# Zylinc Advanced Statistics

## for BroadWorks – Product overview

Friday, February 15, 2019

www.zylinc.com

# Introduction

Zylinc Advanced Statistics is the newest and most powerful Zylinc solution for accessing and analyzing data.

A Zylinc solution's statistics database stores events for all calls, e-mails, and chat requests (for example received, answer, or transfer) as well as for all agents (for example login, logout, and state changes).

This high level of data tracking allows for full cradle-to-grave statistics on all inquiries, and for multiple types of statistics based on all aspects of the Zylinc solution.

Importantly, Zylinc Advanced Statistics not only provides tools for analyzing data from the Zylinc solution itself, but also from the following platforms:

- Mitel

- Microsoft Skype for Business

- Cisco CUCM

- BroadWorks

- Avaya

The result is an end-to-end overview for agents and all levels of your organization's employees.

**This document focuses on Zylinc Advanced Statistics for BroadWorks specifically.**

# Advanced statistics

With Zylinc Advanced Statistics, stakeholders on all levels of your organization can benefit from information about the amount and nature of inquiries that your organization gets, and how your organization handles them.

You can view Zylinc Advanced Statistics as a major extension of the simple web-based Zylinc Statistics Portal, with which you can monitor queue loads, communication channels, service goal targets, KPIs, etc., and work with selected data in bundled Microsoft Excel templates.

With Zylinc Advanced Statistics, you can do all that plus:

- Analyze and manage data from your Zylinc platform as well as from other core PBX sources, such as BroadWorks, Cisco CUCM, and Skype for Business Filter and select specific data, down to individual inquiries

- Set up your own targeted reports

- Schedule automatic generation and distribution of reports

- Export to a wide range of formats



Zylinc Advanced Statistics gives you:

- Easy, efficient, and compelling reporting to management and other stakeholders

- Insight into individual departments' and agents' performance in connection with capacity planning, setting of service goals, and performance appraisals

- Details about handling of individual inquiries in connection with training or analysis of quality issues

- Time-based overview of queue load peaks and trends that can expose changes in inquiry patterns, needs for adjusting opening hours, needs for more staff, needs for IT upgrades, etc.—all the quantitative data that you need for your business cases

- Time-based insight into effects of changes, campaigns, etc.

- Targeted information that can help everyone make better decisions—from top management, call center managers, customer service managers, and IT departments to individual agents or receptionists

- Optional integration with your CRM and ERP systems as well as other third-party database solutions

- The freedom to install on-premise, run in a private cloud, or run as a hosted solution
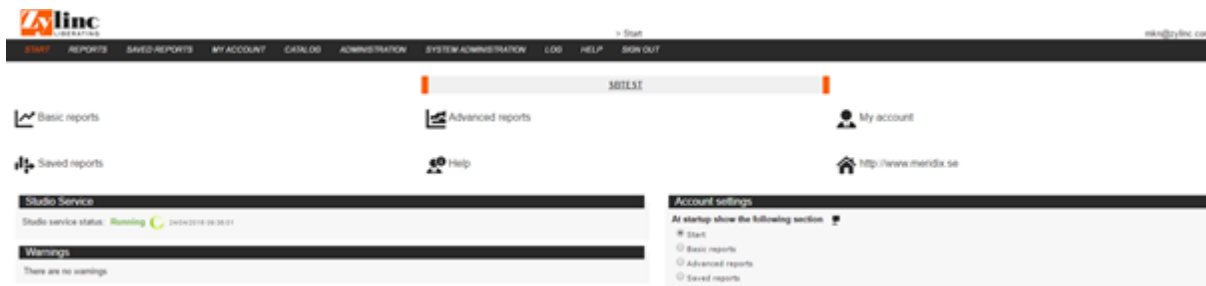
## Multitenancy

As part of a private cloud, ZylincAdvanced Statistics is fully multitenancy-enabled, and it supports multiple tenants through the same deployment, adding only a limited set of requirements to the statistics multitenant platform:

- A dedicated master database for Zylinc Advanced Statistics
- A Zylinc Windows Application Server node (a simple IIS Server)

The deployment is quick and simple, and as with the rest of the statistics multitenant platform, you manage and maintain the system entirely through a web portal.

## Platform support

Zylinc Advanced Statistics not only manages data from the Zylinc platform, but also PBX data from other core PBX data sources, which can be imported and processed by the system:

- BroadSoft BroadWorks
- Cisco CUCM
- Skype for Business (including Lync)
- Mitel
- Avaya

This means that the solution can provide full statistics and behavioral information for the entire platform, and not only for agent users.

**This document focuses on Zylinc Advanced Statistics for BroadWorks specifically.**

## Multiple channels

Zylinc Advanced Statistics provides advanced features for statistical analysis of contact behavior for all media channels—voice, chat, e-mail, and social media.

# Report types for BroadWorks

ZylincAdvanced Statistics can provide multiple different reports, each targeted towards a specific purpose in your organization:

- User IDs
- Departments
- Department members
- Hunt groups
- IVR
- Call center
- Call center agents
- User IDs outgoing distribution
- Departments outgoing dostribution

## User IDs report

A user IDs report is based on specific users.

It contains the following sortable columns of statistical data:

- Total incoming
- Incoming through redirection
- Total answered
- Total unanswered
- Unanswered (no answer)
- Unanswered (voicemail)
- Unanswered (busy)
- Unanswered (rejected)
- Unanswered (failure)
- Total redirected
- Redirected (direct/unconditional)
- Redirected (no answer)
- Redirected (busy)
- Redirected (other reason)
- Average ring time (answered)
- Ring time (answered)
- Average ring time (unanswered)
- Ring time (unanswered)
- Average duration

- Duration

- Longest ring time for an answered call

- Longest ring time for an unanswered call

- Total outgoing

- Outgoing total answered

- Outgoing total unanswered

- Outgoing unanswered (no answer)

- Outgoing unanswered (busy/rejected)

- Outgoing unanswered (failure)

- Outgoing average ring time

- Outgoing ring time

- Outgoing average duration

- Outgoing duration

- Total calls in/out

- Total average duration in/out

- Total duration in/out

## Departments report

A departments report is based on relevant departments in your organization.

It contains the following sortable columns of statistical data:

- Total incoming

- Incoming through redirection

- Total answered

- Total unanswered

- Unanswered (no answer)

- Unanswered (voicemail)

- Unanswered (busy)

- Unanswered (rejected)

- Unanswered (failure)

- Total redirected

- Redirected (direct/unconditional)

- Redirected (no answer)

- Redirected (busy)

- Redirected (other reason)

- Average ring time (answered)

- Ring time (answered)

- Average ring time (unanswered)

- Ring time (unanswered)

- Average duration

- Duration

- Longest ring time for an answered call

- Longest ring time for an unanswered call

- Total outgoing

- Outgoing total answered

- Outgoing total unanswered

- Outgoing unanswered (no answer)

- Outgoing unanswered (busy/rejected)

- Outgoing unanswered (failure)

- Outgoing average ring time

- Outgoing ring time

- Outgoing average duration

- Outgoing duration

- Total calls in/out

- Total average duration in/out

- Total duration in/out

## Department members report

A departments report is based on individual members of relevant departments in your organization.

It contains the following sortable columns of statistical data:

- Total incoming

- Incoming through redirection

- Total answered

- Total unanswered

- Unanswered (no answer)

- Unanswered (voicemail)

- Unanswered (busy)

- Unanswered (rejected)

- Unanswered (failure)

- Total redirected

- Redirected (direct/unconditional)

- Redirected (no answer)

- Redirected (busy)

- Redirected (other reason)

- Average ring time (answered)

- Ring time (answered)

- Average ring time (unanswered)

- Ring time (unanswered)

- Average duration

- Duration

- Longest ring time for an answered call

- Longest ring time for an unanswered call

- Total outgoing

- Outgoing total answered

- Outgoing total unanswered

- Outgoing unanswered (no answer)

- Outgoing unanswered (busy/rejected)

- Outgoing unanswered (failure)

- Outgoing average ring time

- Outgoing ring time

- Outgoing average duration

- Outgoing duration

- Total calls in/out

- Total average duration in/out

- Total duration in/out

## Hunt groups report

A hunt groups report is based on your organization's BroadWorks hunt groups.

It contains the following sortable columns of statistical data:

- Total incoming

- Answered by members

- Unanswered by members

- Average answer time

- Average queue time unanswered/fallbacks

- Average call duration time

- Call duration time

- Total fallbacks

- Longest queue time (answered)
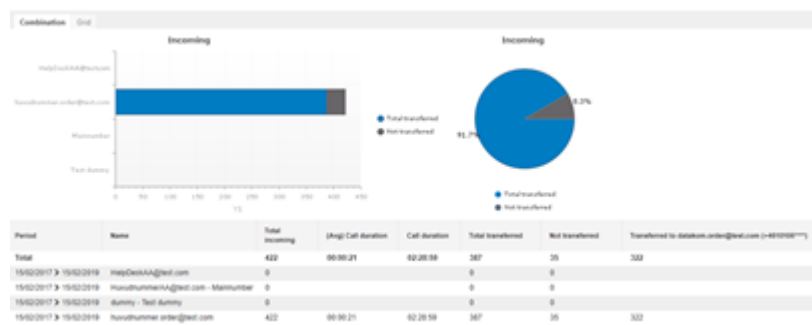
- Longest queue time (unanswered)

## IVR report

An IVR report is based on specific Interactive Voice Response menus.

It contains the following sortable columns of statistical data:

- Total incoming

- Average call duration

- Call duration

- Total transferred

- Not transferred

- Transferred to … (one column for each number that calls have been transferred to)

## Call center report

A call center report contains the following sortable columns of statistical data:

- Total incoming

- Total answered by agents

- Total unanswered by agents

- Average queue time - answered by agents

- Standard deviation queue time - answered by agents

- Average queue time - unanswered

- Standard deviation queue time - unanswered

- Average call duration

- Average queue time - sent to overflow

- Standard deviation queue time - sent to overflow

- Total overflows

- Answered within ...-... seconds (one column for each specified interval)

- Unanswered/overflow within ...-... seconds (one column for each specified interval)

- % service level ... seconds (one column for each specified service target)

- Longest queue time for an answered call

- Longest queue time for an unanswered/overflow call

- Answered by ... (one column for each agent)

- Overflow to ... (one column for each overflow/fallback)

## Call center agents report

A call center agents report contains the following sortable columns of statistical data for each relevant call center agent:

- Answered

- Average call duration

- Standard deviation call duration

- Total call duration

- Longest call duration



## User IDs outgoing distribution report

A user IDs out report contains the following sortable columns of statistical data about individual users' outgoing calls:

- Total outgoing

- Total outgoing duration

- National calls

- National calls duration

- Premium rate calls

- Premium rate calls duration

- Mobile calls

- Mobile calls duration

- International calls

- International calls duration

- % of all national calls

- % of all premium rate calls

- % of all mobile calls

- % of all international calls

- International calls specification (one column for each relevant country code)

- Used

## Departments outgoing distribution report

A user IDs out report contains the following sortable columns of statistical data about individual departments' outgoing calls:

- Total outgoing

- Total outgoing duration

- National calls

- National calls duration

- Premium rate calls

- Premium rate calls duration

- Mobile calls

- Mobile calls duration

- International calls

- International calls duration

- % of all national calls

- % of all premium rate calls

- % of all mobile calls

- % of all international calls

- International calls specification (one column for each relevant country code, each field displays number of calls and total duration)

- Used
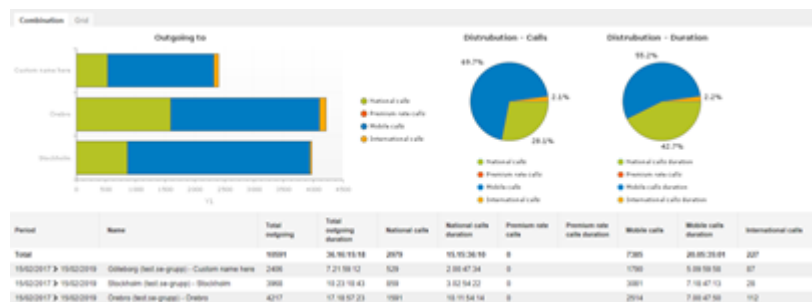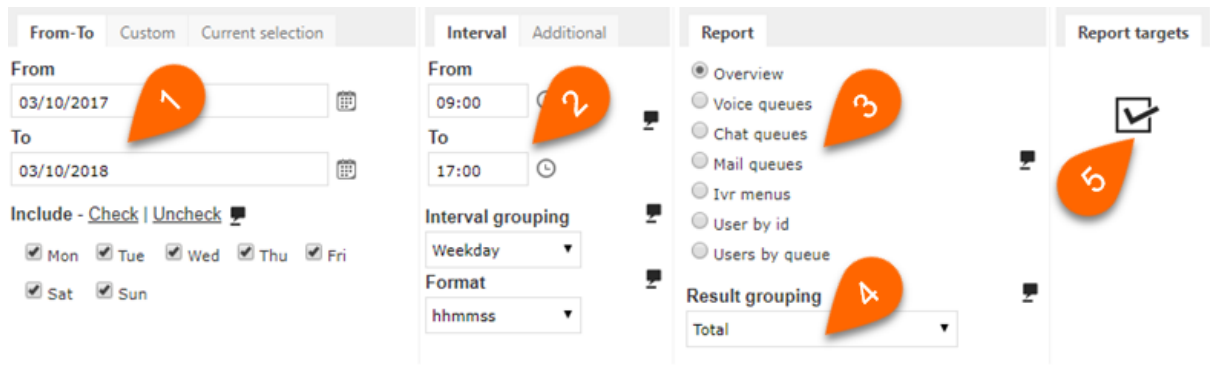
# Report generation

Zylinc Advanced Statistics can handle large amounts of data inline, and it isn't limited in scheduled reporting features. That means that you can test an initial report with a small data set, and then schedule it for the full scope when you're ready.

Creating a report is quick and easy:

1. Select time scope (which period the report should cover, for example Mondays to Fridays in the last year)

2. Select time of day (for example all day or only inside your organization's opening hours) and interval grouping (for example by weekdays or months)

3. Select report type

4. Select result grouping

5. Select report targets (which queues, users, etc. the report should cover)



> ✳ For reports about BroadWorks systems, your report types will be different from the ones in the illustration.

When ready, execute the report and wait a short while for data to be processed

Once Zylinc Advanced Statistics has processed the data, it automatically generates the report, and you can then change grouping on the fly along with visible columns.

Here's an example of a report with results grouped by time of day in one-hour intervals (the minimum supported interval is one minute):

| Period | Total incoming contacts | (Voice) Incoming | (Chat) Incoming | (Mail) Incoming | (Voice) Answered | (Voice) Abandoned | (Voice) Redirected | (Voice) Transferred | (Chat) Answered | (Chat) Abandoned |
|---|---|---|---|---|---|---|---|---|---|---|
| Total | 1958 | 1911 | 22 | 25 | 1226 | 484 | 157 | 94 | 22 | 0 |
| 10:00 | 166 | 164 | 2 | 0 | 101 | 45 | 17 | 5 | 2 | 0 |
| 11:00 | 303 | 298 | 1 | 4 | 216 | 59 | 21 | 16 | 1 | 0 |
| 12:00 | 279 | 273 | 4 | 2 | 169 | 71 | 22 | 10 | 4 | 0 |
| 13:00 | 203 | 193 | 2 | 8 | 128 | 51 | 14 | 11 | 2 | 0 |
| 14:00 | 349 | 339 | 8 | 2 | 215 | 86 | 30 | 14 | 8 | 0 |
| 15:00 | 313 | 307 | 5 | 1 | 190 | 81 | 24 | 20 | 5 | 0 |
| 16:00 | 207 | 205 | 0 | 2 | 131 | 50 | 20 | 10 | 0 | 0 |

You can easily change the report's columns to get full control over exactly which individual types of data (for example the number of calls redirected or call transferred) that the report contains.

## Result grouping

You can group all reports by:

- Time
- Weekdays
- Months
- Dates
- Weeks
- Quarter
- Year and month
- Year
- Period

Here's an example of a report with results grouped by week instead of by one-hour intervals:



| Period | Total incoming contacts | (Voice) Incoming | (Chat) Incoming | (Mail) Incoming | (Voice) Answered | (Voice) Abandoned | (Voice) Redirected | (Voice) Transferred | (Chat) Answered | (Chat) Abandoned |
|---|---|---|---|---|---|---|---|---|---|---|
| Total | 1958 | 1911 | 22 | 25 | 1226 | 484 | 157 | 94 | 22 | 0 |
| Monday | 368 | 356 | 6 | 6 | 241 | 85 | 23 | 27 | 6 | 0 |
| Tuesday | 496 | 487 | 6 | 3 | 320 | 116 | 28 | 26 | 6 | 0 |
| Wednesday | 374 | 365 | 3 | 6 | 196 | 111 | 49 | 5 | 3 | 0 |
| Thursday | 365 | 353 | 3 | 9 | 235 | 80 | 36 | 12 | 3 | 0 |
| Friday | 355 | 350 | 4 | 1 | 234 | 92 | 21 | 24 | 4 | 0 |
| Saturday | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sunday | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Even if you generated a report with one grouping (for example grouping by weeks), you can later change it on the fly (for example to grouping by months). This greatly eases comparison on various grouping levels.
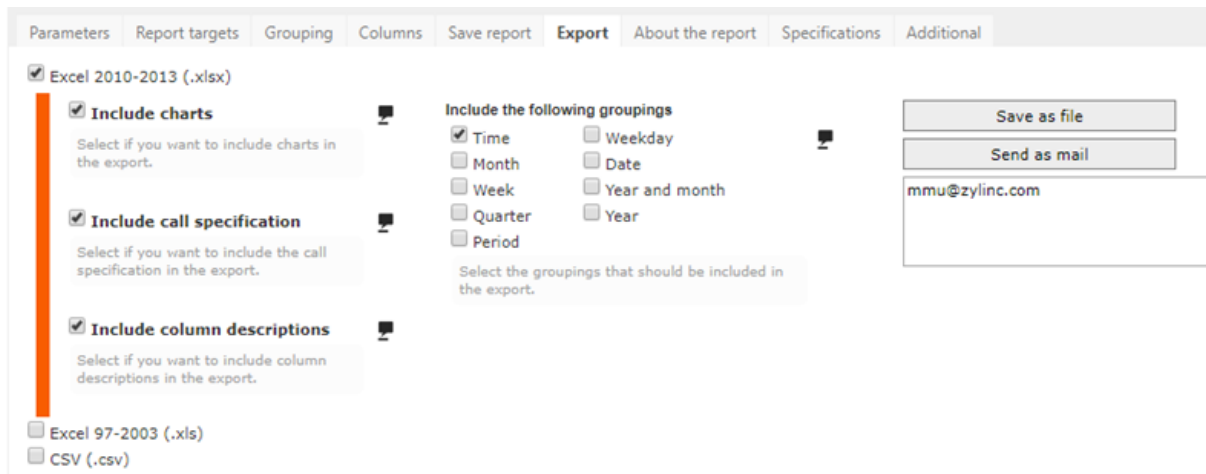
You can save any generated report with all the groupings that you're potentially going to need.

# Data export

Zylinc Advanced Statistics supports export of generated reports to three formats:

- CSV

- Microsoft Excel 97-2003 (.xls)

- Microsoft Excel 2010-2013 (.xlsx)

When you use the Excel formats, you can export multiple data groupings to the same Excel export, and you can include charts and graphs from the reports in your Excel export.



When you export to Excel, each selected grouping becomes a separate sheet in the workbook. The result is an easy-to-access workbook with full data availability.
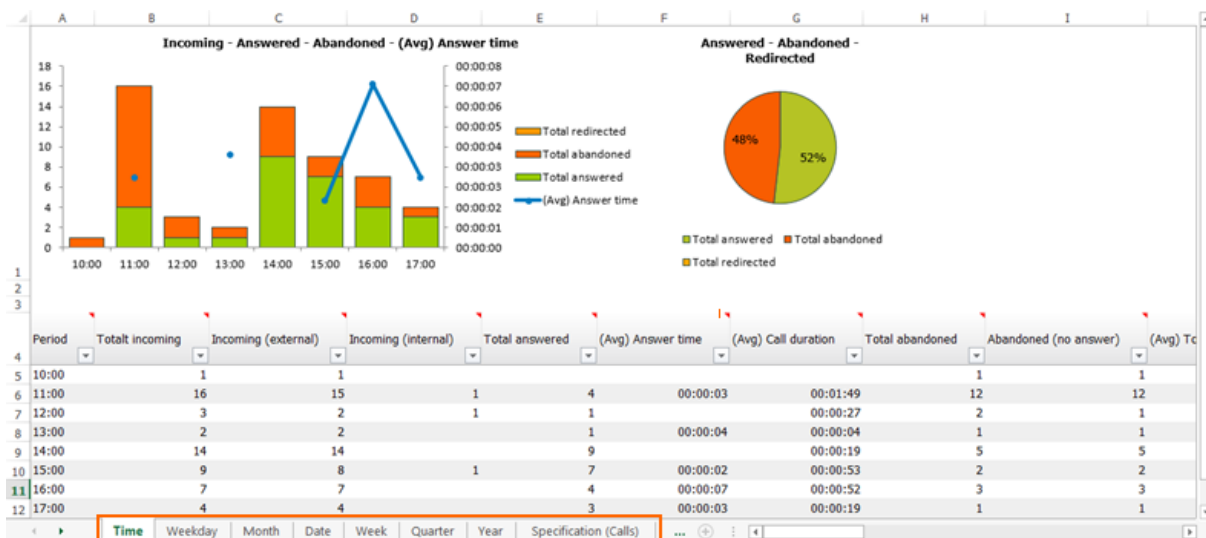


Export to CSV files does not support multiple data groupings.

# Report saving and scheduling
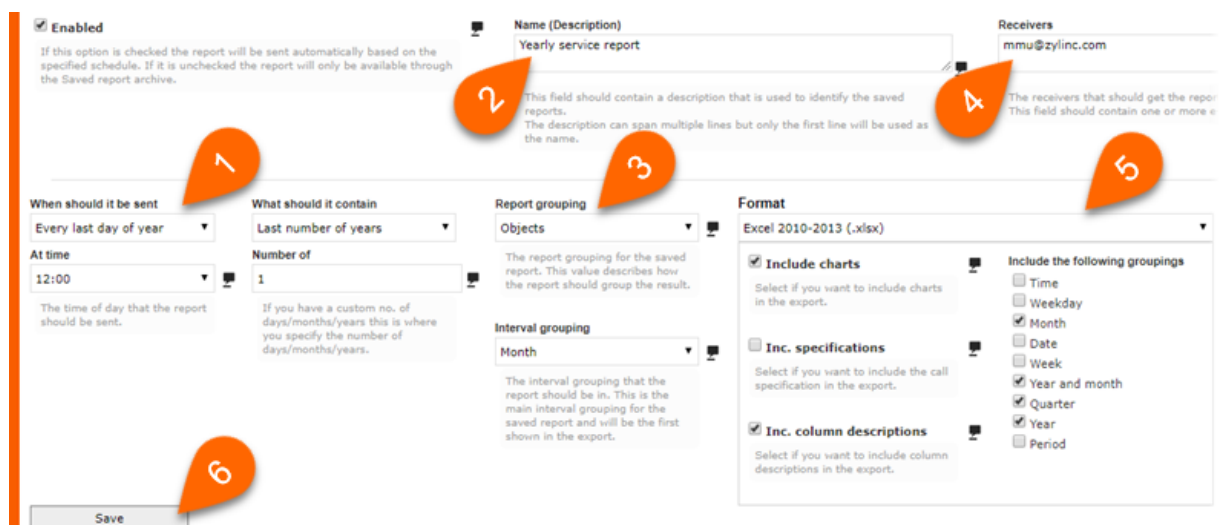
In Zylinc Advanced Statistics, the save and schedule features for reports are combined to allow for easy saving and scheduling of reports.

You can save any generated report with or without a schedule.



The steps to save and schedule a report are very simple:

1. Select scheduling behavior

2. Select a name for the report

3. Select result grouping

4. Select recipients who should automatically receive the report

5. Select report format and additional options

6. Save the report, and scheduling is now active

# External call logging

⚠ This feature is currently only supported for calls from and to BroadWorks endpoints.

With external call logging, Zylinc Advanced Statistics can log calls to all monitored devices in an external database.

For each call, an event is registered in the external database with the following data:

- 📄 userID (varchar(256), not null)
- 📄 callID (varchar(256), not null)
- 📄 userEmail (varchar(256), null)
- 📄 userDisplayName (varchar(256), null)
- 📄 userPhoneNumber (varchar(256), not null)
- 📄 remotePhoneNumber (varchar(256), not null)
- 📄 isIncomingCall (bit, not null)
- 📄 startDatetime (datetime, not null)
- 📄 endDatetime (datetime, not null)
- 📄 answerDatetime (datetime, null)
- 📄 isRedirected (bit, not null)

This is an example of how the table is populated:



On the Zylinc system, all you need to configure in the web-based Zylinc Administration Portal is this:



Zylinc delivers a template Microsoft SQL stored procedure that end customers can customize to suit their needs.

# Zylinc Advanced Statistics dashboards



In Zylinc Advanced Statistics, you can easily set up dashboards for operational as well as analytical pur- poses. Such dashboards are typically displayed in full-screen mode on large monitors in call centers or IT operations centers, but they can be equally relevant for individual managers, supervisors, etc.

In Advanced Statistics, you can make as many dashboards as your organization needs. You can easily customize each dashboard for its particular use, because the dashboards are made up of widgets that you can mix, size, and position as required. You can save dashboard templates and share them with your col- leagues, so they can save time when they make their own dashboards. You can even style the dash- boards with CSS stylesheets to make them fit your organization's visual identity.

In addition to information from Advanced Statistics itself, you can add content like RSS feeds, clocks, YouTube videos, images (such as logos), or embedded web pages to your dashboards.

Examples of some of the many dashboard widgets:
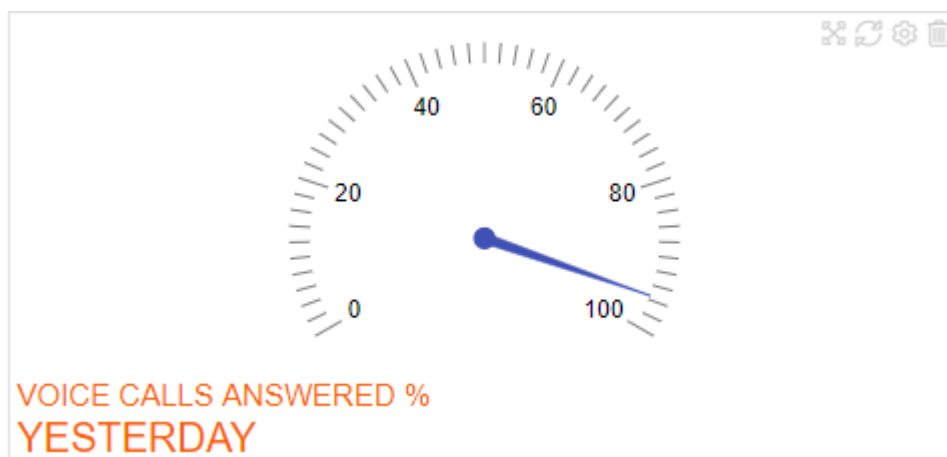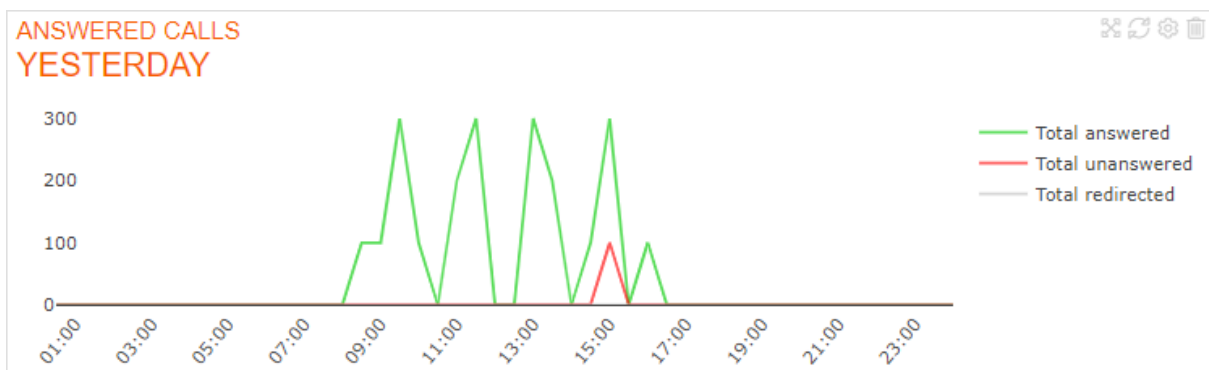
# Third-party integration

Customers or third-party systems that require extended access to the generated statistical data can get API access to the Zylinc statistics.

This is ideal for third-party systems and customers who need the access for BI, data warehousing, workforce management, or performance management.

The API is based on SQL database integration, and it can be accessed either directly or through a mirror. If the purpose is to present live data and action (wallboard features), you should do the database polling from the mirror.

The statistical data is generated by using the Zylinc Attendant Console, Contact Center, or Service Center applications.

The statistics database is based on a Microsoft SQL Server architecture, so all references to views, tables, and stored procedures refer to Microsoft SQL connection methods.



The statistical data includes, but is not limited to:

- Agent performance
- Queue performance
- Channel overview
- Channel performance
- User states
- Users
- Events
- Live performance

Zylinc offers consultancy services to help partners and customers understand the data model and individual use cases.

# Copyright, trademarks, and disclaimer

## Third-party hardware & software – impact on Zylinc support

Zylinc solutions integrate with numerous third-party hardware and software providers. Some of the third-party software is essential to the core operation, for example operating systems and databases. Other third-party software is needed to implement additional features, for example chat. Third-party hardware, like phones or headsets, can also play a great role in a Zylinc solution.

To guarantee a fully working solution, Zylinc closely follows the release cycles of the third-party hardware and software vendors. Zylinc will not support integration to third-party hardware or software that's no longer supported by the respective vendor. This also applies to hardware and software that isn't directly used in the Zylinc solution as such, but can be used as tools that support the general use of the Zylinc solution, for example Microsoft Excel.

- **Microsoft**
  Zylinc solutions aren't supported on Microsoft software that has passed its Mainstream Support end date. Zylinc doesn't support Microsoft products in the Extended Support state.
  You can find the official Microsoft lifecycle definitions at https://support.microsoft.com/en-us/g-p/lifeselect, from where you can also find detailed lifecycle information on specific products.

- **Cisco**
  You can find infomation about the lifecycle of Cisco Call Manager at https://www.-cisco.com/c/en/us/products/unified-communications/unified-communications-manager-call-manager/eos-eol-notice-listing.html

- **Third-party APIs in general**
  Many third-party software and service providers don't follow strict software lifecycle policies where changes to APIs are announced well in advance. This applies to, for example, Facebook and Google. Zylinc follows updates to all relevant APIs closely, and will update the Zylinc solutions to comply with updates as quickly as possible. However, Zylinc isn't responsible for any limitations, thresholds, etc. in such third-party APIs.

- **Third-party hardware**

Many third-party hardware providers don't follow strict lifecycle policies where changes to their hardware and any associated software, firmware, etc. are announced well in advance. This applies to, for example, phone device and headset manufacturers.
Zylinc follows updates to all relevant hardware as closely as possible, and will update the Zylinc solutions to comply with updates as quickly as possible. However, Zylinc isn't responsible for any limitations, etc. in such third-party hardware.

When you upgrade or downgrade third-party software or hardware that could have an impact on how your Zylinc solution will work, we strongly recommend that you test the upgrade or downgrade in an isolated test environment before you apply the changes in your production environment. You should be especially aware of this if you subscribe to automatic third-party updates.

If you're in doubt about whether particular third-party software or hardware will work with your Zylinc solution, you're welcome to contact Zylinc support for advice.

## No warranties
Unless you are provided with a specific warranty from Zylinc as part of your product documentation, Zylinc expressly disclaims any warranty for the product.

The product and any related documentation is provided "as is" without warranty of any kind, either expressed or implied, including, without limitation, the implied warranties of merchantability or fitness for a particular purpose. The entire risk arising out of use or performance of the product remains with you as the user.

## Limitation of liability
In no event shall Zylinc or its suppliers be liable for any special, incidental, indirect, or consequential damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or any other pecuniary loss) nor for any product liability (except for bodily injury) arising out of the use of or inability to use the product or the provision of or failure to provide proper support, even if Zylinc has been advised of the possibility of such damages.

Absent any willful misconduct or gross negligence, the entire liability of Zylinc and its suppliers shall be limited to the amount actually paid by you for the product.

When Zylinc partners deal with orders that involve Zylinc, they can greatly benefit from using the recommended standard delivery process (available on Zylinc unified help). However, when Zylinc partners deal with enterprise orders, that is orders that involve Zylinc solutions for more than 500 end users, they *must* use the standard delivery process.