



VisualGroups 1.5.2.0

Documentation for Administrators and Users

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1 Installing VisualGroups

This chapter describes the serversided installation of VisualGroups from 1.1 on. The use of the client is described in 3 *Using SwyxIt! with VisualGroups*, page 24.

VisualGroups offers the possibility of visually managing call queues in SwyxIt!. Incoming calls are automatically queued and forwarded to available users. Missed calls can be traced back. Additionally, VisualGroups Enhanced offers a statistic function.

A queue is a SwyxWare user including a Call Routing Script and an assigned number. The users' SwyxIt! or NetPhone clients receive and display the queue calls using VisualGroups skins.

According to the "longest inactive" principle, the queue calls are automatically forwarded to the users' internal number. The user determined by the system then has a defined time to answer the call before the caller is being forwarded to the next available user. After a call the user has a wrap up time defined by the administrator in which no calls can be forwarded from the system to the user.



VisualGroups is currently unavailable for SwyxON.

1.1 System requirements

The same system requirements apply for the server- and client-side VisualGroups installation as for SwyxIt! or Netphone Client and SwyxWare or Netphone. See chapter "System Requirements" in the SwyxWare or Netphone documentation.

For VisualGroups 1.5.0.0 you need SwyxWare 11.38 or higher.

1.2 Installing

You must install VisualGroups on the same computer you use for SwyxWare.



For the installation SwyxWare system administrator rights are required.



The use of a remote SQL server is not supported by the VisualGroups installation wizard. For this use the unattended installation method, see *Remote SQL Server Support*, page 9.

For operating VisualGroups Microsoft IIS is required. If Microsoft IIS is not installed, it will be installed via the VisualGroups installation wizard.

The queue users, included in your license, are installed automatically via installation wizard. You can create additional queues via web portal after you have purchased additional licenses. After the configuration of queues you must assign a number to each user created for the queues. See chapter "Numbers and Number Mappings" in the SwyxWare documentation.

You must assign one of the VisualGroups skins to the users' SwyxIt! or Netphone clients so they can receive and display queue calls.

For information on licensing see the SwyxWare documentation, chapter "Licensing, Licensing via licence key, Options and option packs, Swyx VisualGroups".



Check if your license is valid before configuring VisualGroups. Hints of invalid licensing appear on the web portal start page.

How to install VisualGroups

1 Define the following firewall settings on your server:

Log	Port	TCP/UDP	Direction
HTTP	80	TCP	Inbound + Outbound
HTTPS	443	TCP	Inbound + Outbound

- 2 Download the "SwyxPLUSVisualGroupsInstaller.exe" from the Swyx website and start the installation.
- 3 From the dropdown list select the required language.
 - ✓ The VisualGroups installation wizard start page appears.
- 4 Click on "Next" to start the installation.
- 5 Activate the checkbox to accept the license agreement.
- 6 Click on "Next".
 - ✓ Your system is being checked.
- 7 Click on "Next".
- 8 Click on "Browse" and select a memory location, if applicable.



If you remove the IIS website on which VisualGroups is active or the virtual directory for VisualGroups you cannot use VisualGroups anymore and have to reinstall the application.

- ✓ Your system is being searched for a SwyxWare and a SQL database installation.
 - ✓ The name of your SQL server instance appears.
- 9 Depending on your configuration you can select "Windows authentication" or "SQL server authentication".



The usage of Authlite Two Factor solutions or similar products might result in an installation error when using Windows Authentication for the SQL connection. It is therefore recommended that you use SQL authentication.

- 10 Click on "Next".
 - ✓ An overview of your IIS installation settings appears.
- 11 Click on "Next".
 - ✓ VisualGroups is being installed.



Your system may be restarted automatically during the installation, depending on which Windows components are already installed. The restart can cause an interruption of the telephony functions on your server. The installation assistant will be restarted automatically after the interruption. The installation will continue with the step where the interruption occurred.

- 12 Click on the link to configure VisualGroups via Web Portal.
 - ✓ You are forwarded to the configuration wizard and can configure VisualGroups initially, see 2.1 **Configuring initially**, page 11.



If you have a large number of VisualGroups users (about 400 or more), it is recommended to adjust the client sided update time. Enter the desired value in milliseconds in the registry key "Computer\HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Swyx\VisualGroups\userinterval". For example, enter "5000" to set the update time to 5 seconds. The default value is "3000".

1.2.1 Refreshing

You can update VisualGroups by executing the installation file. Your current version will be automatically identified and the update starts.



You can run the installer again at any time. If the same VisualGroups version is already installed on your system, all found configuration data will be preserved (repair installation).



The update will also affect your VisualGroups database, therefore you need to create a backup in advance.

1.2.2 Backing up and restoring

You can backup and restore your VisualGroups environment with current data. The VisualGroups instance is stored on your SwyxWare database.

How to create a backup of the VisualGroups database

- 1 Stop the VisualGroups website in the Microsoft IIS-Manager.
- 2 Create a backup of the VisualGroups database. By default the name of the database is "VisualGroups".
- 3 Start the VisualGroups website in the Microsoft IIS-Manager.
 - ✓ The current database of your VisualGroups directory is backed up.

How to restore a VisualGroups environment

- 1 Stop the VisualGroups website in the Microsoft IIS-Manager.
- 2 Stop the "SwyxPLUS VisualGroups Reporting and Maintenance" service in the Windows Task Manager.
- 3 Restore the VisualGroups database backup you have created before (e.g. using Microsoft SQL Server Management Studio).
- 4 Start the VisualGroups website in the Microsoft IIS-Manager.
- 5 Start the "SwyxPLUS VisualGroups Reporting and Maintenance" service in the Windows Task Manager.
 - ✓ Your VisualGroups environment is restored to the creation date of the backup.

1.2.3 Changing VisualGroups storage directories

By default VisualGroups files are stored in the following directories which you can change as follows, if applicable:

File	Storage directory	Changing option
Installation files	<ul style="list-style-type: none"> For SwyxIt!, VisualGroups up to version 1.1.2.0: C:\Program Files (x86)\Swyx\SwyxPLUSVisualGroups For SwyxIt!, Visualgroups new installation version 1.2.0.0 or higher: C:\Program Files (x86)\Swyx\SwyxVisualGroups For Netphone, VisualGroups up to version 1.1.2.0: C:\Program Files (x86)\T-Com\SwyxPLUSVisualGroups For Netphone, VisualGroups new installation version 1.2.0.0 or higher: C:\Program Files (x86)\T-Com\SwyxVisualGroups 	During installation

File	Storage directory	Changing option
Log file (trace files)	For SwyxIt!: C:\Program-Data\Swyx\Traces Or for Netphone: C:\Program-Data\T-Com\Traces	Via registry key, see <i>Storage directory</i> , page 8.
PDF files with reports (Reports are being sent via email)	For SwyxIt!: C:\Windows\Service-Profiles\LocalService\AppData\Roaming\Swyx\VisualGroups\reporting\ Or for Netphone: C:\Windows\ServiceProfiles\LocalService\AppData\Roaming\T-Com\VisualGroups\reporting\	Changing not possible
IIS log files	%System-Drive%\inetpub\logs\LogFiles	In IIS in the logging menu you can adjust the settings.

1.2.4 Changing the trace level for VisualGroups files

You can define the storage directory and the trace level for each VisualGroups component separately via Windows registry key:

- 1: Set by default, only serious errors
- 4: Significantly more information, useful for support purposes, e.g. the entire installation process is logged



The Windows service account requires read and write rights for the selected storage directory. You may have to adjust the rights via the security tab in the Windows folder settings.

There are the following components available for the <component name> placeholder:

Component name	Function
admin	Logging the web portal activity
ecr	Logging ECR activities
installer	Logging the installation activities
reporting	Reporting creation and sending of the logs
user	Logging the user related data on the server side



If there is no registry key you can create it yourself. Otherwise, the trace files are stored in the default directory.

Change	Registry key and value
Storage directory	Report name: Log file For SwyxIt!: HKLM\Software\WOW6432Node\Swyx\VisualGroups\<Komponentenname>\CurrentVersion\Tracing Or for Netphone: HKLM\Software\WOW6432Node\T-Com\VisualGroups\<name of the component>\CurrentVersion\Tracing Value: <Storage directory> and <File name> of the log file (must have the ending .log) Type: REG_SZ
Trace level	For SwyxIt!: HKLM\Software\WOW6432Node\Swyx\VisualGroups\<Komponentenname>\CurrentVersion\Tracing Or for Netphone: HKLM\Software\WOW6432Node\T-Com\VisualGroups\<name of the component>\CurrentVersion\Tracing Name: <component name> (s. table above) Value: „1“ or „4“ Type: REG_DWORD

1.2.5 Unattended Installation

You can also install Swyx VisualGroups in the background without user intervention. You can run the installer from the command line. To do this, you need an XML file that contains all preconfigured entries for the installation. The XML file should contain the following parameters:

```
<?xml version="1.0" encoding="utf-8"?>

<c:VisualGroupsConfiguration xmlns:c="http://
www.lanphone.de/schemas/2008/VisualGroupsConfiguration"
mode="automatic">

  <c:GlobalParameter>

    <c:Parameter Name="AcceptSwyxEULA">true</c:Parameter>
    <c:Parameter Name="VGInstallationPath">C:\Program Files
(x86)\Swyx\VisualGroups</c:Parameter>
    <c:Parameter
Name="SQLServerInstance">MACHINENAME\SQLEXPRESS</
c:Parameter>
    <c:Parameter Name="SQLAdminLoginMode">SQL</c:Parameter>
    <c:Parameter Name="SQLAdminLoginUser">Admin</c:Parameter>
    <c:Parameter
Name="SQLAdminLoginPassword"><![CDATA[Passw0rd$%³€]]></
c:Parameter>
    <c:Parameter Name="SQLVGLoginAutoCreate">true</
c:Parameter>
    <c:Parameter Name="SQLVGLoginUser">SA</c:Parameter>
    <c:Parameter Name="SQLVGLoginPassword">Passw0rd$%³€</
c:Parameter>
    <c:Parameter Name="SQLVGDatabaseAutoCreate">true</
c:Parameter>
    <c:Parameter Name="SQLVGDatabaseName">VG-DATABASE-01</
c:Parameter>

  </c:GlobalParameter>

</c:VisualGroupsConfiguration>
```


To install VisualGroups unattended

- 1 Create an XML file with the parameters mentioned above. A sample XML file is included in the VisualGroups download.
- 2 Run the installer in unattended mode by typing the following command:

```
"C:\path_to_installer\SwyxPLUSVisualGroupsInstaller.exe" -c C:\path_to_xml\unattendedVG.xml
```

 - ✓ The installation takes place in the background.
- 3 If necessary, the computer restarts automatically. Then enter your login data to continue the installation.



No message about a completed installation will be displayed. You can determine a successful installation by verifying that the VisualGroups Reporting Service is running as a service on the server and that the VisualGroups connection is set up and running in Microsoft IIS.

Remote SQL Server Support

Use 'remoteservername\SQlinstance' and enter the SQLAdminLoginUser and a password. This allows you to create or use an SQL logon account for VisualGroups instead of the (IIS) Application Pool user. Use the following parameters for the configuration:

Parameter	Description
SQLVGLoginAutoCreate	Set the value to 'true' to generate a new SQL logon with the credentials given below. Set the value to 'false' if you have already configured an SQL logon to the SQL server and want to use it.
SQLVGLoginUser	Specify the user to log in via SQL.
SQLVGLoginPassword	Set the password corresponding to the user to log in via SQL.

1.3 Using VisualGroups together with SwyxWare groups

The assignment of users to queues or groups is independent of each other.

If users are assigned to VisualGroups queues (following **queues**) and SwyxWare groups (following **groups**) at the same time, interactions can occur.

If call signalling between group members or via configured relationships is configured for at least one of the groups, this affects all users as they can now receive call signalling. Calls to a member of the group are then signalled to all members via a Windows message window. A user in the group can pick up these calls.

If a user accepts a call signaled in this way, note the following effects:

Case A: A VisualGroups user picks up a call to his group

- The user cannot receive a queue call because he is already on the phone. This means that the user cannot be reached by the queue.
- This results in fewer calls appearing in the user's VisualGroups call statistics. See also 2.2.9 **Create, edit and request regular reports**, page 18.
- The postprocessing times defined for the queues do not apply to direct calls.

Case B: A user of a group accepts calls to a queue

- The call is considered "Answered" in the VisualGroups call statistics and in the optional queue report.
- The call is considered "Missed" in the personal VisualGroups statistics of the originally called VisualGroups user and in the optional report with userspecific evaluation.
- In the optional report, the call acceptance by the accepting user of the group is displayed. See also **Userinformation in report**, page 19.



SwyxWare recognizes one line concept per user. Different phone numbers can be assigned to the lines and specific settings can be made for each user's line. There is no line concept for queues. The call is delivered to a user, not to a line or an assigned phone number of this user. Therefore, no phone number is stored in the "Call Detail Records" of a queue call delivered in this way.



The post-processing time set for a user in SwyxWare is independent of the post-processing time set for the queue in VisualGroups. See ***This is how you create and edit a queue***, page 12.

- The SwyxWare post-processing time blocks the user's **line** after hanging up for the specified time for further call delivery on this line.
- The VisualGroups post-processing time locks the user after hanging up for the assignment of queue calls for the specified time.

For further information on SwyxWare groups, see the groups chapter in the SwyxWare or SwyxIt! documentary.

1.4 Uninstalling

You can completely uninstall VisualGroups.

To uninstall VisualGroups

- 1 Uninstall „SwyxPLUS VisualGroups Reporting and Maintenance“.
- 2 Uninstall "SwyxPLUS VisualGroups".
 - ✓ VisualGroups is uninstalled. All calls to a VisualGroups queue are forwarded to the defined number, if applicable.



To remove all VisualGroups files from your system, you have to manually delete the VisualGroups database from your SQL server, the VisualGroups queue user in the SwyxWare Administration and the directory of the PDF reports. Additionally, you have to delete the IIS log files of the VisualGroups web instance, if applicable, see *Changing VisualGroups storage directories*, page 7.

2 Configuring VisualGroups

This chapter describes the serversided configuration of VisualGroups. The use of the client is described in 3 *Using SwyxIt! with VisualGroups*, page 24.

2.1 Configuring initially

When the installation is completed, you can use the configuration wizard to configure VisualGroups initially.



For the initial configuration SwyxWare system administrator rights are required.



After 10 minutes of inactivity you will be logged off automatically of the web portal due to safety reasons.

How to configure VisualGroups initially

- 1 Open the Web Portal via the link in the installation wizard or in a web browser, *Further configuring*, page 12.



You can also open the web portal via the desktop shortcut that has been created during the installation.

✓ The VisualGroups configuration wizard login page appears.

- 2 Log in with your user account. The user account must have SwyxWare administration right.
- 3 Click on "Next" to start the initial configuration.



If you cancel the initial configuration and start the configuration wizard at a later stage in an existing installation, all settings will be reset.

- ✓ Your VisualGroups licenses are being checked.
- ✓ An overview of your VisualGroups licenses appears:
 - License: Your VisualGroups lincense
 - Number of queues: Current number of your licensed queues

- 4 Click on "Next ".

- 5 Enter names for the queues. The name appears in the users' SwyxIt! or netphone clients and in the VisualGroups reports.

- 6 Assign skins and users to your queues:

- Queue: From the dropdown list select the required queue.
- Skin: From the dropdown list select the VisualGroups skin you want to assign to the user.
- Available users: From the dropdown list select the group from which you want to assign users to the queue.
- User: Activate the checkbox in the line of the user you want to add or activate the checkbox in the "User" line to add all users in the list. Click on the "Arrow" symbol to assign the selected users to the queue.
You can also assign users via drag and drop.



You can enter a name into the search bar to search for a user.

- 7 Click on "Next ".

- 8 Define the reporting settings:

- Interval: Activate the checkbox of the time interval in which you want to receive your usage reports.
- Day of Week: Activate the checkbox of the day of week on which you want to receive your usage reports.
- Language: From the dropdown list select the language in which you want to receive your usage reports.
- Reporting time: Enter the beginning and the end of the time span in which the usage reports shall be created (e.g. your office hours).
- Recipient: Enter the email address to which your usage reports shall be sent.

- 9 Click on "Next ".

- 10 Validate your SMTP settings and enter your password for the authentication of SwyxServer at the SMTP server.
- 11 Click on "Next".
 - ✓ The web portal start page appears.
- 12 Click on "Finish" to finish the initial configuration.
 - ✓ The initial configuration is completed. You can use the web portal for further configurations.



After the initial configuration is completed, every SwyxWare administrator with a corresponding administration profile can use the web portal to configure VisualGroups, see *Further configuring*, page 12.

2.2 Further configuring

After the initial configuration of VisualGroups is completed, you can use the web portal for further configurations.

- 1 Enter the following address in your web browser:
 - IIS as a local service:
http://localhost/visualgroups/adminvg.aspx
 - IIS as a separated service:
http://<computer name/IP address>/visualgroups/adminvg.aspx



Your licenses are being checked once a day and with every login to the web portal. If you do not have sufficient licenses for your queues, the queues which have been created last are being deactivated first (Last-In-First-Out-Principle).

- 2 Log in with your SwyxWare user account.
 - ✓ You are now logged into the web portal and can define settings there.



You need a user account with SwyxWare administrator rights in order to be able to make all further configurations. An account with SwyxWare user rights has limited access to the SwyxWare installation, with this access, e. g. queues cannot be created or renamed.

2.2.1 Creating, editing and deleting queues

When the initial configuration is completed, you can create additional queues via web portal and edit existing queues.



New licenses are being activated as soon as an administrator logs in to the web portal.



SwyxWare administration rights are required to create queues.



The separate creation of SwyxWare groups is not required for the use of VisualGroups.

This is how you create and edit a queue

- 1 In the menu select "Administration | Queues".
 - ✓ The list of your queues appears with the following information:
 - Wrap Up Time: Time span after a call in which a user does not receive a new call.
 - Maximum waiting time of callers after which they are forwarded to another number.
 - Number of assigned users.
- 2 Click on "Add" or activate the checkbox in the line of an existing queue and click on "Edit".
- 3 You can define the following functions:

Name	Description
Queue name	Enter a name for the queue. The name appears in the users' SwyxIt! or NetPhone clients and in the VisualGroups reports. Note: You can also rename queues in the web portal.

Name	Description
Language	From the dropdown list, select the language for the waiting and position announcements that callers in the queue are to hear.
Wrap-up time for users	Enter the rework time after a call in seconds in which a user does not receive a new call. Select "Infinite" from the drop-down list to set the wrap-up time mode to "Visible, automatic infinite" for all users in the queue. See <i>Wrap-up time</i> , page 17.
Ringing time	Specify the ring duration (5 to 180 seconds) for a call delivery attempt to a VisualGroups user in this group. If a user does not answer the call during this period, the call is put back into the queue.
Music on hold	Select an Audio file from the dropdown list. The audio file is used for waiting callers in the queue. You can edit the selectable audio files in the SwyxWare administration. Note: You can configure custom music on hold by uploading an audio file to the global SwyxWare files directory and marking it as music on hold. The file can be selected when creating or editing a queue in the web portal.
Allow users to edit their queue preferences	Activate the checkmark if you want that users can also define their criteria for automatic call delivery on their own. See also 3.9 <i>Defining criteria for automatic call delivery</i> , page 29.
Call strategy	Select a call strategy from the dropdown list. See <i>Call Strategies</i> , page 14.
Waiting time	If applicable set the waiting time after which callers will be forwarded to another number than the queue number when no user has taken the call.

Name	Description
Connect caller to	If required, enter a phone number to which callers should be forwarded if the specified waiting time is exceeded. You can also specify a phone number to which callers are forwarded if no users are logged in the queue.
Last agent routing	Select a last agent routing method from the dropdown list and specify the period in seconds in which a returning caller will be delivered to the user who previously processed him. See <i>Last agent routing</i> , page 15.
Announce queue position	Select "Yes" in the dropdown list if the caller should be informed of the queue position in regular intervals. Select "No" to turn off position announcements for the queue.
Offer callback in queue	Select "Yes" from the dropdown list to activate the callback function. See <i>Callback function</i> , page 18.
Enable call categorization	Select "Yes" from the dropdown list to have calls categorised by the user. To create predefined categories see <i>Categorization of calls</i> , page 22. You can now assign the available call categories to the queue below via drag and drop or by selecting the checkbox and clicking the corresponding arrow button.

- 4 If applicable, select a group from the dropdown list whose users you want to assign to the queue.
- 5 Activate the checkbox in the line of the user you want to add or activate the checkbox in the "User name" line to add all users in the list.



You can enter a name into the search bar to search for a user.

- 6 Click on the "Arrow" symbol to assign the selected users to the queue. You can also assign users via drag and drop.
- 7 Click on "Save".
 - ✓ The settings for the queue are applied. A VisualGroups user for the queue may have been created automatically in SwyxWare. You can now assign a number to the queue, *Assign queue to phone number*, page 18.

How to delete a queue

- 1 In the menu select "Administration | Queues".
 - ✓ The list of your queues appears.
- 2 Activate the checkbox in the line of a queue and click on "Delete".
 - ✓ The queue is no longer available and is no longer recorded in the usage report.

2.2.2 Call Strategies

VisualGroups offers you four call strategies:

Strategy "None": Function inactive

Strategy "Intelligent": Default

Strategy "Simple": Based on the number of connected calls

Strategy "Pure": Based on the number of connected queue calls

For each user, a timestamp "Waiting since" is used to calculate the time the user is already waiting. For each VisualGroups call all users are evaluated and sorted. The call is delivered to the longest waiting user first.

The timestamp "waiting since" is reset differently for each strategy based on the settings described under "Technical Information".

The following examples illustrate the impact of the corresponding call strategies based on four users (A,B,C and D) when all are available and no specific criteria have been defined.

At the first login of each day, the timestamp "waiting since" is reset.

Strategy "None": Function inactive

Technical Information

Calls in the queue are not actively distributed among the available users. Users must manually select incoming calls from the queue to pick them up.

Strategy "Intelligent": Default

Technical Information

Triggers that reset the timestamp "waiting since":

Handling calls (calls via SwyxWare and VisualGroups)

- initiating a call (outbound)
- disconnecting a call (outbound)
- receiving a call (inbound)
- picking up a call (inbound)
- disconnecting a call (inbound)

Examples:

1. VisualGroups scenario:

- Order of call 1 = A,B,C,D

The call rings at A and is not answered.

The call rings at B, is connected and then disconnected.

- Order of call 2 = C,D,A,B

2. Non-VisualGroups scenario:

Call 1 does not come from the VisualGroups queue.

The call rings at A, is connected and then disconnected.

- Order of call 2 = B,C,D,A

3. Non-VisualGroups scenario 2:

Call 1 does not come from the VisualGroups queue.

The call rings at A and is not answered.

- Order of call 2 = B,C,D,A

Strategy "Simple": Based on the number of connected calls

Technical Information

Triggers that reset the timestamp "waiting since":

Handling calls (calls via SwyxWare and VisualGroups)

- disconnecting a call (outbound)
- disconnecting a call (inbound)

Examples:

1. VisualGroups scenario:

- Order of call 1 = A,B,C,D

The call rings at A and is not answered.

The call rings at B, is connected and then disconnected.

- Order of call 2 = A,C,D,B

2. Non-VisualGroups scenario:

Call 1 does not come from the VisualGroups queue.

The call rings at A, is connected and then disconnected.

- Order of call 2 = B,C,D,A

3. Non-VisualGroups scenario 2:

Call 1 does not come from the VisualGroups queue.

The call rings at A and is not answered.

- Order of call 2 = A,B,C,D

Strategy "Pure": Based on the number of connected queue calls

Technical Information

Triggers that reset the timestamp "waiting since":

Handling VisualGroups calls only

- disconnecting a call (inbound)

Examples:

1. VisualGroups scenario:

- Order of call 1 = A,B,C,D

The call rings at A and is not answered.

The call rings at B, is connected and then disconnected.

- Order of call 2 = A,C,D,B

2. Non-VisualGroups scenario:

Call 1 does not come from the VisualGroups queue.

The call rings at A, is connected and then disconnected.

- Order of call 2 = A,B,C,D

2.2.3 Last agent routing

As administrator you can configure the last agent routing method for the queue, see *This is how you create and edit a queue*, page 12 step ().

With the 'Last Agent Routing' dialing principle, you can determine whether a caller who calls again within a predefined time is reconnected to the user he has previously spoken to.

The advantage of this function is that the caller does not have to describe his request to an additional employee again. As a result, service performance can be improved and capacity within the queue can be saved.

The following modes can be accessed:

Mode	Description
Off (Default setting)	The call distribution remains unchanged.

Mode	Description
On with priority	<p>A caller who calls again within the configured period of time is handled differently from other calls in this queue. VisualGroups connects the caller with the user who handled his previous call.</p> <p>Recurring calls have a higher priority than other calls in the queue. This means that a caller who calls again within the defined time period takes the first position in the queue of the user with whom he has previously spoken. The call is only delivered to other users in the queue after the set time has elapsed.</p>



If the user to whom a recurring Last Agent Routing call is to be delivered is busy or unavailable or cannot be reached, VisualGroups will wait for the user to be available until the predefined time has elapsed. When the defined period has elapsed, the call is added to the queue according to the default distribution.

2.2.4 Adding, editing and deleting users

You can add SwyxWare users to VisualGroups and assign queues and VisualGroups skin.



The synchronization with the SwyxWare Administration takes place with every login in the VisualGroups web portal.



If a user is assigned to several queues and these queues have different skin configuration, the skin "VisualGroups enhanced" will be selected automatically.



You can define for all users on the same SwyxServer the skin as system-wide standard. For further information see the SwyxWare documentation.

To search and filter for users

- 1 In the menu select "Administration | Users".
- 2 In order to search for a user, enter a name in the search bar.
You can also switch the sort order to ascending or descending by clicking the arrow icon, and customize the sort order by clicking on column headers. The arrow symbol becomes visible when you move the mouse cursor over the column header.

How to add users

- 1 In the menu select "Administration | Users".
✓ The list of all VisualGroups users appears with the following information:
 - Username
 - SwyxIt! Status information for a user
 - Time at which the user was last active and accepted a call
 - Number of assigned queues
- 2 Click on "Add".
- 3 You can define the following settings:

Name	Description
Skin	From the dropdown list select the VisualGroups skin you want to assign to the user.
Wrap up time	From the dropdown list, select the required mode for the wrap-up time. See <i>Wrap-up time</i> , page 17.

Name	Description
Available and Assigned Queues	Activate the checkbox in the line of the queue you want to assign the user or activate the checkbox "Queue" in the headline to assign the user to all queues. Click on the "Arrow" symbol to assign the user to the selected queue. You can also assign users via drag and drop.
Assigned Queues	Select the criteria from the dropdown list for the automatical call delivery of a user. You can define the wait and time criteria as well as the call dispatch for each queue.



You can enter a name into the search bar to search for a user.

- 4 Click on "Save".

How to edit users

- 1 In the menu select "Administration | Users".
 - ✓ The list of all VisualGroups users appears with the following information:
 - Username
 - Status information for a user
 - Time at which the user was last active and accepted a call
 - Number of assigned queues
- 2 Activate the check mark in the line of the corresponding user and click on "Edit".
- 3 You can define the following settings:

Name	Description
Skin	From the dropdown list select the VisualGroups skin you want to assign to the user.

Name	Description
Wrap-up time	From the dropdown list, select the required mode for the wrap-up time. See <i>Wrap-up time</i> , page 17.
Available and Assigned Queues	Activate the checkbox in the line of the queue you want to assign the user or activate the checkbox "Queue" in the headline to assign the user to all queues. Click on the "Arrow" symbol to assign the user to the selected queue. You can also assign users via drag and drop.
Assigned Queues	Select the criteria from the dropdown list for the automatical call delivery of a user. You can define the wait and time criteria as well as the call dispatch for each queue.

For further information see the SwyxIt! documentation.



You can enter a name into the search bar to search for a user.

- 4 Click on "Save".

How to delete a user

- 1 In the menu select "Administration | Users".
 - ✓ The list of all VisualGroups users appears.
- 2 Activate the check mark in the line of the corresponding user and click on "Delete".
 - ✓ The user can no longer use VisualGroups and is no longer recorded in the usage report.

2.2.5 Wrap-up time

As an administrator, you can set the mode in which a user is displayed his wrap-up time, the so-called wrap-up time, see *Wrap up time*, page 16 or *Wrap-up time*, page 17.

The following modes can be accessed:

Mode	Description
(Disabled)	To disable the function, set the wrap-up time to 0 seconds in the queue settings. See Wrap-up time for users , page 13.
Not visible	No wrap-up time is displayed to the user in the client. The waiting time set for queues is still active.
Visible, not adjustable	The user's wrap-up time is displayed in real-time in the client. The user cannot adjust the wrap-up time. <div> <div>Wrap-up time active: 2:26 m.</div> <div>Wrap-up time inactive</div> </div>
Visible, adjustable	The user's wrap-up time is displayed in real-time in the client. The user has options to stop or extend the wrap-up time. <div> <div>Wrap-up time active: 4:37 m. ++ +</div> <div>Wrap-up time inactive ++ +</div> </div>
Visible, automatic infinite	The post-processing time remains active until the user clicks the Stop button in their client. You can define the function for users and queues. If the unlimited wrap-up time has been set for the user or queue, it is given priority over other modes. The user's client permanently displays the wrap-up time as "active" until the user stops it manually.

2.2.6 Callback function

The callback function allows a caller in the queue to signal a callback request. A caller can then be called back by a VisualGroups user and does not have to wait in the queue. The function is available in the Enhanced and Standard license.

An audio message points the function out to the caller in a queue with activated callback function at an interval of about 90 seconds. The caller

can signal the callback request by pressing the "#" key on his telephone. The call is disconnected and a user can call back when he is available again. See 3.8 **Callback request: Calling callers back**, page 29.

To configure the callback function for a queue, see *This is how you create and edit a queue*, page 12.

2.2.7 Assign queue to phone number

You have to assign a number to each user that was created for your queue.

For further information see the SwyxWare documentation, chapter "Numbers and Number Mappings".

2.2.8 Use own audio file for queue

If you have installed the SwyxECR option pack you can use own announcements for your queues. To do this, you must put a Call Routing rule with the desired announcement before the VisualGroups script.

For further information see the SwyxWare documentation, chapter "configuration of SwyxServer" See also the Swyx Extended Call Routing User Documentation.

2.2.9 Create, edit and request regular reports

VisualGroups usage reports are created for a defined time period and sent to the given e-mail address. You can create different types of user reports (daily, weekly, monthly) and define individual settings for each of these usage reports. You can also request reports on past periods and generate them on demand.



In some cases the start and end time of the logging time may differ from the defined time. The logging time is automatically extended if calls are detected outside the defined time.



Reports are created and sent via email within 30 minutes after the defined logging time.

How to create and edit reports on a regular basis

- 1 Select "Administration | Reporting | Reports" in the main menu of the web portal.
✓ The list of your VisualGroups usage reports appears with following information:
 - Name of the report
 - Interval
 - Time when the last usage report was created
- 2 Click on "Add" or activate the checkbox in the line of an existing usage report and click on "Edit".
- 3 Additionally to the settings in the configuration wizard (*Define the reporting settings*; page 11) you can edit the following settings:

Name	Description
Report name	Enter a name for the usage report.
Language	Select the language for the reports from the dropdown list.
Report type	Use this interval to specify the intervals at which usage reports are to be generated.
Execute on & Time of execution	Select a time for sending the regular reports.
Reporting time interval	Specify the interval at which data is summarized ("averaged") in the report. The shorter the interval, the more results are listed in a usage report.
Logging time	Enter the period to which you want to restrict reporting.
Recipient's email address (CC/BCC)	Enter the email address(es) to which the Carbon Copy or Blind Carbon Copy reports should be sent.
Userinformation in report	Click on the checkbox to show or hide user-specific information in the reports. This information includes the logon data of the users as well as their individual call acceptance statistics and evaluation.



When saving and processing personal data, observe the respective applicable legal data protection regulations.

- 4 By assigning the available queues, you can specify which queue(s) will be included in the report. You can assign the selected queue(s) using the arrow icons. You can also assign queues via drag and drop.



If you assign multiple queues, an additional report is sent with the total of all assigned queues.

- 5 In order to do this, select the checkbox for the desired queue(s) and click on the corresponding arrow.
- 6 Click on "Save".
✓ The report will be created according to your settings and sent to the specified email address(es).

This is how you request a report (resend reports)

- 1 Select "Administration | Reporting | Request a report" in the main menu of the web portal.
✓ The request a report page will be shown.



The available time periods are eventually limited by the configured data protection settings.

- 2 Select the desired report from the "Report configurations" dropdown list.
- 3 Select the desired period of the report from the "Time frame" dropdown list.
- 4 Click on "Request".
✓ The report is now in progress and will be delivered within 30 minutes.

How to delete a report

- 1 In the menu select "Reporting | Reports".
✓ The list of your VisualGroups reports appears.
- 2 Activate the checkbox in the line of the corresponding usage report and click on "Delete".



The directory of where the reports can be deleted is described in the column *PDF files with reports*, page 7.

2.2.10 Editing SMTP server settings

You can edit your SMTP settings that are required for sending of VisualGroups reports.



If sending of emails with reports have failed, a new transmission attempt occurs in one hour. There is a maximum of 5 transmission attempts for every report.

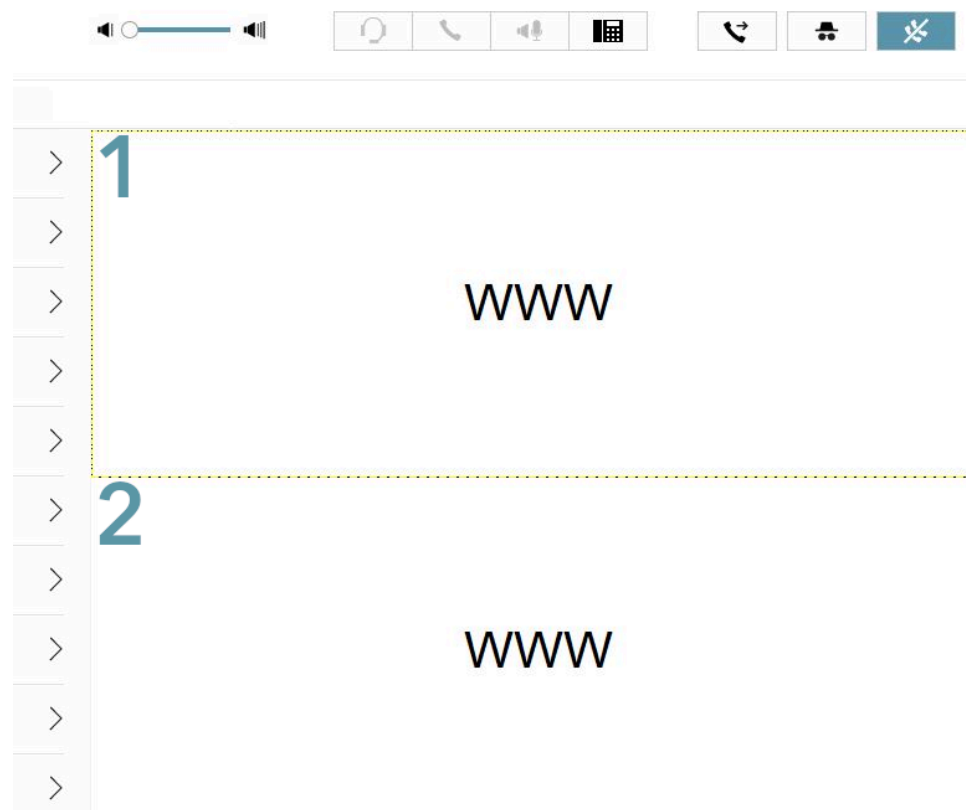
To edit the SMTP-Server-Settings

- 1 In the menu select "Reporting | SMTP Server".
See also 2.1 *Configuring initially*, page 11, step (10).

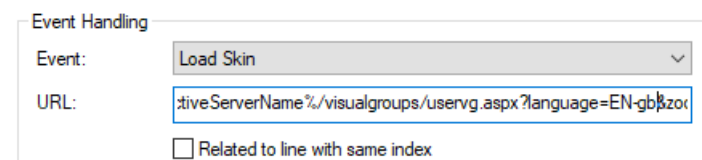
2.2.11 Set the language of the user interface and number of VisualGroups lines in the client

To edit a skin, see chapter „Editting Skin“ or „The Use of Skins“ in the SwyxIt! documentation.

In the editor mode there are VisualGroups placeholders for the queues view (1, top right) and if available the statistics area (2, down right).



- 1 Select the entry you want.
- 2 In the editor mode click on the tab "SwyxIt!" Web Extension". For Netphone click on the tab "Netphone Web Extension".
- 3 Select "loading skin" in the dropdown list.
- 4 Click right behind the parameter 'language='.



- 5 Replace the value following to the mark "=" with one of the following values.

Parameter	Value
[language=XX-xx]	'DE-de', 'EN-gb', 'FR-fr', 'IT-it', 'NL-nl'.



For the first change replace `%{HKEY_LOCAL_MACHINE\SOFTWARE\Swyx\ClientSetup\Culture}` with one of the language parameters.

- 6 Close the window.
- 7 If necessary repeat the steps (1) to (6) to edit the other area.
- 8 You can also configure the number of lines to be displayed in the client. To do this, enter a value for the following parameter at the end of the URL:

Parameter	Description
[rows=xx]	For 'xx', enter the number of desired lines in digits. For example, enter '20' to enlarge the display to 20 lines.



Make sure that you adjust the size of the Web Extension accordingly if you want to integrate the changed number of columns in a Swyxlt! Skin. To adjust the size of the Web Extension, enter a value for the parameter 'zoom=xx'.

- 9 Click on "File | Skin | Edit" to leave the edit mode. Save the skin to save the changes.

2.2.12 Privacy settings

You can define in the web portal when data protection relevant data is to be deleted.

- 1 Select "Administration | Settings | Retention" in the main menu of the web portal.
✓ The page for requesting reports will be shown.
- 2 You can set the storage duration in days for the following settings:

Name	Description
Caller information (Default 7 days)	Information of the queue caller: <ul style="list-style-type: none"> • Caller number • Caller name • Date and time
Mail information (Default 7 days)	Information regarding the email based dispatch of PDF reports: <ul style="list-style-type: none"> • Mail addresses for reporting. • Date and time
User information (Default 62 days)	Information of the queue users: <ul style="list-style-type: none"> • Swyx usernames • Call statistics • Date and time

- 3 Click on "Save".
✓ The settings are now saved and will be applied automatically.

2.2.13 LDAP Search Query

VisualGroups uses LDAP information to display caller information if they are not included in the global phonebook. You can change the LDAP query. This allows you to perform searches in specific LDAP nodes or apply a custom filter.

- 1 Select "Administration | Settings | LDAP" in the main menu of the web portal.
✓ The LDAP configuration page opens.
- 2 You can define the following settings:

Name	Description
Enable LDAP	Select the checkbox to enable or disable the LDAP function.
LDAP server & port	Enter the server address and port to which you want to connect. The address can be a hostname or an IP address.

Name	Description
Advanced Query Settings	<p>You can specify a custom LDAP query. Activate the checkbox to enable the input field. The default search query is '{searchNumber={0}}' which is applicable for any Estos MetaDirectory LDAP server. You can edit this query string according to your requirements. The filter mechanism adheres to the LDAP search filter syntax standards. '{0}' is used as the placeholder for the CallerID.</p> <p><i>Example:</i></p> <p><code>(&(dc=meta)(searchNumber={0}))</code></p>
Enable authentication	Select the check box to enable authentication with user name and password.
User name, Password	Optional: Enter your user name and password if authentication is enabled.

- Click on "Save".
 - ✓ The settings are now saved and are automatically used for each incoming call.

2.2.14 Set default language

You can set a default language in the Web portal for displaying new queues and reports. You can also customize the language for queues, wallboards and reports individually.

- Select "Administration | Settings | Language" in the main menu of the web portal.
- Select the desired language.
- Click on "Save".
 - ✓ The settings are now saved and will be applied automatically.

2.2.15 Categorization of calls

Administrators can analyse calls based on the assignment of categories by users in Swyx Analytics using the PDF reports. The categorization can

be sorted via drag and drop and assigned individually for each queue, see *Enable call categorization*, page 13.

- Select "Administration | Settings | Call categories" in the main menu of the web portal.
 - ✓ A list of your call categories opens.
- Click "Add" to create a new conversation category or "Edit" to rename an existing call category. If you want to remove a call category, click on "Delete".
- Enter the desired name for the call category.
- Click on "Save".
 - ✓ The call category was successfully created.

After you have assigned the category to a queue, see 2.2.1 **Creating, editing and deleting queues**, page 12, it can be selected by users after a call in the queue for categorization, see 3.7 **Categorizing calls**, page 29.

2.2.16 Running VisualGroups over HTTPS/SSL

When you want to access the VisualGroups portal/wallboards from outside your local network it is recommended to enforce HTTPS for all external traffic to VisualGroups.

See service.swyx.net/hc/en-gb/articles/360008304879-TLS-SSL-Activation-in-VisualGroups (You may need to be logged in to view the content).

Prerequisites:

- Domain name which points to the VisualGroups machine
- Valid SSL certificate
- Administrator access to the machine and IIS manager



VisualGroups is still available via HTTP from the local host and network after HTTPS/SSL configuration.

2.2.17 Permissions of the administration profiles

For information about the administration profiles in SwyxWare see the SwyxWare documentation for administrators, chapter "Profiles | Administration profiles".

The User Operator and Call Status Operator profiles give you supervisor access within the VisualGroups portal.

The profiles have the following permissions for VisualGroups:

- **Group 1** System Administrator
- **Group 2** Backoffice Administrator, User Administrator & User Operator
- **Group 3** Call Status Operator

	Permission	Group 1	Group 2	Group 3
Users	Displaying	✓	✓	✓
	Editing	✓	✓	✓
	Creating	✓	✓	
	Deleting	✓	✓	
Queues	Displaying	✓	✓	✓
	Editing	✓	✓	✓
	Creating	✓		
	Deleting	✓		
Reports	Displaying	✓	✓	✓
	Editing	✓	✓	✓
	Creating	✓	✓	✓
	Deleting	✓	✓	✓
Wallboard	Displaying	✓	✓	✓
	Editing	✓	✓	✓
	Creating	✓	✓	
	Deleting	✓	✓	✓


	Permission	Group 1	Group 2	Group 3
System settings	LDAP	✓	✓	
	Data retention	✓	✓	
	SMTP	✓	✓	
	Call categories	✓	✓	

3 Using Swyxlt! with VisualGroups



This chapter describes the client sided usage of VisualGroups. This requires the server side installation as described in 1 **Installing VisualGroups**, page 5.

For requirements and instructions related to the custom installation of Swyxlt!, please refer to the Swyxlt! documentation, chapter „Installing and Uninstalling Swyxlt!“.

You can define criteria for the forwarding of queue calls to your internal number but you can also answer calls manually.

Via settings symbol  you can display further settings.

Via filter symbol you can display or hide queues. Therefore, the information on the tabs depends on the selected queues. The filter symbol indicates if there is an active filter.

Filter symbol	Description
	No active filter; information on all queues is displayed
	Active filter; information on the selected queues is displayed

Selecting a VisualGroups skin

To be able to use options you may have to select one of the following skins in Swyxlt! under “Settings | User Profile | Skin”:



Probably your administrator has already assigned you the corresponding skin.

- “Swyxlt! 11 [5x VisualGroups Standard].cab” (excl. statistics)
- “Swyxlt! 11 [5x VisualGroups Enhanced].cab” (incl. statistics)



The selected skin is also available to you on other computers you log into with your Windows login data. The skin is loaded automatically there.

For further information please refer to the Swyxlt! documentation, chapter “The Use of Skins”.



VisualGroups regularly scans whether a Swyxlt! user has loaded a VisualGroups skin and is therefore considered a VisualGroups user. If this user changes from a Swyxlt! skin with VisualGroups to a skin without VisualGroups, it may take about one minute until no more VisualGroups calls are delivered to this user. Restart Swyxlt! to apply the status immediately.



Note for CTI pairing: VisualGroups is currently optimized for the use of SwyxPhone L6x. If a user uses other telephony devices assigned to him for answering calls, the call statistics may not be fully available.

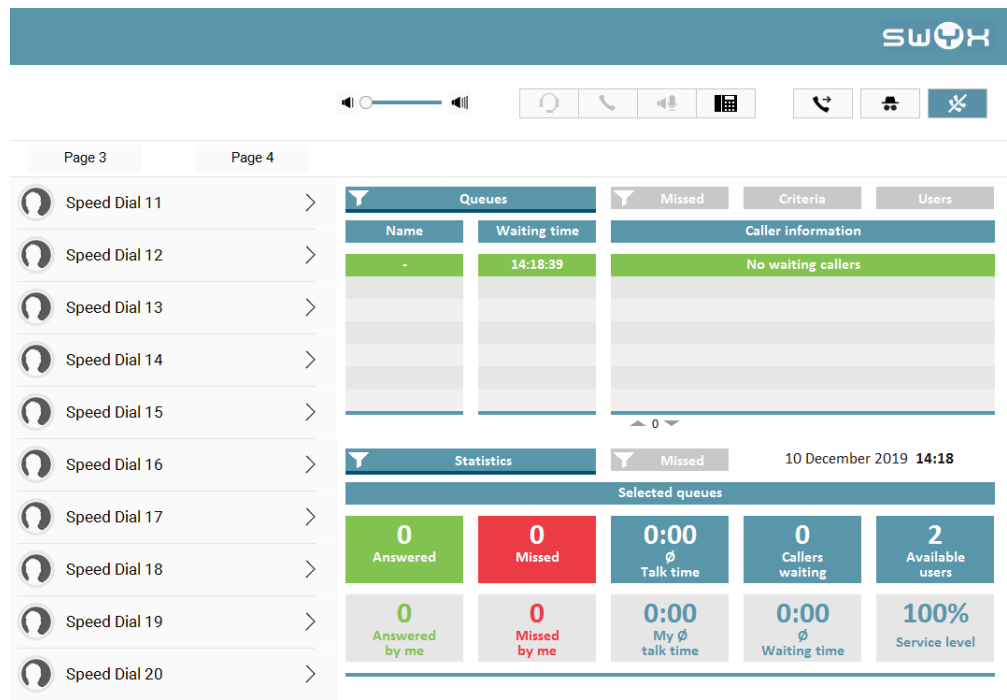
3.1 Defining the settings for Windows Server

If you want to use on Windows Server 2016 or Windows Server 2019 you have to define the following settings:

- 1 Add the SwyxServer address you have configured in Swyxlt! to the security zone whitelist in the Browsers security settings.
- 2 Activate the “Initialize and script ActiveX controls not marked as safe for scripting” checkbox in the security zone’s extended settings.

3.2 User interface

VisualGroups is displayed on the right next to the Swyxlt! or Netphone speed dials.



The "Queues" tab

On this tab the following information on calls in the selected queues is displayed:

Queues		Missed	Criteria	Users
Name	Waiting time	Caller information		
Helpdesk TAP	0:48	+4420123456		
Helpdesk TAP	0:13	John Jones - 3066		



The bar under the tab is marked red when your SwyxIt! presence status is set to "Away" or "Do Not Disturb".

- Name of the queue to which the call has been forwarded



For a better overview the queues have different colors.

- waiting time the caller has already had so far
- Name and number of the caller



The caller name is only displayed if the caller is a contact in your local phonebook.



An arrow between "Name" and "Waiting time" means that the call is forwarded to a user.

See also *Displaying or hiding queues*, page 27.

The "Criteria" tab

On this tab you can define if and, if applicable, how queue calls are automatically forwarded to your internal number.

Queues	Missed	Criteria	Users
Queue criteria		All queues	
Quantity criterion		or	Time criterion
Call dispatch			
Active			

Defining the waiting time until the automatic call delivery (time criterion)

Defining the number of callers for automatic call delivery (quantity criterion)

Defining the call dispatch

Prioritising incoming calls according to queues

The "Users" tab

On this tab the following information on other internal subscriber is displayed:

Queues	Missed	Criteria	Users
Name	Status	Line - Criteria	
Helpdesk TAP			
John Jones	Available	Idle - Immediately	
Marie Dupont	Available	Busy - Immediately	
Reception			
John Jones	Available	Idle - S>=60 or #>=3	
Sales External			
Marie Dupont	Available	Busy - Immediately	



- Report name
 - Status
 - Line state
 - idle or busy
 - Criteria
 - S> = Time criterion
 - #> = Quantity criterion
 - Not active = No "Available user" in statistics and reports, queue calls are not forwarded to the internal number
 - Passive = "Available user" in statistics and reports, queue calls are not forwarded to the internal number
- See also *Defining criteria for automatic call delivery*, page 29.

The "Statistics" tab

On this tab the following information on the selected queues is displayed:



Statistics show information per day.

 Statistics	 Missed	10 December 2019 14:42		
Selected queues				
5 Answered	2 Missed	1:01 ∅ Talk time	0 Callers waiting	2 Available users
4 Answered by me	9 Missed by me	0:38 My ∅ talk time	0:31 ∅ Waiting time	71% Service level

- Answered calls of all users assigned to the queues
- Your own/personal answered calls
- Missed calls of all users assigned to the queues
- Your own/personal missed calls
- Average talk time of all users assigned to the queues
- Your own average talk time
- Callers who are currently waiting
- Average waiting time of all callers



A call counts as missed queue call if it could not be forwarded to a user in the queue. If a user has not deactivated automatic call delivery and does not answer a call, the call counts as a "Missed by me" call for this user.



Missed calls are not part of the calculation of the average waiting time.

- Users with the "Available" status
- Service level (relation between answered and missed calls)

The "Missed" tab

On this tab the following information on missed calls in the selected queues is displayed:

Queues		Missed	Criteria	Users
Time	Waiting time	Caller information		
Helpdesk TAP				
14:34:07	00:02:40	+4420123456		
14:29:11	00:00:27	+4420123457		
IT Helpdesk				
14:37:37	00:00:00	+4415112345		
14:24:09	00:00:01	+4923112347		

- Time when the call has been cancelled, e.g. when the callers dropped the call.
- Waiting time
- Caller name



The name is only displayed if the caller is a contact in your local phonebook.

- Caller number, see also *Tracking missed calls*, page 33.


3.3 Displaying or hiding queues

By default calls, settings and statistics of all queues your administrator has assigned you to are displayed. You can, however, also display and hide queues.



Depending on your criteria, calls from queues which your administrator has assigned you to, are still forwarded to your internal number.

How to display or hide queues

- 1 Click on the filter symbol  under "Queues".
✓ The list of your queues appears.

Queues	Missed	Criteria	Users
All queues			
Helpdesk TAP	<input checked="" type="checkbox"/>		
Sales External	<input checked="" type="checkbox"/>		
Reception	<input checked="" type="checkbox"/>		
Sales Internal	<input checked="" type="checkbox"/>		

- 2 Activate the checkbox in the line of the appropriate queues.
- 3 Click on the "Queues" tab to leave the selection view.
✓ The calls in the selected queues are displayed.

Queues	Missed	Criteria	Users
Name	Waiting time	Caller information	
Helpdesk TAP	0:48	+4420123456	
Helpdesk TAP	0:13	John Jones - 3066	

3.4 Answering calls manually

Depending on your criteria, calls are forwarded to your internal number and displayed on a SwyxIt! line button. You can, however, also answer calls manually.

How to answer a call manually

- 1 Click on the "Queues" tab.
✓ The currently incoming calls in the selected queues are displayed.

Queues		Missed	Criteria	Users
Name	Waiting time	Caller information		
Helpdesk TAP	0:48	+4420123456		
Helpdesk TAP	0:13	John Jones - 3066		

2

- Click on the line of the appropriate call.
 - ✓ The call is going to be displayed on one of your line buttons within a few seconds.
- Click on the line button or pick up the handset.
 - ✓ You are connected to the caller.

3.5 Forwarding calls to other users

You can forward calls to other users, see SwyxIt! documentation, chapter „How do I transfer a call without Inquiry?“, and „How do I directly forward a call?“.

3.6 Deactivating Automatic Call Delivery


You can deactivate the call delivery of calls to your internal number for single or all queues.

To disable automatic call delivery

- Click on the "Criteria" tab.
 - ✓ The list of your queues appears.


Queues	Missed	Criteria	Users
All queues			
Helpdesk TAP			
Sales External			
Reception			
Sales Internal			

2

- Click on the settings symbol  in the line of the appropriate queue.
 - ✓ Your criteria are displayed.

Queues	Missed	Criteria	Users
Queue criteria			
Quantity criterion			
Call dispatch			
Active			

3

- Click on the settings symbol  in the "Call dispatch" line.
- Activate the checkbox in the "Not active" line.
- Click on any tab to leave the selection view.
 - ✓ Calls are not forwarded to your internal number anymore.



You can still answer calls manually.



If you set both, the "No active time criterion" and the "No active quantity criterion" at the same time, automatic call delivery is also deactivated (passive mode).

3.7 Categorizing calls

If your administrator has enabled call categorization for your queue, see 2.2.15 **Categorization of calls**, page 22, you will be prompted after each call to assign it to predefined categories.

- 1 When a call is finished, a window for categorizing the call opens.



The wrap-up time will continue until you have completed the categorization process.

- 2 Select a corresponding entry from the preconfigured categorization list.
- 3 Click "Save and stop wrap-up time" to complete the operation.
 - ✓ The call has been successfully categorized. Your wrap-up time is deactivated and you are again considered as available user in the queue.



If you close Swyxlt! during the process, you have to categorize the call when logging in to the client again.

3.8 Callback request: Calling callers back

For information on the callback function and its configuration, see 2.2.6 **Callback function**, page 18.

An active callback request from a caller is signalled to all users in the queue with a teal symbol next to the phone number.

- 1 Select the "Missed" tab.
- 2 Click on the entry of the desired pending callback request.
 - ✓ You now call the caller back. The callback request is displayed in the queue with a check mark as completed.

3.9 Defining criteria for automatic call delivery

You can define if and, if applicable, how queue calls are automatically forwarded to your internal number.



Queue calls are only automatically forwarded to your internal number if you have set the "Available" status.



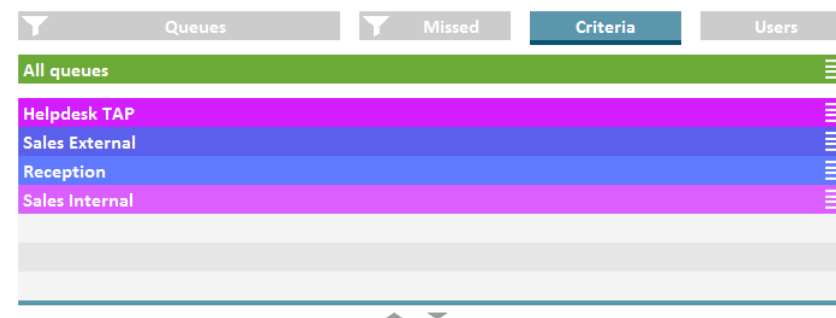
If all users of a queue have set both, the time criterion and the quantity criterion "Not active", calls are forwarded to a number the administrator may have defined. As long as there is at least one user in the queue who has set "No active time criterion" under call dispatch, calls are not forwarded to the number the administrator may have defined.

3.9.1 Defining the waiting time until the automatic call delivery (time criterion)

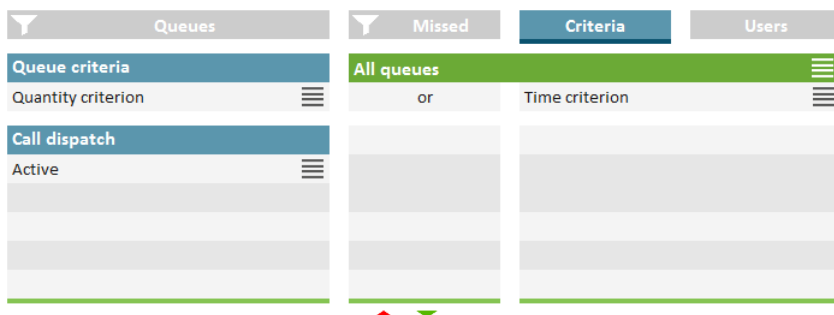
You can define a waiting time after which queue calls are automatically forwarded to your internal number.


To define a waiting time for automatic call delivery

- 1 Click on the "Criteria" tab.
 - ✓ The list of your queues appears.



- 2 Click on the settings symbol in the line of the appropriate queue.
 - ✓ Your criteria are displayed.



- 3 Click on the settings symbol  in the line of your current time criterion.
- 4 Activate the checkbox in the line of the appropriate setting.
 - Immediately = The next queue call is forwarded to your number without delay (system default)
 - After n seconds = the next queue call is forwarded to your internal number after the selected time



If "No active time criterion" is set as queue criterion the user is in passive mode.

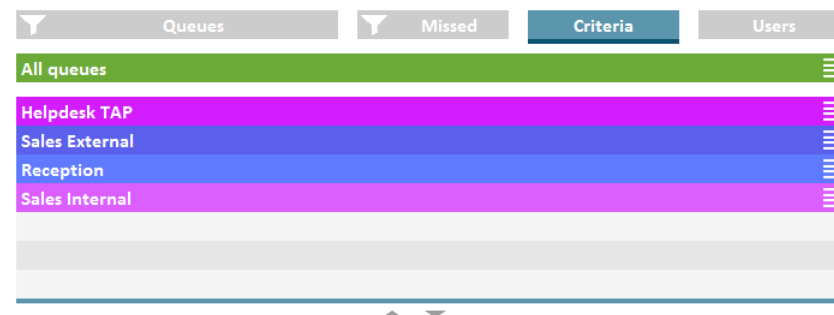
- 5 Click on any tab to leave the selection view.


3.9.2 Defining the number of callers for automatic call delivery (quantity criterion)

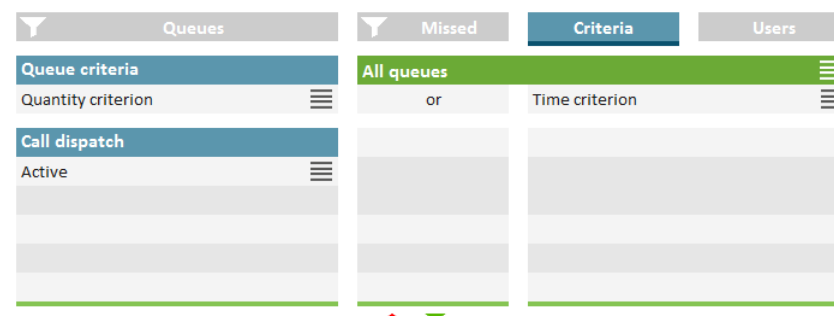
You can define the minimum number of callers that must be waiting in a queue until queue calls are forwarded to your internal number.


How to define the number of callers for automatic call delivery (quantity criterion)

- 1 Click on the "Criteria" tab.
✓ The list of your queues appears.



- 2 Click on the settings symbol  in the line of the appropriate queue.
✓ Your criteria are displayed.



- 3 Click on the settings symbol  in the line of your current quantity criterion.
- 4 Activate the checkbox in the line of the appropriate setting.
 - No active quantity criterion = Independent of the number of callers the next queue call is forwarded to your internal number
 - At least n waiting = The next queue call is forwarded to your internal number when the defined number of callers has been reached
- 5 Click on any tab to leave the selection view.

3.9.3 Defining the call dispatch

You can define if you want to be the first or last user in a queue to whom calls are forwarded or if you want to be displayed as an available user for the queue.

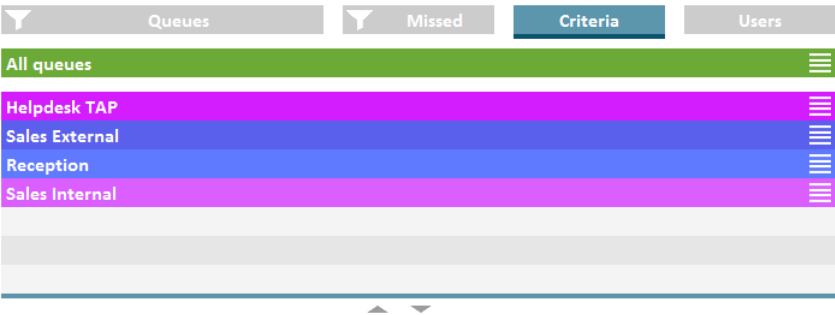
Example: As a team lead you only receive a call if no other user in the queue has answered it. As a receptionist you are the first user in the queue who receives a call before it is forwarded to other departments or supervisors.




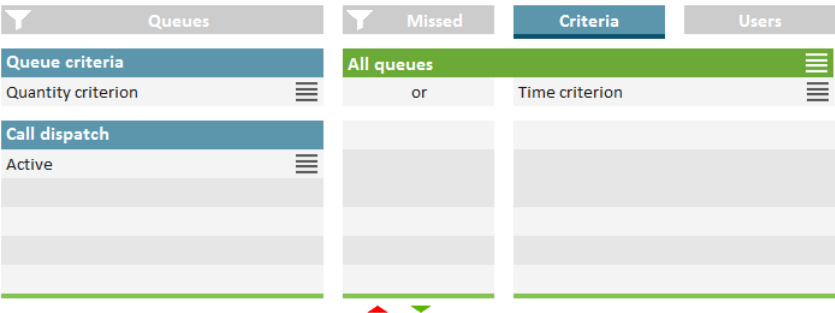
If you have set your call dispatch to "Not active" your other criteria are deactivated.

How to define the call dispatch

- 1 Click on the "Criteria" tab.
✓ The list of your queues appears.



- 2 Click on the settings symbol  in the line of the appropriate queue.
✓ Your criteria are displayed.



- 3 Click on the settings symbol  in the "Call dispatch" line.

- 4 Activate the checkbox in the line of the appropriate setting.
 - Active = The next queue call is forwarded to your internal number according to your other criteria
 - Receive calls first/last = You are the first or last user in the queue to whom calls are forwarded
 - Not active = Calls are not automatically forwarded to your internal number
- 5 Click on any tab to leave the selection view.

Examples for the combination of time and caller dependent criteria and call dispatch:



In general, queue calls are delivered according to the "longest inactive" principle, i.e. a queue call is forwarded to the internal number of the user who has had no forwarded call for the longest time.

Quantity criterion (Number of callers)	Time criterion Waiting time	Call distribution	Effect
No active quantity criterion	Immediately	Active	<ul style="list-style-type: none">• Activated by default• The next queue call is forwarded to your internal number without delay• "Available user" in statistics and reports
No active quantity criterion	Immediately	Receive calls first/last	<ul style="list-style-type: none">• The next queue call is forwarded to your internal number without delay• You are the first or last user in the queue to whom calls are forwarded• "Available user" in statistics and reports

Quantity criterion (Number of callers)	Time criterion Waiting time	Call distribution	Effect
No active quantity criterion	30 seconds	Active	<ul style="list-style-type: none"> The next queue call is forwarded to your internal number when the caller has already been waiting for 30 sec. "Available user" in statistics and reports
At least 2 waiting	Immediately	Active	<ul style="list-style-type: none"> The next queue call is forwarded to your internal number "Available user" in statistics and reports
At least 2 waiting	30 seconds	Active	<ul style="list-style-type: none"> The next queue call is forwarded to your internal number when at least 2 callers are waiting or the caller has already been waiting for 30 sec. "Available user" in statistics and reports
At least 3 waiting	60 seconds	Receive calls first/last	<ul style="list-style-type: none"> The next queue call is forwarded to your internal number when at least 3 callers are waiting or the caller has already been waiting for 60 sec. You are the first or last user in the queue to whom calls are forwarded "Available user" in statistics and reports

Quantity criterion (Number of callers)	Time criterion Waiting time	Call distribution	Effect
No active quantity criterion	No active time criterion	Active	<ul style="list-style-type: none"> Calls are not automatically forwarded to your internal number "Available user" in statistics and reports Users are displayed as "Passive" under the "Users" tab Calls are not forwarded to the number the administrator may have defined
Any	Any	Not active	<ul style="list-style-type: none"> Calls are not automatically forwarded to your internal number Not an "available user" in statistics and reports If there is no other active user in the queue, calls are forwarded to a number the administrator may have defined.

3.9.4 Prioritising incoming calls according to queues

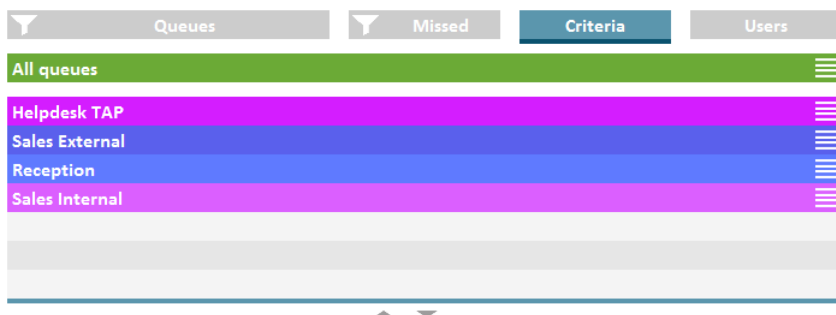
You can change the order in which incoming calls are displayed in the client by prioritizing queues differently.




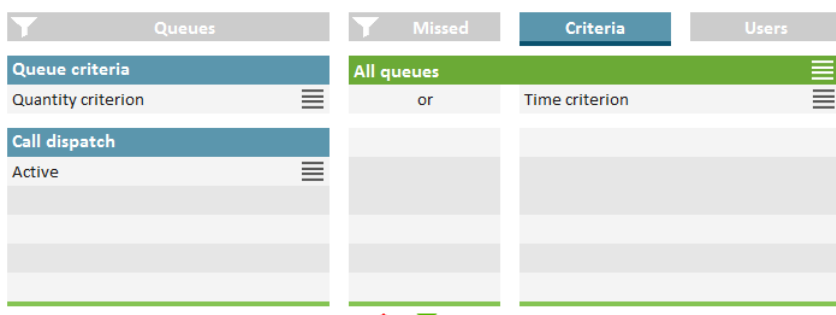
This setting does not affect the rules for distributing calls to users in the queue.


To prioritize incoming calls by queue

- 1 Click on the "Criteria" tab.
✓ The list of your queues appears.



- Click on the settings symbol  in the line of the appropriate queue.
✓ Your criteria are displayed.



- Click on the settings symbol  in the "Priority" line.
✓ The selection for the prioritization appears.
- Select the desired priority number for the selected queue.
The lower the number, the higher the priority for sorting incoming calls. Calls in the queue with priority "1" are displayed first in the queue list in the client.





If you have set the same value for prioritization for several queues, the sorting is done according to the general rules. The longest waiting caller of the corresponding queues is displayed first in the list.



3.10 Tracking missed calls


You can track missed calls and call callers back at any time.

How to call back a caller after a missed call

- Click on the "Missed" tab.
✓ The list of all missed calls appears in the selected queues.

	Queues	 Missed	Criteria	Users
Time	Waiting time	Caller information		
Helpdesk TAP				
14:34:07	00:02:40	+4420123456		
14:29:11	00:00:27	+4420123457		
IT Helpdesk				
14:37:37	00:00:00	+4415112345		
14:24:09	00:00:01	+4923112347		

 4 

- Click on the filter icon .
✓ The list of your queues appears.

Queues	Missed	Criteria	Users
All queues			
Helpdesk TAP	<input checked="" type="checkbox"/>		
Sales External	<input type="checkbox"/>		
Reception	<input checked="" type="checkbox"/>		
Sales Internal	<input checked="" type="checkbox"/>		

- Activate the checkbox in the line of the appropriate queues.
- Click on the "Missed" tab to display missed calls for the selected queues.
- Click on a call to call the caller back.
✓ You are connected to the caller.



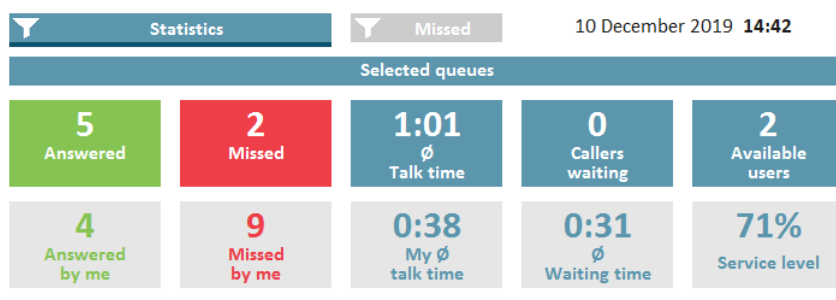
If you have called a caller back, a green checkmark appears between time and waiting time column. You can remove the check mark with a click.


3.11 Filter Statistics

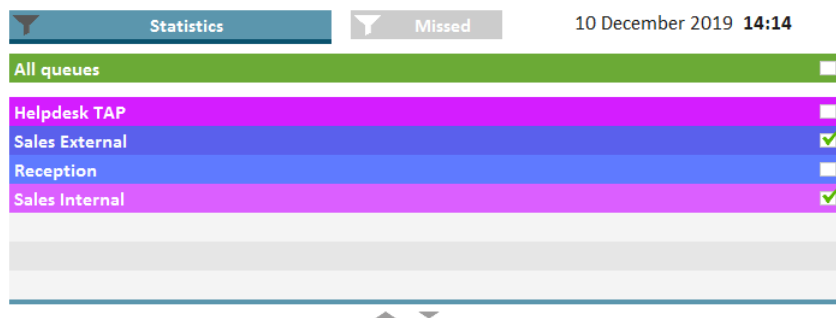
You can define for which queue you want to display statistics.

How to filter statistics

- 1 Click on the "Statistics" tab.
✓ The statistics of the selected queues appear.



- 2 Click on the filter icon .
✓ The list of your queues appears.



- 3 Activate the checkbox in the line of the appropriate queues.
- 4 Click on the "Statistics" tab to display the statistics for the selected queues.

3.12 Evaluate reports

VisualGroups reports are created as PDF files per queue. If you have more than one queue you receive an additional report with a summary of all queues.



For queues where no calls have been detected in the logging time, there will be no reports. The queues will, however, appear in the summary.

VisualGroups reports include the following reports:

Queues

- Total of all Calls
- Answered calls
- Missed calls
- Average talk time of all users
- Average waiting time of all callers
- Service level: Service level, relation between answered and missed calls (including missed calls due to forwarding).

Example:

A queue has a total of 10 calls and, 6 of them have been taken and 4 missed. 2 of the missed calls have been forwarded to a number defined by the Administrator ("Missed due to forwarding").

In this case the service level is 60%.



If in this period no calls have been received the service level is 100%.

- Redirection: Cause of the forwarding of calls to a number defined by the Administrator
- Accepted by forwarding: Amount of calls that have been forwarded to a number defined by the Administrator.



"Forwarding" and "Missed by forwarding" appear only if an appropriate number has been defined and calls have been forwarded in this specific time frame.

See also the SwyxWare Documentation for administrators.

- Impact of the forwarding on the service level in percent ("-" = negatively)



Calculation formula: $100\% * \text{Answered} / (\text{Answered} + \text{Missed})$

Users



The user information appear only if the user-specific information have not been deactivated in the report. See **Userinformation in report**, page 19.

- Answered calls (answered personally by the user + forwarded by other users)



For a call which has been forwarded to a user by another user two calls will appear in the report.

- Percentage of total of answered calls in the queue
- Missed calls



The number of your own missed calls can be higher than the total number of missed calls. If a call is forwarded to a user more than once, e.g. one time automatically by system and one time by another user, each failed call delivery attempt is counted as a missed call of the respective user. For a queue a call is only counted as missed if the call is not answered by a user within the defined maximum waiting time for callers.

- Percentage of total missed calls in the queue
- Average talk time
- Relative percentage of total talk time in the queue

Example 1:

A queue has a total of 40 calls and an average talk time of 2:00 min.

User A with an average talk time of 3:00 min has a value of +50% since 3:00 min are 1 min more than the total average of 2:00 min and 1 min is 50% of 2:00 min.

User B with an average talk time of 1:30 min has a value of -25% since 1:30 min are 30 sec less than 2:00 min and 30 sec is 25% of 2:00 min.

Example 2:

A queue has a total of 8 calls.

User A has 7 answered calls with an average talk time of 2:00 min.

User B has 1 answered call with an average talk time of 10:00 min.

The total average talk time in the queue is $(7 \times 2) + (1 \times 10) = 24 / 8 = 3:00 \text{ min}$.

Answered calls, Missed calls and Average talk time

	Queue	Users
Answered calls	Total of calls which have been answered by all users of the queue	Both, automatically forwarded calls and calls forwarded by other users, which have been answered by the user
Missed calls	<ul style="list-style-type: none"> • no user has answered the call within the defined maximum waiting time • the caller dropped the call before a user could answer the call 	<ul style="list-style-type: none"> • the user has not answered the call within the defined time • the caller dropped the call before the user could answer the call

	Queue	Users
Average talk time	Average talk time of all users, calculated from the total talk time of all calls	Average talk time, calculated from all calls the user has answered, including calls forwarded by other users

4 Wallboards

Swyx VisualGroups wallboards enable realtime insights to queue statistics. You can create and edit various wallboards in the web portal. These allow you to visually merge multiple queues into one view.



The Wallboard feature is only available with a valid VisualGroups Enhanced license.

4.1 Creating and editing wallboards



VisualGroups wallboards are only supported with the browsers Google Chrome, Mozilla Firefox, Safari and Microsoft Edge 80.0.361.69 or higher.

- 1 Select "Administration | Wallboards" in the main menu of the web portal.
 ✓ The list of your VisualGroups wallboards appears with following information:

Column	Description
Wallboard name	Name of the wallboard
Language	Language of the wallboard
Layout	Light or dark mode
URL	The URL will redirect you to the wallboard.

- 2 Click on "Add" or activate the checkbox in the line of the corresponding wallboard and click on "Edit".
- 3 You can define the following settings:

Parameter	Description
Name	Enter a name for the wallboard. The name is displayed in the web portal.
Display name	Enter the display name for the wallboard.
Type	Choose between two wallboard types from the dropdown list: <ul style="list-style-type: none"> • Summary: Original wallboard • List view: displays a list of multiple queues • Userinfo: In addition to the overview, also provides a status overview of users in up to 4 queues and a favorites bar with up to 10 users. The colour coding of the users indicates the availability or call status. A teal marker shows a user that he/she will receive the next call in the queue.

(Dynamic colouring)

The values for the dynamic colouring are automatically filled in if there is another wallboard configuration where formula parameters were entered for that particular queue. You can overwrite these values by entering new ones. The values will only be applied to existing configured wallboards if you select the "Apply the parameters for this queue (%QUEUENAME%) to all configured wallboards". If you create a second overview wallboard with the same queue, the values are not filled. The values for the color coding are only applied to the formula parameters of the list view.

Authorisation	You can enforce authorisation to view the wallboards. From the drop-down list, choose between "No authorization", "(SwyxWare) users only" and "(SwyxWare) Administrators only".
Language	Select the language to be displayed on the wallboard.

Parameter	Description
Layout	Select the layout in which the wallboard is to be displayed.
Refresh in seconds	Enter the refresh time in seconds. The wallboard updates the data at this interval.

Parameter	Description
(Formula parameters)	The following formula parameters define when the label is displayed in red ("Warning"). The values for the orange and green labels are automatically calculated and displayed during the configuration. You can leave the fields for the formula parameters blank. If you do not enter a value, the input field remains grey and the dynamic colouring for the wallboard is not activated.
Waiting	The number of callers waiting in one or more queues.
Users busy	The number of users in the call.
Users available	The number of users that can currently accept a call.
Ø waitingtime	The average waiting time of a caller in seconds.
Service level	The percentage of answered calls.
Missed	The number of unanswered calls.

For examples and the calculation of threshold values see *Calculation of wallboard parameters and sample configurations.*, page 40.

- If you have selected "Summary view" as the type, you can assign one or more queues to the wallboard by checking the box next to the desired available queues and clicking the appropriate arrow button. You can also assign the queues via drag and drop.



The assigned queues are displayed in the wallboard. If you select more than one queue, the statistics are summarized respectively added.

For an example wallboard "Summary" see 4.1.1.1 **Example view: Summary**, page 39.

- If you have selected "List View" as the type, assign the queues by selecting the checkboxes next to the desired available queues and clicking the appropriate arrow button. You can also assign queues via drag and drop.



Above the queue assignment you configure the color coding for the overview in the summary column; below for each assigned queue individually.

For an example wallboard "List" see 4.1.1.2 **Example view: List**, page 39.

- If you have selected "Userinfo" as the type, assign up to four queues by selecting the checkboxes next to the desired available queues and clicking the appropriate arrow button. Below you can assign up to ten users for the favorites list in the upper part of the wallboard. You can also assign queues and users via drag and drop.



The color coding in the wallboard "Userinfo" is based on the SwyxIt! status of the users.

For an example wallboard "Userinfo" see 4.1.1.3 **Example view: Userinfo**, page 40.

- Click on "Save".
 - ✓ The wallboard is saved and a URL is created in the overview. The URL will redirect you to the wallboard display.

4.1.1 Displaying a wallboard

- Select "Administration | Wallboards" in the main menu of the web portal.
 - ✓ The list of your VisualGroups wallboards appears.

- 2 Click on the URL in the line of the corresponding wallboard.
 - ✓ You will be redirected to the wallboard.
- 3 If necessary log in with your SwyxWare account to view the wallboard.
 - ✓ The wallboard automatically updates itself according to the specified refresh time.



A change to the wallboard configuration is automatically applied when viewing the wallboard. The previous URL is retained.

4.1.1.1 Example view: Summary

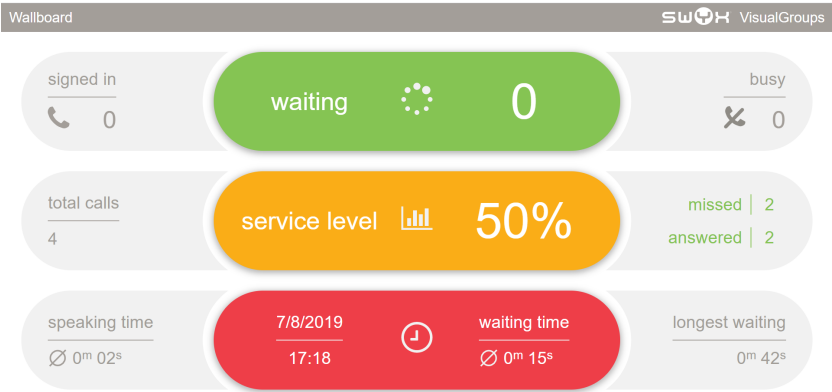


Fig. 4-1: Example wallboard summary view in light mode

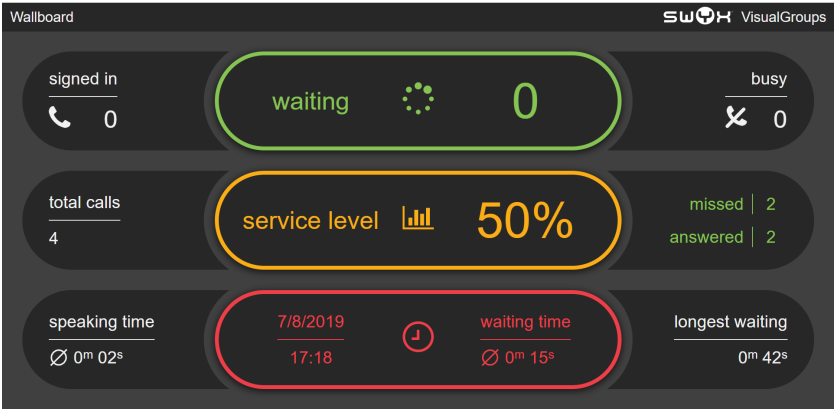


Fig. 4-2: Example wallboard summary view in dark mode

4.1.1.2 Example view: List

queues	service level	waiting	answered	waiting time	missed	speaking time
Test Queue	50%	0	2	0m 15s	2	0m 02s
Marketing	100%	0	0	0m 00s	0	0m 00s
Service	100%	0	0	0m 00s	0	0m 00s
summary	50%	0	2	0m 15s	2	0m 15s

Fig. 4-3: Example wallboard list view in light mode

Wallboard SWH VisualGroups						
queues	service level	waiting	answered	waiting time	missed	speaking time
Test Queue	50%	0	2	0m 15s	2	0m 02s
Marketing	100%	0	0	0m 00s	0	0m 00s
Service	100%	0	0	0m 00s	0	0m 00s
summary	50%	0	2	0m 15s	2	0m 15s

Fig. 4-4: Example wallboard list view in dark mode

All Queues SWH Visual Groups									
Maria Blumer	Peter Auerbach	Maria Bosch	Thomas Dreemann	Johanna Scherer	Detlef Wirtz	David Williams	NR	Nicole Richard	Demi Summer
Marketing	Marketing	Marketing	Marketing	Marketing	Marketing	Finanz	Finanz	Finanz	Marketing
Finanz	Finanz	Finanz	Finanz	Finanz	Finanz	Finanz	Finanz	Finanz	Finanz
Logistik	Logistik	Logistik	Logistik	Logistik	Logistik	Logistik	Logistik	Logistik	Logistik
Marketing			Finance			Logistics			
Konstanze R.	Isabelle Spencer	Klaus Aströger	Alex Cramer	Alexander Crowe	Mia Jackson	Rita Obers	Claudia O'Miller	Elisabeth J.	EJ
Laura Hornbach	James Broen	Rita Kramer	Steve Hancock	Karl Albrecht	Maya Aberts	Dana Lindbake	Kevin Kretz	Lena Leutner	
22.07.2019		14:05		waiting time 00m 08s		waiting calls 2		service level 90%	
						available 5		busy 8	

Fig. 4-6: Example wallboard userinfo in dark mode



If you have assigned more than four queues, the list view scrolls through all queues.

4.1.1.3 Example view: Userinfo

All Queues SWH Visual Groups									
Rita Kramer	Tom Becker	Tina Nauer	Eric Knowles	Lena Reuter	Alex Cramer	Tobias Schneider	AN	Amy Newton	Zoe Rosefield
Marketing	Marketing	Marketing	Marketing	Marketing	Marketing	Finanz	Finanz	Finanz	Marketing
Finanz	Finanz	Finanz	Finanz	Finanz	Finanz	Finanz	Finanz	Finanz	Finanz
Logistik	Logistik	Logistik	Logistik	Logistik	Logistik	Logistik	Logistik	Logistik	Logistik
Marketing			Finance			Logistics			
Sarah Herzog	DB	Eric Bolton	David Durr	Isabelle Spencer	Eve Knowles	Maria Bosch	Dean Jaden	Nicole Richard	NR
Clair Hardbaker	Tom Sting	Claudia Schmidt	Thomas Dreemann	Konstanze A. M.	Maria Blumer	Demi Summer	William Webster	Birgit Arnold	
22.07.2019		14:05		waiting time 00m 08s		waiting calls 0		service level 90%	
						available 4		busy 5	

Fig. 4-5: Example wallboard userinfo in light mode

4.1.2 Deleting a wallboard

- 1 Select "Administration | Wallboards" in the main menu of the web portal.
✓ The list of your VisualGroups wallboards appears.
- 2 Activate the checkbox in the line of the desired wallboard.
- 3 Click on "Delete".

4.2 Calculation of wallboard parameters and sample configurations.

In this chapter the calculation formulas of the wallboard parameters (thresholds) are shown for the three categories "Normal", "Warning" and "Fail". Additionally you'll find three sample configurations for orientation and quick setup.

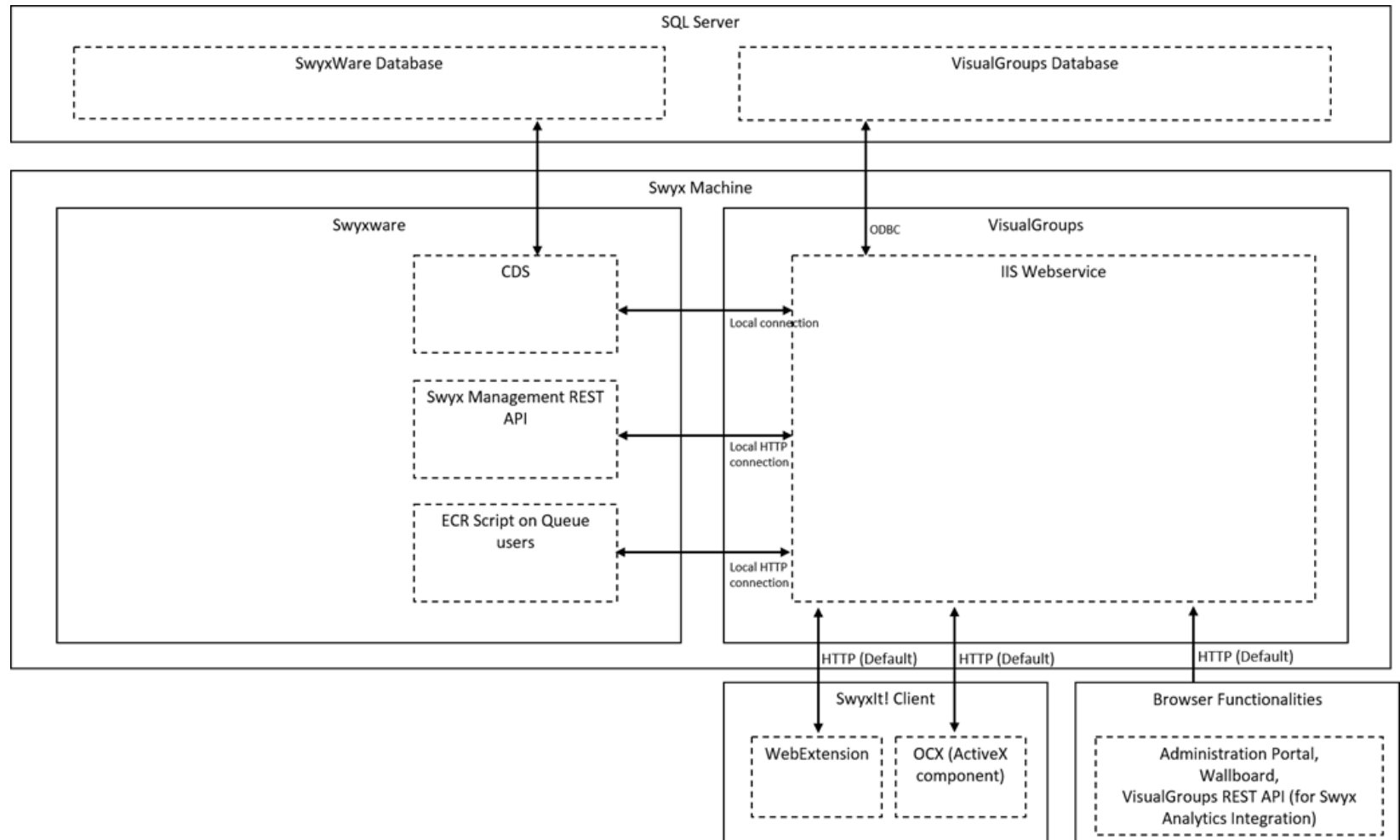
- **Example 1:** Average threshold, average number of users
- **Example 2:** Low threshold, low number of users
- **Example 3:** High threshold, higher number of users

Name	Calculation	Ex. 1	Ex. 2	Ex. 3
Waiting		$X = 5$	$X = 2$	$X = 10$
	Normal: $<X \cdot 0,5$ (rounded up)	< 3	< 1	< 5
	Warning threshold: $\geq X \cdot 0,5$ (rounded up)	≥ 3	≥ 1	≥ 5
	Fail threshold $\geq X$	≥ 5	≥ 2	≥ 10
Users busy		$X = 80\%$	$X = 50\%$	$X = 90\%$
	Normal: $<X - 20$ (Users busy/available*100%)	$< 60\%$	$< 30\%$	$< 70\%$
	Warning threshold: $\geq X - 20$	$\geq 60\%$	$\geq 30\%$	$\geq 70\%$
	Fail threshold ≥ 80	$\geq 80\%$	$\geq 50\%$	$\geq 90\%$
Users available		$X = 0$	$X = 5$	$X = 10$
	Normal: $\geq X \cdot 1,3$ (rounded, min. 1 higher)	> 1	> 7	> 13
	Warning threshold: $\leq X \cdot 1,3$ (rounded, min. 1 higher)	$= 1$	≤ 7	≤ 13
	Fail threshold $\leq X$	$= 0$	≤ 5	≤ 10
Ø waitingtime		$X = 40$	$X = 20$	$X = 120$
	Normal: $\leq X \cdot 0,75$ (rounded up, in sec.)	< 30	< 15	< 90
	Warning threshold: $\geq X \cdot 0,75$ (rounded up, in sec.)	≥ 30	≥ 15	≥ 90
	Fail threshold $\geq X$ (in sec.)	≥ 40	≥ 20	≥ 120

Name	Calculation	Ex. 1	Ex. 2	Ex. 3
Service level		$X = 80\%$	$X = 90\%$	$X = 70\%$
	Normal: $> ((100-X)/2) + X$ (rounded up))	$> 90\%$	$> 95\%$	$> 85\%$
	Warning threshold: $\leq ((100-X)/2) + X$ (rounded up)	$\leq 90\%$	$\leq 95\%$	$\leq 85\%$
	Fail threshold $\leq X$	$\leq 80\%$	$\leq 90\%$	$\leq 70\%$
Missed		$X = 5$	$X = 2$	$X = 10$
	Normal: $<X \cdot 0,5$ (rounded up)	< 3	< 1	< 5
	Warning threshold: $\geq X \cdot 0,5$ (rounded up)	≥ 3	≥ 1	≥ 5
	Fail threshold $\geq X$	≥ 5	≥ 2	≥ 10

App. A: Appendix

A.1 Overview System



1. VisualGroups must be installed on the same system as SwyxWare. This is necessary because VisualGroups depends on the SwyxWare CDS service and connects locally. In addition, the ECR scripts connect locally (via HTTP) to VisualGroups' IIS Web service.
2. The VisualGroups database can be hosted as required. It does not need to be hosted on the same machine as SwyxWare.
3. If you are running the unattended installation mode, you can specify a database name that allows multiple VisualGroups instances on a single SQL server.
4. The data traffic from SwyxIt! as well as configuration pages or wallboards is primarily sent via HTTP.
5. You can make the Web service accessible over the public Internet. As the client interaction takes place over HTTP, you can configure SSL and a domain name on the IIS web service and, depending on the scenario, allow a connection from all or from specific IP addresses. Note, however, that the ECR scripts connect to localhost and therefore do not use the configured domain name. See "TLS/SSL Activation in VisualGroups", service.swyx.net/hc/en-gb/articles/360008304879-TLS-SSL-Activation-in-VisualGroups.
6. If you restrict the connection via Internet to certain IP addresses, users with other IP addresses (e. g. from home office or mobile) can connect to SwyxIt! via remote connection but cannot access the VisualGroups service.