server

If the server hosting the CMG Speech database changes name or IP address, the change must be propagated as follows:

- In the CMG system **(CMG CM -> CMG Speech -> Parameters ->** change **CMG Speech Host)**
- On all CMG Speech servers, use **CMGSpeechDBConnTool** (found in `<CMGSpeech>\Pgm\Tools`) to specify a new **DB Server name,** press **Test connection** and then **Save in registry** to save the new server name.
- In the **Servers** table in the **CMG Speech** database (either using **SQL Management Studio** or equivalent, or using **CMG Speech CM**)

4.3.1.2 Renaming a CMG Speech Main program server

If a CMG Speech Main program server (without database) changes the name or IP address, the change must be propagated as follows:

- In the **Servers** table in the **CMG Speech** database (either using **SQL Management Studio** or equivalent, or using **CMG Speech CM)**
- Update all occurrences of the server name in the **UGCallPaths** table as follows: Open an **SQL Query Analyzer** with an administrator login and use the **CMG Speech** database.

  Write and execute the clause as follows:

```
Update UGCallpaths

Set path = replace(path, '\\oldsrvname\', '\\newsrvname\')
```

replacing `oldsrvname` with the previous name or IP address of the server, and **newsrvname** with the new name or address.

Remember to restore the required shares and give the CMG Speech service account unrestricted access to them.

4.3.1.3 Renaming a CMG Server

If the CMG server changes name or IP address, the change must be propagated as follows:

- Using **CMG Speech CM -> System settings -> Servers,** change the **Server Name** of the CMG server.

4.3.1.4 Renaming CMG Speech Telephony server(s)

If one or several CMG Speech Telephony servers change name or IP address, the change must be propagated as follows:

- Using **CMG Speech CM -> System settings -> Servers,** change the **Server Name** of the Telephony server(s).
- Update all occurrences of the server name in the **UGCallPaths** table as follows: Open an **SQL Query Analyzer** with an administrator login and use the **CMGVoice** database.

  Write and execute the clause

```
update UGCallpaths

set path = replace(path, '\\old_name\', '\\new_name\'),propagationpath =
replace(prop_path, '\\old_name\','\\new_name\')
```

replacing `old_name` with the previous name or IP address of the server, and `new_name` with the new name or address.

Remember to restore the required shares and give the CMG Speech service account unrestricted access to them.

4.3.2 CHANGING DATABASE LOGIN

If the name or password of the database login used to access the CMG Speech database is changed at any time, the login information stated in the registry must be changed as follows:

- On all CMG Speech servers, use **CMGSpeechDBConnTool** (found in `<CMGSpeech>\Pgm\Tools`) to specify a new DB User (login) and/or **DB Password,** press **Test connection** and then **Save in registry** to save the new information.

4.3.3 MOVING THE DATABASE TO ANOTHER SERVER

If the CMG Speech database is moved to another server than the one it was originally installed on, some manual restore operations are required to make sure the SQL user that previously had access to it has so also in the future. To ensure this, do this after having restored/moved the CMG Speech database to the target server:

- The old database user probably lingers in the CMG Speech database. If so, delete it using for example SQL Server Management Studio or equivalent.
- Create a database login, with the same name and password as previously used, and grant him access to the **CMGVoice** database.
- Open an **SQL Query Analyzer** (or equivalent) with an administrator login and direct it to the **CMGVoice** database.
- Write and execute the following clause

  ```
  exec vspi_grantrightstouser 'nice'
  ```

  replacing 'nice' with the database login account created earlier.
- If applicable, follow the steps in section 4.3.1.1 to change the name of the CMG Speech Main (database) server.

4.3.4 CHANGING WINDOWS ACCOUNT USED FOR SERVICES

If you change the windows account used by CMG Speech, or the password of it, the changed account and password must be changed:

- On all **file system shares** accessed by the CMG Speech system:
  - On the CMG Speech Main (program) server, **UserFiles, Identifiers, Customer** and possibly **Voicemails** shares
  - On each CMG Speech Telephony server, possibly **Identifiers** and **Customer** shares
- On the CMG Speech services:
  - On the CMG Speech Main server, all services using the windows account and starting with **CMG Speech** (File Manager, Notifier and TTS generator services)
  - On each CMG Speech Telephony server, the **CMG Speech File Manager service** and **Mitel Network Telephony Services.** If they exist, also on the **Mitel QueueManager** and **Mitel MediaServer** services.
  - If additional applications are installed, such as CMG Speech Attendant, these may also be affected. Change all applicable services.
- On **Component Services Applications** located on all CMG Speech and CMG servers:
  - The **CMGSpeechCom** package
  - The **CMGCom** package

Note:

The windows account used must have sufficient rights on the servers, meaning it is allowed to access the registry.

Make all changes and then restart the server(s).

4.3.5 UPDATING ACS SEPARATELY

ACS is shared by all CMG Speech applications. Updating an ACS installation usually means replacing NeTS, Media Server and/or Queue Manager with newer versions by uninstalling the previous one and installing the new. When this happens, the services go back to using the local system account instead of the explicit windows account specified earlier.

After updating NeTS, Queue Manager or Media Server, remember to manually restore the windows account used by the process to its previous value.

4.3.6 UPDATING CMG SEPARATELY

When a CMG system is updated, BluStar Web is removed and reinstalled. Sometimes the Speech related functions in BluStar Web are also removed at this point.

If the CMG server is not also a CMG Speech server, the easiest thing is to uninstall and reinstall the CMG Speech Components for CMG server. This will reinstall the BluStar Web Speech related functions.

If the server is both a CMG and CMG Speech server, the best solution is to back up the BluStar Web Speech related functions before updating CMG and restoring it afterwards. If the update has already

been made and the Speech related functions are gone, uninstall the CMG Speech system (but keep the database!) and install it again, restoring the database.

4.3.7 TUNING TTS PHRASES

CMG Speech uses Nuance Vocalizer for Network for generating TTS phrases. Although the different languge voice engines are adequate for most presentations it is likely that each installation encounters some phrases, whose pronunciation in a given language requires modification. This is possible through the use of dictionaries.

Dictionaries are installed by the CMG Speech Language packages. They are located on the Main program server in the **<CMGSpeechSrv>\TTS** folder, one for each language.

Each dictionary has a source form and a compiled form. The source dictionary is a UTF-8 file with the suffix **.dct** in which tunings of expressions are entered. This file is compiled into the binary form suffixed **.dcb** using the batch file **dictcomp.bat,** located in the TTS folder. The binary file is then loaded and used by the TTS generator service.

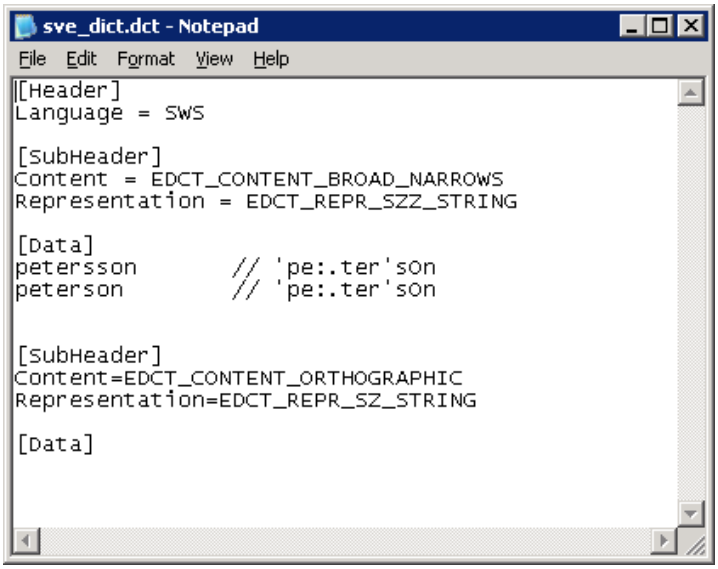
Detailed information on using dictionaries is found in *Nuance Vocalizer for Network 5.0 - Developer's Guide,* **vocalizer_devg.pdf,** available in `<Nuance Vocalizer>\doc\devguide.`

4.3.7.1 Dictionary contents

In each dictionary, two things can be configured:

- "Translations" of common abbreviations. For example, HR -> "Human Resources".
- Phonetic expressions used for certain words. For example, the Swedish name "Per" is, in everyday speech, not pronounced as indicated by its letters.

These two items are configured in separate sections in the source dictionary. The figure shows a Swedish dictionary with two phonetic expressions, but no specified abbreviations:



Each dictionary contains one header and two sections, one for each of the configurable items.

The [Header] section contains the language abbreviation (Nuance Vocalizer style). For a list of all available Vocaliizer abbreviations, see the table in section 4.3.8.2.

Each [SubHeader] and [Data] pair then contains tunings of a certain kind. If the SubHeader's Content is EDCT_CONTENT_BROAD_NARROWS, that means that we're appointing phonetic expressions for certain words. If the Content is EDCT_CONTENT_ORTOGRAPHIC, that means we're translating an abbreviation to something.

In the examples below, we assume you will be working with the Swedish dictionary.

4.3.7.2 The TTS test tool

Installed with Nuance Vocalizer, there is a command line tool which is very useful for testing how a certain expression will sound when generated. It's located in the `<Nuance Vocalizer>\ common\speech \components directory and is named nvncmdline.exe.`

To use it, open a command line and browse to the directory above. The tool has a help mode if you run it with parameter -?, but here is a crash course on how to use it to test entries in a dictionary.

Say for example you have the dictionary entry

```
petersson // 'pe:.ters'sOn
```

… and want to test it to see how the name "Petter Petersson" is pronounced in Swedish. Use a command line tool and write and execute the following:

```
nvncmdline.exe –l sv-SE –n Alva –o "test1.wav" –w –s "Petter Petersson" –d
<CMGSpeechSrv>\TTS\SVE_dict.dcb
```

The execution of the above command will generate a wav file (test1.wav) playing the sentence "Petter Petersson" in Swedish using the narrator Alva. It will use the dictionary specified after –d while doing so (ote that you must replace `<CMGSpeechSrv>` with the folder where CMG Speech is installed). .

These are the valid language abbreviations used by Nuance:

Language	**Abbreviation**	**Folder**
English US	en-US	enu
UK English	en-GB	eng
Swedish	sv-SE	sws

Norwegian	no-NO	non
Danish	da-DK	dad

The names of the narrators to use is most easily found by looking at the folders in `<Nuance Vocalizer>\languages\doc\languages`. Here, you find a directory for each Folder in the table above, and under each such directory, a sub directory with the name of the narrator.

This way, it is possible to test pronunciation of single words or names without having to regenerate all TTS names.

4.3.7.3 Configuring an abbreviation

To configure a translation of an abbreviation, follow these steps.

1. Before you start, make a backup copy of the current source dictionary **sve_dict.dct**
2. Open the source **dictionary sve_dict.dct** file using a simple text editor, e.g. notepad. You must be able to save it in UTF 8 format.
3. Locate the sub section where Content = **[EDCT_CONTENT_ORTOGRAPHIC]**
4. Create an entry for the abbreviation you want to replace. It should consist of a single line with first the expression you want to replace, e.g. “IT”, followed by a tab and then the translation. If the translation spans several words, you must enclose the expression in quotes. For example:

   ```
   IT “information technology”
   ```
5. Save the file.
6. Open a command line promp, browse to the TTS directory and use the dictcomp.bat utility to compile the dictionary, as follows:

   ```
   C:\> Dictcomp.bat SVE
   ```
7. Test the abbreviation using the command line tool described above. Repeat steps above until you have produced an acceptable conversion. If you fail to do so, restore the backed up source dictionary and repeat step 6 to compile it.

4.3.7.4 Configuring a phonetic expression

To configure a phonetic expression for a word, follow these steps.

1. Before you start, make a backup copy of the current source dictionary **sve_dict.dct**.
2. Open the source dictionary **sve_dict.dct** file using a simple text editor, e.g. notepad. You must be able to save it in UTF 8 format.
3. Locate the sub section where Content=**[EDCT_CONTENT_BROAD_NARROWS]**
4. Enter the name (or word) you want to configure a phonetic representation for, followed by a tab two slashes and then a whitespace.
5. Now it’s time to determine the adequate phonetic representation. For this, you need to consult the Language Supplement for the language in question. For Swedish, this is found in the html page **<Nuance>\Nuance Vocalizer For Network 5.0\languages\doc\languages\sws\alva**

vnetwork5_sws_supplement.htm. Open it using e.g. a web browser and use the Phonetic Alphabets section to determine the phonetic units that will make up the pronunciation you desire.

6. Having decided on a pronunciation, write it at the end of the row in the dictionary.

> **Note**:
>
> That if comprising several words, there may be particular characters that should be used to separate them. For example, in Swedish the character is underscore. An expression example is `Per // p E:r`

7. Save the file.
8. Open a command line prompt, browse to the TTS directory and use the **dictcomp.bat** utility to compile the dictionary, as follows:

```
C:\> Dictcomp.bat SVE
```

9. Test the abbreviation using the command line tool described above. Repeat steps above until you have produced an acceptable pronunciation. If you fail to do so, restore the backed up source dictionary and repeat step 8 to compile it.
10. If the new pronunciation should be taken into effect immediately, either replace the generated TTS file in the Identifiers share with this new one, or regenerate TTS phrases directly.

TROUBLESHOOTING 5

This chapter contains the following sections:

- TROUBLES
- CAUSES

5.1 TROUBLES

Each listed trouble appoints one or several possible causes, written in italic. To read more about a certain possible cause, see section 5.2.

5.1.1 BACKUP AND RESTORE

5.1.1.1 CMG Speech Backup does not work

If the CMG Speech Backup fails in SQL Server Agent, the most probable reason is that the *Database recovery model is Simple.*

5.1.1.2 CMG Speech Save Log does not work

If the CMG Speech Save Log job fails in SQL Server Agent, the most probable reason is that the *Database recovery model is Simple.*

5.1.2 CALL HANDLING

5.1.2.1 The system does not answer

This can be either because:

- *The call never reaches the system*
- *The receiving line/server combination is not configured in CMG Speech*

5.1.2.2 The system asks for PIN or extension for forwarded calls

If the system asks you to login for administration instead of presenting the presence and activity information for a called user, it can have several causes:

- The called party's phone is not actually forwarded due to problems in link between CMG and the PBX.
- Diversion service is not enabled in PBX and not signaled over the trunk to CMG Speech.

- Supplementary services are not enabled in PBX or in Aculab configuration.
- Diversion info is not enabled in Aculab configuration.
- The PBX is not sending diversion info over ISO GFP or in pure UUI.
- The PBX is tunneling UUI inside GFP.

5.1.2.3 The system does not play the called party's name / extension

This is most often regular system behavior. The system aims to reduce unnecessary presentation. For example, when a user presents a certain piece of information, the system omits to present the same information. A reason why TTS names are not played is because the called party has recorded a general greeting. In this case the called party's greeting is enough. There is no need for CMG Speech play the same information.

5.1.2.4 The system presents the wrong activity information

If the system presents only "the person you called is not available" although there is a registered activity, the cause is probably that *CMG Activity fetch fails.*

If the system does not present the activity but a return time, probably the cause is that *A user greeting takes precedence over system presentation.*

If the system presents an activity but not the registered one, the most likely cause is that *The CMG Activity mapping is incorrect.*

5.1.2.5 Voicemails are not recorded

Note:

Only applicable if CMG VoiceMail is installed.

If no voicemail option is presented, this can imply that the voicemail menu is not correctly configured, see section 5.2.7.

If the system plays "the mailbox is filled" instead of recording, the mailbox is not accessible or the size limit is exceeded. This can e.g. depend on the following:

- NeTS cannot access the voicemails share, see section 5.2.8.
- Voicemail Cleanup maintenance task has failed, see section 5.2.9.
- The reason can also be that the called party has too many voicemails in his mailbox.

5.1.3 WEB INTERFACES - BLUSTAR WEB, DIRECTORY MANAGER, CMG SPEECH CM

5.1.3.1 Menu in CMG Speech CM Incorrect Displayed

If CMG Speech CM menu is incorrectly displayed, then you security settings must be changed. Add the site to your trusted sites.

5.1.3.2 Cannot listen to Voicemails from CMG Web

This can happen for example if the PBX does not allow outgoing calls, see section 5.2.10

5.1.3.3 Cannot record Greetings in CMG Web

This can happen for example if the PBX does not allow outgoing calls, see section 5.2.10

5.1.3.4 Speech tab disabled in CMG Directory Manager

If the Speech tab in DM is disabled, the reason can be that the CMG Speech login information stated in CMG CM is wrong. More information can be found in section 5.2.11.

5.1.4 MAINTENANCE TASKS

5.1.4.1 File manager service fails to start

Sometimes the CMG Speech File Manger service reports an error when starting. This is a known issue but not critical, since the service does start after the error is logged.

5.1.4.2 Message wait indication on phone does not work for new voicemails

When this happens, it is often due to the following configuration issues:

- Message wait is not enabled for the DM user, see section 5.2.12.
- CMG message systems are not mapped to CMG Speech parameters, see section 5.2.13.

If both these are checked, also verify that the user's notification settings in BluStar Web are correct. If also these settings are correct, troubleshoot the ***spman*** process ***dbtopbx*** in the CMG server for hints.

5.2 CAUSES

5.2.1 DATABASE RECOVERY MODEL IS SIMPLE

The database cannot be backed up correctly unless it uses full recovery model. Do the following:

1. On the main database server, start **SQL Server Management Studio** or equivalent.
2. Browse to the **CMGVoice** database under the local server's **Databases.**
3. Right-click **CMGVoice** and click **Properties,** select the **Options** tab.
4. Set **Recovery model** to **Full.**

5.2.2 THE CALL NEVER REACHES THE SYSTEM

This can be verified through NeTS logs, executing in detailed log level.

Do the following:

1. Use **NeTS Config** to configure log level "debug3".
2. Place a call to the failing number, wait a few seconds and hang up.
3. Restore the NeTS log levels to original values.
4. Look for "inbound call" in NeTS log to find incoming calls. The logs immediately before and after that log will contain information about the call.

5.2.3 THE RECEIVING LINE/SERVER COMBINATION IS NOT CONFIGURED IN CMG SPEECH

When placing a call, do the following:

1. Check the Application Event Log for errors.
2. If receiving a collection of errors, check the first one.
   - If the error states "Either BOF or EOF is true" the line/server combination your call has come in on does not exist in CMG Speech. Which line/server combination that is should be obvious in one of the errors logged in the collection
3. Verify and fix through **CMG Speech CM -> System Settings -> Lines,** where you must find the line/server combination your call reaches. If it does not exist, add it.

5.2.4 A USER GREETING TAKES PRECEDENCE OVER SYSTEM PRESENTATION

The system aims at reducing presentations so that no information is presented twice. If a user has recorded a greeting for example for the activity lunch, the system will not present this information. If it did, the dialog would become something like:

The person you called is at lunch and is expected back at 12.15.

Hello, you have called Michael. I am at lunch right now.

Presenting the activity (in this example *lunch*) twice is unnecessary. When a user greeting exists, system presentation is suppressed.

5.2.5 CMG ACTIVITY FETCH FAILS

If there is a failure fetching CMG activities, this will be visible in the NeTS log.

If the connection information is wrong (login failed), make sure the correct connection information is stated in CMG Speech **CM in System Settings -> Databases.** This can be done by trying to configure the **Message systems** tab. If the login information is incorrect, you will get an error when trying.

If the **Event Viewer** log indicates “Distributed transaction error”, use **Administrative Tools -> Component Services** to configure the **CMGCom** package as follows:

1. Right-click the package and click **Properties.**
2. Go to the **Security** tab. Make sure that **Enforce access checks for this application** is **not** checked, and that the **Security level** setting states that access checks are performed **only at the process level.**
3. Go to the **Identity** tab. Make sure the package uses the same explicit identity as used by the Network Telephony Services (NeTS) service.

Shut down and restart the package if you have changed anything.

5.2.6 THE CMG ACTIVITY MAPPING IS INCORRECT

If the CMG Activities are incorrectly mapped in SCM, the wrong activity is definitely presented. In **CMG Speech CM -> User Groups -> CMG Activities,** select the correct display language (the one used in CMG DM and BluStar Web) and check the mapping between CMG Activities and CMG Speech phrases.

5.2.7 VOICEMAIL MENU OPTION IS NOT CORRECTLY CONFIGURED

There can be several reasons for a menu option to not appear. Two examples of this are:

- The menu option voicemail is only presented if the called party has an active voicemail account.
- Transfers to switchboard operators are only allowed during open hours.

Start with checking if there is a reason for leaving out the menu option:

1. Use CMG Speech CM to configure the CallHandling log level to Info or higher.
2. Reproduce the call case.

If the menu option is omitted for a reason, this will be shown in the NeTS log.

For example: it is not allowed for external callers, this can be remedied in **CMG Speech CM -> User Groups -> Menus.**

If no voicemail choice is visible in the NeTS log, the option is probably not at all in the menu applied to the current call. Use **CMG Web** and log in as the called party. Check the current activity in **Activities** page and use the **Preferences -> Voice -> Phrases** tab to see which menu is applied to the corresponding activity.

5.2.8 NETS CANNOT ACCESS THE VOICEMAILS SHARE

NeTS must run under a windows domain account with full control access to the Voicemails file system share on the CMG Speech Main server. If NeTS has been reinstalled or updated, it is possible that the account was not restored to the previous value, and that NeTS now runs as a local system account. This is sufficient for most telephony operations but not for accessing the file system shares. The solution is to restore the account and restart the NeTS process.

5.2.9 THE VOICEMAIL CLEANUP MAINTENANCE TASK HAS FAILED

The File Manager log on the CMG Speech Main (program) server should contain logs on the failed Voicemail cleanup. If you see something like “path/file access error”, make sure the CMG Speech File Manager service on the main program server runs as an account that has full access to the voicemails share.

If the log shows something like “invalid drive”, make sure that the Voicemails directory under <CMGSpeech>\Voices is shared, and that the account used by the File Manager service has full access to the share and the file system.

If the File Manager service is not running, refer to section 5.1.4.1.

5.2.10 THE PBX DOES NOT ALLOW OUTBOUND CALLS

Verified through NeTS logs executing in detailed log level, by doing the following:

1. Turn up appropriate NeTS log levels to max.
2. Repeat the failing attempt to call out. Wait a few seconds.
3. Restore the NeTS log levels to original values.
4. Analyze the NeTS log produced (found in <NeTS installation folder>\Logs\NeTS).

5.2.11 INVALID LOGIN INFORMATION TO CMG SPEECH IN CM

Do the following:

1. Make sure you have the latest service packs for CMG CM and DM.
2. Open **CMG Configuration Manager** and, in the left-hand menu, select **CMG Speech** and **Parameters.**
3. Verify that the login information is correct. The password is not visible but can be changed nonetheless.

Note:

The database login for CMG Speech can be the same as the login for CMG.

5.2.12 MESSAGE WAIT IS NOT ENABLED FOR THE DM USER

If the **Message wait** check box in DM is not checked for the user (in the **Settings** tab), Message wait notification will not work.

5.2.13 CMG MESSAGE SYSTEMS ARE NOT MAPPED TO CMG SPEECH PARAMETERS

In order for any notification to work, the CMG message system to use must be mapped to a CMG Speech Parameter. This is done in **CMG Speech CM** under **System settings -> Databases,** in the **Message systems** tab. Select an appropriate Parameter type for every message system listed.

LOG FILES AND TRACING 6

This chapter contains the following sections:

- LOG LEVELS
- LOGGING

This section describes how to activate logs for the system's normal operation, and how to interpret the logs produced by CMG Speech.

6.1 LOG LEVELS

Log levels in CMG Speech range from 0 (no logs produced) to 7 (debug level). The higher the log level, the more information is produced.

6.2 LOGGING

The following is possible to log:

- Basic system operation – incoming calls, outbound calls, call handling
- System maintenance procedures

6.2.1 BASIC SYSTEM OPERATION – CALL HANDLING

With basic system operation, we mean inbound and outbound calls and how they are handled. There are several logs involved in this area:

- **NeTS logs** describing telephony and state machine activity, as well as behavior logs from CMG IVR / VoiceMail, including information fetched from the CMG Speech and CMG databases.
- **CMG Speech Call Info logs,** describing the basic properties of incoming calls to CMG Speech
- **CMG Speech Channel logs,** complements the NeTS log with information on Administration-specific logs.

When troubleshooting telephony related cases, collect and analyze all logs related, for example NeTS, Call Info, and Channel logs.

6.2.1.1 NeTS

NeTS logs contain information about telephony-related events and actions (for example new incoming call, playing voice file, recording, answering, hanging up, and transferring) and state machine execution.

A NeTS log also contains information on call handling in most parts of CMG Speech; for example fetching user and activity information, presenting activities and menus, and recording of voicemails. The logs

describe decisions taken during the call - for example which menu options to present, whether or not to play greetings, how the user's current activity should be presented and so on.

Logging

NeTS logs are produced in the **<NeTS installation folder>\Logs\NeTS** directory and are named **NeTS_<YYMMDD>.log,** where <YYMMDD> is replaced with year, month and day.

Configuration

For more information on configuration of telephony and state machine logs, see available NeTS documentation.

CMG Speech related logs in the NeTS log are configured in **CMG Speech CM.**

These are the possible settings:

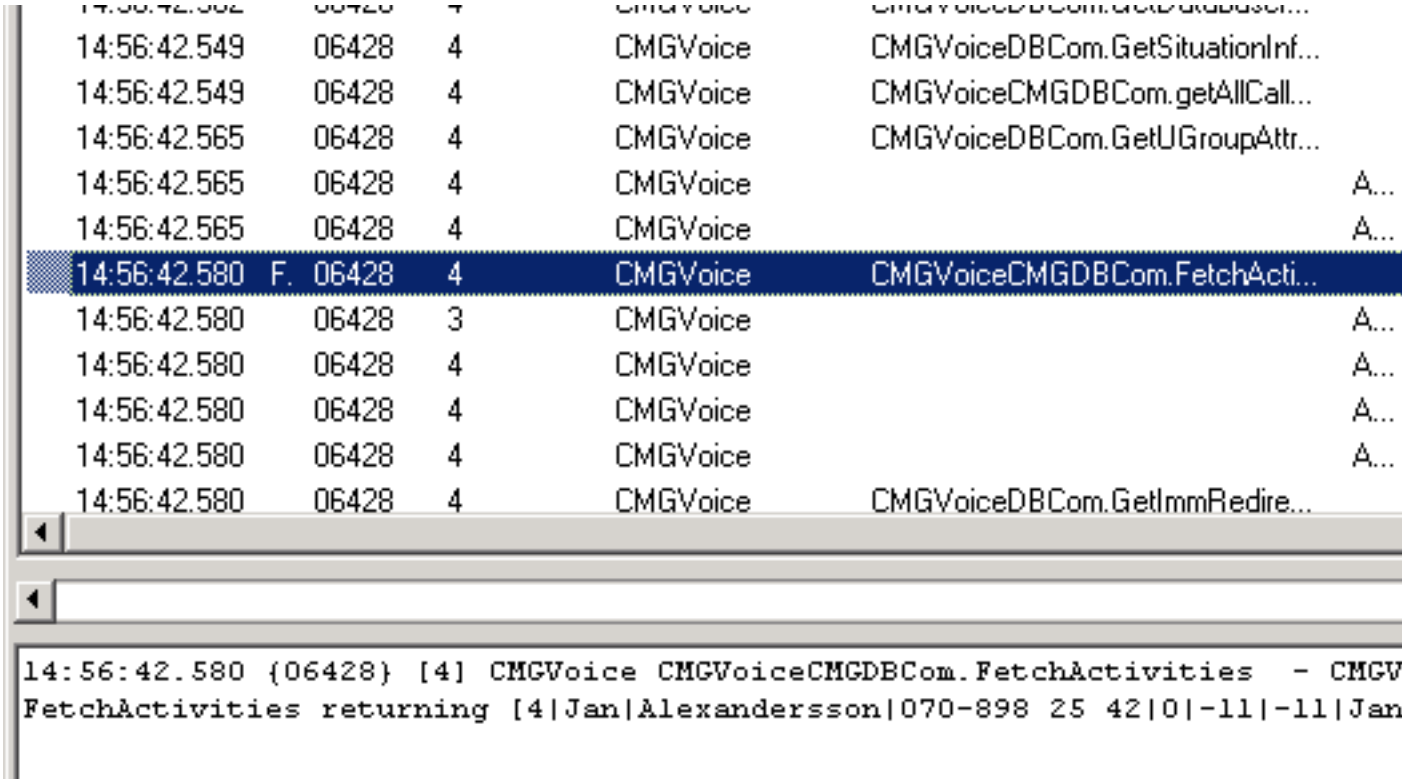
SETTING	LOCATION	DESCRIPTION
Log level for Call Handling	CMG Speech CM	Configured in **CMG Speech CM -> System Settings -> Log Levels** for the Call handling object.

Interpretation

For information on call handling and state machine activity in NeTS logs, please refer to available NeTS documentation.

A NeTS log with the Call Handling log level **Trace** will show information on basic system behavior and choices made. Usually **Information** level is enough to see the most basic decisions and follow the call flow.

An example of CMG Speech-related logs in the NeTS log is found in the following figure.



The example shows a log running in Information level. All lines with Module = CMGVoice are logged by CMG Speech components. Throughout a call, lots of information is fetched on user, activities, menu options and settings, and therefore it is good to learn how to navigate and locate things you are interested in.

In the example, the selected line is shown in more detail in the lower-level window. In this case, it shows the basic person and activity information fetched for the called person.

6.2.1.2 Call Info

Call Info logs contain basic information on all incoming calls to CMG Speech, that is, which number the call is from, which number was originally called, if the call was direct or indirect, the origins of the call and so on.

Logging

If produced, logs for Call Info are found in the `<CMGSpeech>\Logs\CallInfo` directory, and named `CallInfo_<YYMMDD>.log`, where <YYMMDD> is replaced with year, month and day.

Configuration

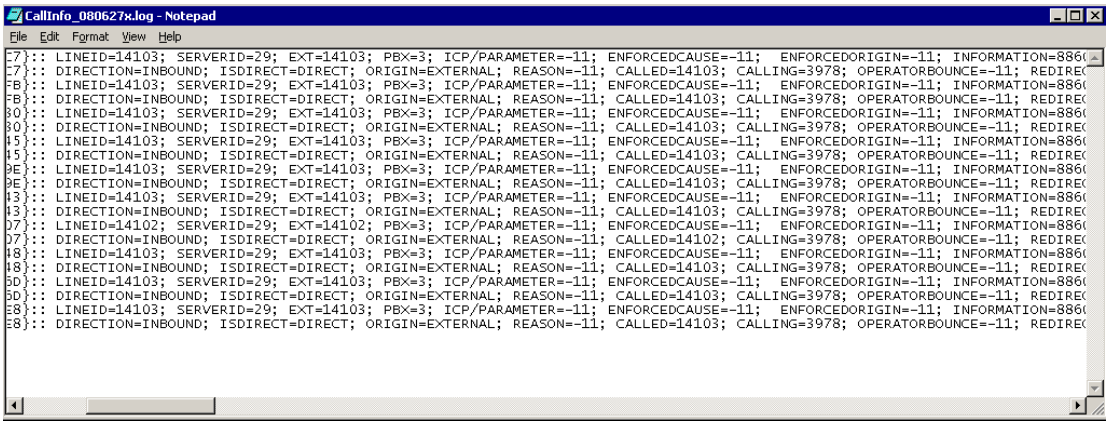
Configuration of Call Info logs is made in **CMG Speech CM.**

These are the possible settings:

SETTING	LOCATION	DESCRIPTION
Log Level	SCM	Configured in **CMG Speech CM -> System Settings -> Log Levels.** State an appropriate log level for the Call Info object. Normally, **Information** is an appropriate level.

Interpretation

A Call Info log produced with Information level will look as follows.



For each incoming call, two lines are logged;

- One with information on the line handling the call.
- One with information on the call itself.

The most important items found in a Call Info log are these:

- the **Line ID** or **Information** (port) number
- the **Actor ID**
- the **called** and **calling party**

The `LineID` gives us the ID of the channel handling the call and thus points to the Channel Log in which we will find the call handling log.

The `ActorID` is also important since it is used to follow the call through the NeTS log, the Call Info log and Channel log. It is the same in all three for a given call. In the figure above. The Actor ID appears just before the "::" characters, within {}-brackets.

The `Called` and `Calling` numbers tell us who is placing the call, and to which number. Usually, a case is described as "I called the number 2270 at 12.34…" and the time and called number is then the easiest way

to locate the call in the Call Info log. Having done that, the Actor ID for the call can be traced in the NeTS and Channel log as well.

6.2.1.3 Call handling – channel logs

The channel logs contain complementary information on calls handled by CMG Speech on a given channel, that is, a SIP port. Most of this information is found in the NeTS log, but in some cases it is logged here instead.

Logging

Channel logs are found in separate channel directories in `<CMGSpeech>\Logs`, one directory for each channel, and are named `CHAN_X_<YYMMDD>.log`, where `<YYMMDD>` is replaced with year, month and day.

Configuration

Configuration of channel logs is made in **CMG Speech CM.**

These are the possible settings:

SETTING	LOCATION	DESCRIPTION
Call Handling	SCM	Configured in **CMG Speech CM -> System Settings -> Log Levels** for the Call handling object.

Interpretation

The contents of the Channel log are the same as that of the NeTS log, logged by the CMGVoice module.

6.2.2 SYSTEM MAINTENANCE

To activate logging for any of the performed maintenance tasks, refer to the sub section for the appropriate function under Maintenance.

TECHNICAL ASSISTANCE 7

Mitel provides *www.mitel.com* as a starting point for technical assistance regarding all products, including the Virtual Reception. From here, partners can obtain online documentation, FAQs, latest software updates and request further technical assistance.

REFERENCES 8

[1] Virtual Reception Installation and Configuration Guide

[2] CMG Speech Office System Description

[3] CMG Speech Configuration Manager - Administrator’s Guide