Genesys Quality Management 8.0

Upgrade Guide

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Chapter

1 Introduction

This chapter provides an overview of this document, identifies the primary audience, introduces document conventions, and lists related reference information:

- Document Purpose
- Audience
- Document Version
- Related Documents
- Conventions Used
- Expected Knowledge

Document Purpose

This document describes the process of upgrading from an earlier Genesys Quality Management product version (see document content for compatibility information). Advanced configuration, clustering and integration with third party applications are described in other documents - e.g. Genesys Call Recording Administration Guide and related Whitepapers.

Audience

This document is intended for the system engineers and administrators responsible for installation and upgrading Genesys Quality Management.

Document Version

The Genesys Quality Management products are provided by a partnership between Genesys and ZOOM International. The Genesys Quality Management products use a versioning format that represents a combination/joining of the versions used by these two separate entities. Although the Genesys Quality Management products and documentation use this combined versioning format, in much of the software and logs you will see the ZOOM versioning alone. You need to be aware of this, for example, when communicating with Technical Support.

The version for this document is based on the structure shown in the following diagram:
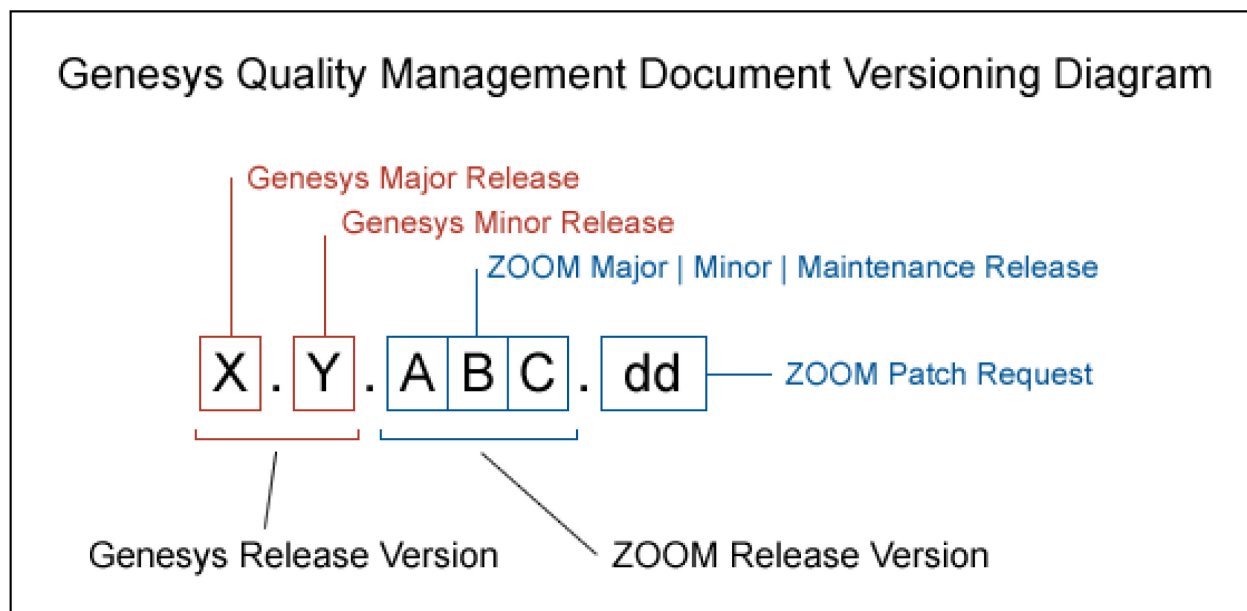
Related Documents

For other documents related to Genesys Call Recording please consult:

- *Genesys Quality Management 8.0 Installation Guide*
- *Genesys Quality Management 8.0 Planning Guide*
- *Genesys Screen Capture 8.0 Administration Guide*
- *Genesys Quality Manager 8.0 Administration Guide*
- *Genesys Quality Manager 8.0 User Guide (CC Manager)*
- *Genesys Call Recording 8.0 User Guide*

Conventions Used

Names of functions and buttons are in bold. Example: **Upload**

File names, file paths, command parameters and scripts launched from the command line are in
`non-proportional font.`

```
Code is placed on gray background and bordered
```

Expected knowledge

Readers of this document are expected to have the following skills or knowledge

- Basic knowledge of the Genesys Call Recording system features and functionality
- Knowledge of Red Hat Enterprise Linux installation and configuration
- Unix system administration skills
- Network administration skills

2 Overview

Genesys Quality Management introduces an upgrade/migration utility in the form of a command-line based wizard, for upgrading the following Genesys Quality Management versions:

Existing Installation Version	Possible Target Migration Version
GQM 8.0.460	GQM 8.0.461, GQM 8.0.463, GQM 8.0.470, GQM 8.0.471, GQM 8.0.480
GQM 8.0.461	GQM 8.0.463, GQM 8.0.470, GQM 8.0.471, GQM 8.0.480
GQM 8.0.463	GQM 8.0.470, GQM 8.0.471, GQM 8.0.480
GQM 8.0.470	GQM 8.0.471, GQM 8.0.480
GQM 8.0.471	GQM 8.0.480

The upgrade wizard only supports migration from/Genesys Quality Management installations that are using the default embedded PostgreSQL database. Oracle is not currently supported by the wizard. Please refer to the *Using Oracle with Genesys Quality Management* guide for the procedures for installing and migrating to an Oracle database-based Genesys Quality Management installation.

The information in this chapter is divided into the following topics:

- Features
- Limitations
- Requirements
- Principles of Operation

Features

- The upgrade wizard always performs a complete file / data backup before commencing the upgrade operation.
- Both interactive and command-line (CLI) modes are available; the latter enables batch processing scenarios
- All target installs require only the installation ISO / CD / DVD to be accessible on a Linux mount point; all patches are included within the installation's database directory
- All configured remote storage mount points remain available during and after the update process has finished
- A reboot is recommended.
- All update actions are logged to a file in the /home directory, i.e.: `/home/callrec_upgrade.log`

Limitations

The current upgrade wizard has the following known limitations:
- A number of settings are not migrated, including maintenance tool (e.g. Archive, Backup) preferences, so these should be manually recorded and re-entered after upgrade is complete. These tasks are noted in the 'Pre-Upgrade' tasks section of this guide;
- User permissions in Genesys Call Recording and Genesys Quality Manager are not removed during upgrade;
- Manually (or independently) upgraded software packages on the server can cause problems for the upgrade wizard. For example, if security patches have been applied to the PostgreSQL database client since the original Genesys Quality Management installation, the upgrade wizard may stop with an error when attempting to upgrade this software. In this case, please contact Support.

Note:
There is a known issue with servers equipped with iSCSI storage devices, which causes the upgrade process to fail. Please contact Support for more information.

Requirements

The upgrade wizard requires the following for correct operation:
- Execution from a Linux root account in server CLI or via SSH client
- Access to the mounted installation ISO / CD / DVD containing the target Genesys Quality Management installation files
- The wizard must be run on each individual server in a cluster configuration
- Enough storage space available locally (~500 MB for a single server installation with no database data)

The wizard does not require that Genesys Quality Management services such as Genesys Call Recording and Genesys Quality Manager are running when an upgrade is started, but it is recommended that all services are running when upgrade starts.

Principles of Operation

The Genesys Call Recording configuration files are always backed up before upgrading begins, while (by default) media files are not backed up, since they are not affected by the upgrade. This can be changed using the 'backup exclude file' included with the upgrade wizard scripts – see the Pre-Tasks section.

Depending on the type of installation being upgraded, the upgrade wizard will behave differently in Interactive Mode regarding database data backup. Database backup behavior is categorized by the following scenarios of the existing Genesys Quality Management installation:

- **Single (standalone) server**, containing local PostgreSQL embedded database and local operational Genesys Call Recording Configuration Service
  - o Behavior: if database backup is requested, *backs up and restores ONLY the configured Genesys Call Recording database – any other databases present will NOT be restored!*

- **Cluster server #1**, containing local PostgreSQL embedded database, Genesys Call Recording configuration files, but no local operational Genesys Call Recording Configuration Service
  - o Behavior: if database backup is requested, allows user to select one or more databases to be backed up and restored

- **Cluster server #2**, containing local operational Genesys Call Recording Configuration Service, but no local database
  - o Behavior: no request for database backup

- **Cluster server #3**, containing only Genesys Call Recording configuration files (e.g. a dedicated Recorder or Decoder server)
  - o Behavior: no request for database backup

The following diagram represents this database backup decision logic:
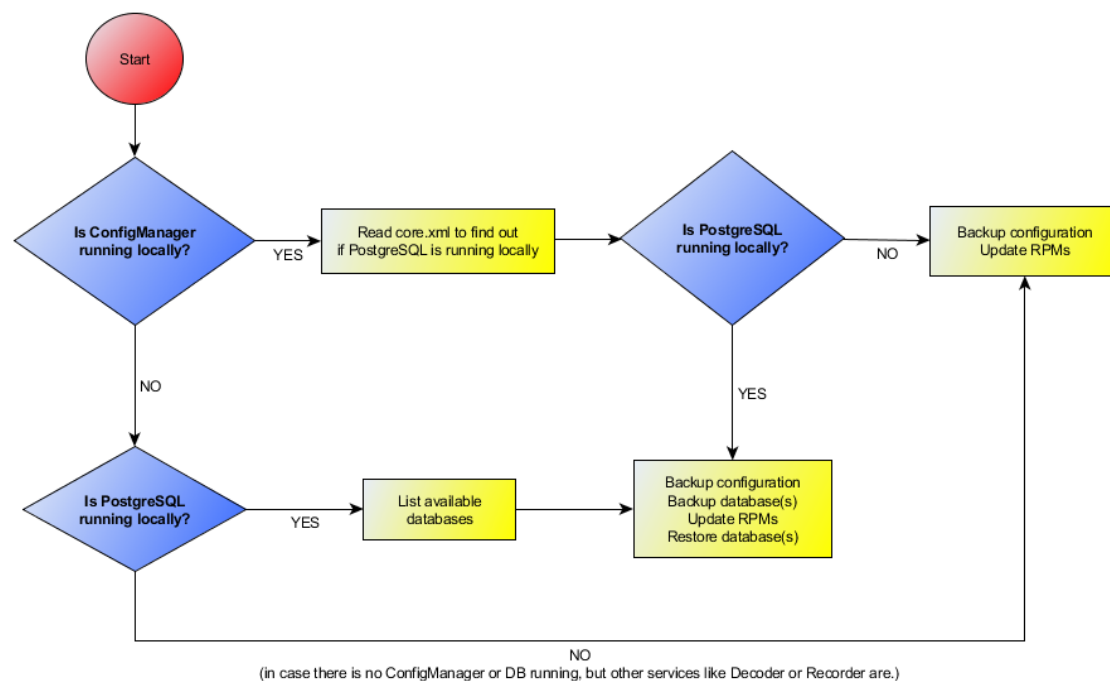
Figure 1: Upgrade process - database backup scenario logic

Ensure databases are backed up!
During upgrade, the server software modules (RPMs) are upgraded, which includes the PostgreSQL database server, if installed. Thus if databases are not backed up either during upgrade wizard operation or manually beforehand, they cannot be restored after database server update

3 Pre-Upgrade tasks

The following tasks should be performed before running the upgrade wizard.

- Note down the Maintenance Tool settings (**Global**, **Archive**, **Backup**, **Restore**, **Delete**, **Synchro**, **Delete**, **Relocation**) on the **Settings** > **Configuration** > **Maintenance** screen in the Genesys Call Recording Web GUI. The current version of the upgrade wizard does not migrate these settings, so they will need to be restored manually in the Web GUI after upgrading is complete.

- For installations using custom file paths (i.e. not the Genesys Call Recording 'default' paths of `/opt/callrec/...` for audio and video data files), modify the paths in the `backup_exclude_file` (included in the `upgrade` directory), which contains all paths for directories that should not be backed up during the upgrade.
The following is the default contents of this file (which follows the `rsync` utility syntax):

```
- /data/calls/
- /data/pcap/
- /data/psql/
```

- The upgrade wizard does not back up media by default (as indicated by the exclude file above), since only the system and configuration files are updated. The following directories are backed up:
    - `/opt/callrec, /etc`
    - PostgreSQL configuration files
    - PostgreSQL data dump files (these may be extremely large if you have a high volume of calls)

- Ensure that you have enough storage space available locally before running the upgrade scripts (~500 MB for a single server installation with no database data)

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4 Obtaining the Upgrade Wizard

The information in this chapter covers following topic:

- [Genesys Quality Management 8.0 Installation CD](#)

Genesys Quality Management 8.0 Installation CD

On the **Genesys Quality Management installation CD/DVD/ISO** (from Genesys Quality Management 8.0.480 upwards) the upgrade wizard is available as an executable script (in the `/upgrade` directory at the root of the CD). In this case, it is only necessary to mount this CD/ISO; the upgrade wizard will run directly from the wizard, referencing the CD for other resource files as necessary.

- Mount the CD or ISO image

```
mount /dev/cdrom /media/cdrom
```

Note:

the mount command arguments may vary for your setup; depending on the device connected, the mount command could be:

`mount /dev/cdrecorder /media/cdrom` [or other – consult your device documentation]

The `/media/cdrom` location needs to be an existing directory on your system, and can be created using: `mkdir /media/cdrom`

- Change directory to the upgrade directory on the mounted CD / ISO and check the directory contents

```
cd /media/cdrom/upgrade
ls
[backup_exclude_file  database_updates      upgrade_script.sh
backup_script.sh      global_functions.sh  upgrade_scripts]
```

5 Running the Upgrade Wizard

The upgrade wizard can be run in two modes; interactive mode (requiring user input) and 'batch' or CLI mode, where all relevant command line parameters are provided when executing the wizard, enabling unattended upgrade operations to be performed.

The information in this chapter is divided into the following topics:

- Interactive Mode
- CLI Mode

Interactive Mode

The interactive upgrade process is performed as follows, when logged in via the server console (CLI) or SSH remote session with root permissions:

- Start the upgrade wizard shell script

```
sh upgrade_script.sh
```

- Enter the required target version to update to (without square brackets):

```
############################## Upgrade process ###########################
###
#
# Current version of database is :  4.6.0
#
# Current installed packages version : 8.0.461
#
############################################################################
###

Upgrade target options :
-------------------------
 Type [8.0.461] for upgrade to version 8.0.461
 Type [8.0.470] for upgrade to version 8.0.470
 Type [8.0.480] for upgrade to version 8.0.480
 For exit type [q]

Enter upgrade target (see possible options above) :
```

Figure 2: Upgrade wizard - selecting an upgrade target

- Select a backup directory for current configuration data (default is /home/backup/). Ensure that any custom directory has enough storage space:

```
############################## Upgrade process ##############################
###
#
# Current version of database is :  4.6.0
#
# Current installed packages version : 8.0.461
#
#############################################################################
###

Upgrade target options :
--------------------------
 Type [8.0.461] for upgrade to version 8.0.461
 Type [8.0.470] for upgrade to version 8.0.470
 Type [8.0.480] for upgrade to version 8.0.480
 For exit type [q]

Enter upgrade target (see possible options above) :8.0.480
Checking if current version is older than requested target version ... DONE
Checking if source version is supported .... DONE
Enter backup directory (be sure to have enough space there): [/home/backup]: █
```

Figure 3: Upgrade wizard - selecting a backup directory

> **Note:**
> If the backup directory is different to the default (`/home/backup`), it must already exist
> before running this wizard, with full read/write permissions for the script (`750`).

- Choose whether to perform a complete database dump (yes/no); default is yes:

```
###
#
# Current version of database is :  4.6.0
#
# Current installed packages version : 8.0.461
#
##############################################################################
###

Upgrade target options :
-------------------------
 Type [8.0.461] for upgrade to version 8.0.461
 Type [8.0.470] for upgrade to version 8.0.470
 Type [8.0.480] for upgrade to version 8.0.480
 For exit type [q]

Enter upgrade target (see possible options above) :8.0.480
Checking if current version is older than requested target version ... DONE
Checking if source version is supported .... DONE
Enter backup directory (be sure to have enough space there): [/home/backup]:
Is configuration service running .... DONE
Getting database host .... DONE
Checking if database running on local server .... RUNNING
Do you want to make a database dump [y|n]? [y]: 
```

Figure 4: Upgrade wizard - choosing to make a database dump

Warning!
Answering 'no' at this database dump prompt will effectively *delete all your existing databases and data* during the upgrade! If a database is not backed up, it cannot be restored after the upgrade is complete.

The behavior of the upgrade wizard at this point is dependent on the type of existing installation that is being upgraded (standalone server or cluster – see Principles of Operation).

If no Genesys Call Recording Configuration Service is currently present on the server (i.e. the server is part of a cluster) and you chose to perform a database dump in the last step, the list of existing databases will now be displayed, each with an index number, to enable you to specify database(s) to back up:

- Enter **one** of the following:

    - the index number of the database that you wish to back up (e.g. 1)

    - a – to back up all databases displayed

    - n – to back up no databases displayed (cancels backup operation – *no databases will be restored after upgrading is complete!*)

- • The wizard will continue to allow individual databases to be chosen for backup until either all have been selected, or n is pressed.

```
Creating backup of /opt/callrec directory .... DONE
Getting list of installed RPMS .... DONE
Creating backup of CallREC setup cache file .... DONE
Getting database pool name .... DONE
Getting database host .... DONE
Creating backup of search path .... DONE
Is configuration service running .... DONE
Found following databases :
------------------------

------------------------------------
| Index | Name          | Size   |
------------------------------------
| 1     | callrec       | 10024kB |
| 2     | backup        | 5192kB |
| 3     | development   | 5192kB |
| 4     | production    | 5192kB |
------------------------------------
Select database(s) to be backed up (enter index number, 'a' for all or 'n' for n
othing/next step): [a]: 1
The following databases were selected for backup :  callrec
Enter index number for another DB backup or 'n' to continue. [n]: 4
The following databases were selected for backup :  callrec production
Enter index number for another DB backup or 'n' to continue. [n]: n
```

Figure 5: Upgrade wizard - selecting databases for backup (cluster installations only)

- • The wizard will now begin the upgrade process. This may take *several hours*, depending on the size of database and file stores. At this point the screen may appear to be frozen, while the upgrade wizard is creating the database dumps.

```
 For exit type [q]

Enter upgrade target (see possible options above) :8.0.480
Checking if current version is older than requested target version ... DONE
Checking if source version is supported .... DONE
Enter backup directory (be sure to have enough space there): [/home/backup]:
Is configuration service running .... DONE
Getting database host .... DONE
Checking if database running on local server .... RUNNING
Do you want to make a database dump [y|n]? [y]:
Checking if proper media is inserted .... PASS

Stopping nagios and snmpd:
-------------------------
Stopping nagios: No lock file found in /var/run/nagios.pid
Stopping snmpd:                                              [  OK  ]
Creating backup of database config files .... DONE
Removing database connections .... DONE
Adding connection for 127.0.0.1 and 192.168.110.78 .... DONE
Reloading database configuration .... DONE

Stopping product services:
-------------------------
Stopping Call Recording WEB: ...
```

Figure 6: Upgrade wizard - upgrading in progress

- When complete, the wizard will show an appropriate success message and exit. If the wizard stops responding (check the process state using the top command), or shows a failure error, please contact Support.

```
----------------

Starting nagios and snmpd:
-------------------------
Starting nagios: done.
Starting snmpd:
Getting list of installed RPMS .... DONE
Changing directory to '/media/cdrom/ZQM_Suite/RPMS' .... DONE
Getting list of CDROM RPMS .... DONE
Filtering output of 'cdrom_packages' .... DONE
Returning to previous location .... /root/upgrade
Making a diff between installed/CDROM packages .... DONE
Umounting CDROM.
Checking content of fstab file .... OK
Upgrade finished.

**********************************************************
* Upgrade complete - restarting the server is recommended. *
* Some new features such as Keymanager may not be enabled. *
* These features can be enabled using the standard         *
* 'callrec-setup' utility.                                 *
**********************************************************

[root@tstcr029 upgrade]#
```

Figure 7: Upgrade wizard - upgrade successful

CLI Mode

The upgrade utility can be run as part of a batch (non-interactive) process from the command line as follows:

```
sh upgrade_script.sh [TARGET_VERSION] [BACKUP_DIR_PATH]
[dodump|nodump]
```

The command line parameters are:

- `TARGET_VERSION`: the three digit version to which you want to upgrade (i.e. the version contained on the installation CD / DVD / ISO); e.g. `4.8.0`
- `BACKUP_DIR_PATH`: full path to an existing directory, for storage of backup files created during the upgrade process; e.g. `/home/backup`. *This directory must exist before running the script, with full read/write permissions for the script (`750`)*
- `dodump` [or] `nodump`: specify whether to create a database backup file or not (respectively) before starting the upgrade process
- `-h` [or] `--help`: display the above help information

Entering no parameters will start up the interactive upgrade mode, as described earlier.

Warning!

Specifying nodump as a parameter will *effectively delete all your existing databases and data* during the upgrade! If a database is not backed up, it cannot be restored after the upgrade is complete.

Example:

```
sh upgrade_script.sh 4.8.0 /home/backup dodump
```

6 Post Upgrade Tasks

After successful completion of the upgrade wizard, the Genesys Call Recording Web GUI should be accessible at the same URL, with the same user accounts and passwords available.

However, the following tasks should be performed before the upgraded installation goes live.

- Ensure correct Genesys Call Recording and Genesys Quality Manager licenses are uploaded via their respective Web GUIs (see the *Call Recording* and *Quality Manager Administration Guides*).

- Re-enter the Maintenance Tool settings in the Web GUI (**Settings** > **Configuration** > **Maintenance**), since these are not migrated by the upgrade wizard at present.

- Ensure that the roles and permissions are set up correctly on the upgraded version (rights are not removed from existing installations during an upgrade). Ensure also that any new roles or permissions included in the newer Genesys Quality Management version are assigned within the upgraded Genesys Call Recording and Genesys Quality Manager applications

- For installations using Cisco UCCE integration, the Cisco UCCE library file JavaCIL.jar was backed up to `<backup-path>/callrec-backup/ipcc/JavaCIL.jar` by the upgrade wizard, but must be manually restored and the UCCE service restarted.

  - Restore the saved `JavaCIL.jar` file from the backup directory to the Genesys Call Recording installation and restart the UCCE integration module after the Genesys Call Recording license has been uploaded (this example uses the default backup path):

    ```
    mv /home/backup/callrec-backup/ipcc/JavaCIL.jar
    /opt/callrec/ipcc/
    /opt/callrec/bin/rc.callrec_ipcc restart
    ```

- For installations that are older than Genesys Quality Management 8.0.470 and have a large number of recording rules, version 8.0.470 introduced a new database constraint, preventing the creation of rules with a priority greater than 1000:

```
CONSTRAINT valid_priority CHECK (priority >= 0 AND
priority < 1000)
```

- This database patch is not currently applied to earlier installations that are upgraded Genesys Quality Management 8.0.470 or above, so this must be done as follows:
- In a PostgreSQL database editor, check if all existing recording rules have a priority value under 1000. If they do, then this constraint can simply be patched in directly.
- If recording rules exist that have a priority value of 1000 or over, they must be manually fixed with a value below 1000 before the patch can be applied.

Chapter

7

Requesting Technical Support

Prior to contacting Genesys technical support, please refer to the *Genesys Technical Support Guide* for complete contact information and procedures.

Technical Support from VARs

If you have purchased support from a value-added reseller (VAR), please contact the VAR for technical support.

Technical Support from Genesys

If you have purchased support directly from Genesys, please contact Genesys Technical Support at the following regional numbers:

Region	Telephone	E-Mail
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