





Analyzer Guide

VoiceObjects 9.0

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Table of Contents

| | |
|--|-----------|
| TABLE OF CONTENTS | 3 |
| ABOUT THE ANALYZER GUIDE | 6 |
| Organization of this Guide | 6 |
| Typographical Conventions | 6 |
| Feedback and Questions | 6 |
| 1 WELCOME TO VOICEOBJECTS ANALYZER | 7 |
| Business Value | 7 |
| The Report Categories | 8 |
| Business Intelligence Tools | 8 |
| Reporting Features | 9 |
| 2 INSTALLATION AND CONFIGURATION OF VOICEOBJECTS ANALYZER | 10 |
| Installation Requirements | 10 |
| The language-specific view layer | 10 |
| Installing VoiceObjects Analyzer for BusinessObjects | 11 |
| Import VoiceObjects Analyzer into a BusinessObjects installation | 11 |
| Configure the universe connection | 12 |
| Installing VoiceObjects Analyzer for Cognos | 12 |
| Import VoiceObjects Analyzer into a Cognos installation | 12 |
| Installing VoiceObjects Analyzer for MicroStrategy | 14 |
| Import VoiceObjects Analyzer into a MicroStrategy installation | 14 |
| Configuring VoiceObjects Desktop for VoiceObjects Analyzer | 14 |
| Accessing VoiceObjects Analyzer from VoiceObjects Desktop | 15 |
| 3 REPORT LIBRARY | 16 |
| Administration and Maintenance | 17 |
| Channel and Driver Distribution | 17 |
| Cluster Efficiency | 20 |
| Cluster Efficiency Trend | 22 |
| Number of Recordings | 24 |
| Number of Sessions by Day | 26 |
| Number of Sessions by Hour of Day | 28 |
| Number of Sessions by Month | 30 |
| Number of Sessions by Weekday | 32 |
| Processing vs. Session Duration | 34 |
| Server Statistics | 36 |
| Session Partitioning Analysis | 38 |
| Application Development and Tuning | 41 |
| Average Number of Sessions | 41 |



| | |
|---|-----|
| Caller Exits by Input States | 43 |
| Caller Exits by Modules | 45 |
| Dialog Language | 47 |
| Dialog Language Trend | 49 |
| DTMF Fallback Analysis | 51 |
| Event Distribution | 53 |
| Events by Day..... | 56 |
| Exit Type Distribution..... | 58 |
| Exit Types Trend | 60 |
| Input State Frequency | 62 |
| Menu Navigation Analysis | 64 |
| Module Analysis | 66 |
| Recognition Quality | 68 |
| Recordings by Input State | 70 |
| Service Analysis | 71 |
| Service Chain Session Analysis..... | 73 |
| Service Deployment History | 75 |
| Session Duration Benchmark..... | 77 |
| Session Input State Analysis..... | 79 |
| Transition Types | 81 |
| Utterance Analysis (Voice, DTMF, Text)..... | 83 |
| Utterances by Input States | 85 |
| Voice vs. DTMF Input..... | 87 |
| Business and Caller Analysis | 89 |
| Business Task Completion Rates..... | 89 |
| Business Task Data..... | 91 |
| Business Task Session Analysis..... | 93 |
| Caller Frequency | 95 |
| Caller Loyalty..... | 97 |
| Channel Trend Analysis | 99 |
| Dialog Depth..... | 101 |
| Dominant Path Analysis | 103 |
| Early Drop-Off Analysis | 105 |
| Layer Usage Overview | 107 |
| Module Sequences..... | 109 |
| Module Sets..... | 111 |
| Session Details..... | 113 |
| Subsequence Analysis (Start – End) / (Start) / (End)..... | 115 |



| | |
|--|------------|
| Top 20 Callers | 117 |
| A - THE LOGICAL DATA MODEL | 119 |
| Dimensional Attributes and Facts..... | 119 |
| Date and Time dimension..... | 119 |
| Modules and Input States dimension | 119 |
| Dialog dimension | 121 |
| Configuration dimension..... | 123 |
| Service dimension | 124 |
| Session dimension | 125 |
| Media Platform dimension..... | 126 |
| Recording dimension..... | 127 |
| Layer dimension | 128 |
| Business Task dimension..... | 129 |
| Facts | 130 |



About the Analyzer Guide

This *Analyzer Guide* contains a detailed description of VoiceObjects Analyzer, the reporting and analysis package for leading business intelligence products for both standard and customized real-time analysis.

The *Analyzer Guide* includes a description of the installation process of VoiceObjects Analyzer, an overview of the functionality provided, and a detailed description of each report along with the business value that can be derived from it.

Organization of this Guide

The *Analyzer Guide* consists of the following chapters:

Chapter 1 – Welcome to VoiceObjects Analyzer – provides a short introduction to VoiceObjects Analyzer.

Chapter 2 – Installation and Configuration of VoiceObjects Analyzer – describes the installation process of VoiceObjects Analyzer. This chapter covers the setup of the language-specific view layer and the installation of VoiceObjects Analyzer on BusinessObjects, Cognos and MicroStrategy.

Chapter 3 – Report Library – contains a detailed description of all available reports.

Appendix A – The Logical Data Model – provides a comprehensive description of the data that is stored by Infostore.

Typographical Conventions

This document contains the following typographical conventions:

| | |
|--------------------------|---|
| <i>Italic Font</i> | Used to indicate names of applications, projects, objects, variables, files, and folders; output text, and book titles. |
| Bold Font | Used to indicate any screen terminology like names of windows, worksheets, editors, sections, boxes, tabs, fields, and menus. |
| <code>Courier New</code> | Used for grammar code. |

All path specifications in this document use slashes (/) to apply to both Linux and Windows. If you work on Windows you may also use backslashes (\).

Feedback and Questions

If you have any comments on this document please send your feedback to vo-documentation@voiceobjects.com.

If you have technical difficulties please contact your local VoiceObjects administrator or if you have a valid software support and maintenance contract in place send an email describing your problem to support@voiceobjects.com.



1 Welcome to VoiceObjects Analyzer

While deployment obviously is a major milestone in the lifecycle of a service, it certainly isn't the last step. Users calling the service and navigating through the designed dialogs leave an important trail behind them on VoiceObjects Server, providing insight into usage and acceptance patterns.

This chapter provides a first overview of VoiceObjects Analyzer, the component within the VoiceObjects product family that deals with analyzing these data.

Business Value

The analytic features of VoiceObjects Analyzer are based on the statistics functionality of Infostore, the logging component of VoiceObjects Server.

Infostore provides the capability to gather and refine the statistics data throughout your servers and store the information in a standardized data model. For detailed information about Infostore refer to the *Infostore Guide*.

VoiceObjects Analyzer is designed to turn these data into information that helps business users to gain insight into factors that influence the profitability of their services.

By leveraging this information to continuously tune and improve the deployed services, developers can rapidly boost acceptance.

The analytics of VoiceObjects Analyzer are designed to provide you with answers to the following questions:

What is the completion rate of business tasks?

What are the dominant paths users take?

What kind of personalization is used?

What is the (average/minimum/maximum) workload of your servers?

What are the peak workloads and when do they occur?

At what time will system maintenance downtime have minimum impact?

Is the current number of ports sufficient? Are the servers properly sized?

Is the load on your cluster evenly balanced?

Are there daily/monthly trends in the use of your service?

How many of your calls result in an error?

What are your most actively used services?

How many unique callers do you have?

How many repeat callers are there? How often do they call?

How much time (on average/minimum/maximum) do callers spend in your service?



The Report Categories

The pre-defined reports of VoiceObjects Analyzer are categorized into three different areas of interest:

Administration and Maintenance

The reports in this category are primarily targeted towards administrators of service environments. They help to identify peaks, both highs and lows, in the usage of the deployed services, the average usage, throughput and other useful figures.

Application Development and Tuning

The reports in this category target application designers. They provide information about the usage of the different services, about the average time that callers spend within the services and give hints on trends in the usage of the dialogs.

Business and Caller Analysis

The reports in this category are of most interest to marketing people or CRM analysts. They primarily provide information on business tasks and on the callers and their acceptance of the services, i.e. how well the service is addressing caller needs, how many of the callers are coming back, and how often they visit.



Note: The *Analyzer Guide* describes the reports provided with VoiceObjects Analyzer for Cognos package. Other packages may contain more or less reports, or the reports may be defined different, may have different filter criteria, layout or functionalities.

Business Intelligence Tools

VoiceObjects Analyzer is based on market-leading Business Intelligence tools to leverage best-of-breed query and reporting functionality. Those tools most efficiently support to gain insight into the data stored in Infostore.

VoiceObjects Analyzer is currently available for the Business Intelligence tools BusinessObjects XI, Cognos and MicroStrategy.

For detailed information on working with these tools refer to the respective product documentation provided by its vendors.

In case of BusinessObjects refer to the manual *Building Reports Using the Web Intelligence Java Report Panel* which is part of the BusinessObjects installation.

In case of Cognos refer to the manual *User Guide Report Studio* which is part of the Cognos installation.

In case of MicroStrategy refer to the *Basic Reporting Guide* for an introduction into the work with reports, metrics, filters and prompts within the MicroStrategy environment.



Reporting Features

VoiceObjects Analyzer provides you with insight into application data by supplying reports, diagrams, and scorecards.

By using standard query and reporting tools, you have access to features such as:

Formatting

Each report comes with a predefined formatting that may be adapted to accommodate your corporate style guides and to assure a consistent presentation of data. You might, for example, want to add your company logo to the header of the VoiceObjects Analyzer reports.

Drilling

Starting with a report that gives you a high level overview you can systematically drill down into the data and pinpoint sources of meaningful trends in caller behavior. For instance, you can start with a report that shows the number of calls per month. If you encounter a deviation in call frequency for a particular month you might want to drill down to see the calls per day in that month.

Slicing and Dicing

You have the flexibility to add or remove dimensional attributes and measures from reports to customize the amount of data that is presented. Imagine a report showing detailed information about all dialogs initiated by one specific ANI. You might want to listen to recordings of the calls that terminated with an error. To do this you would need to add the media platform session ID to the report.

Filtering

At run time you are prompted to choose filter conditions to adapt the scope of analysis to your needs. Using this feature you can for example exclude servers used for testing purposes from your reports to only see data from the production servers.

For detailed information on all the features available with a certain Business Intelligence tool refer to its product documentation provided by the respective vendor.



2 Installation and Configuration of VoiceObjects Analyzer

This chapter describes the installation process of VoiceObjects Analyzer for the use with BusinessObjects, Cognos or MicroStrategy. For details on how to install and configure the respective Business Intelligence environments, refer to the according documentation of these products.

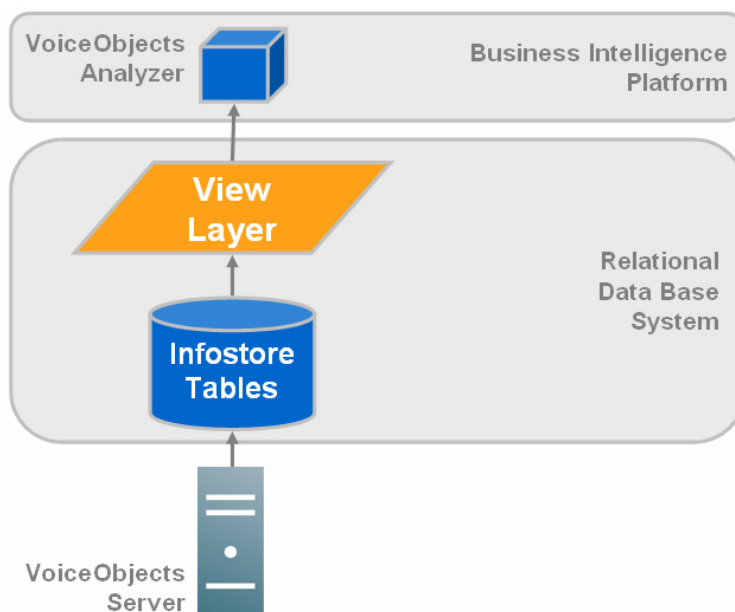
Installation Requirements

VoiceObjects Analyzer is based on leading Business Intelligence platforms. To install and use VoiceObjects Analyzer the according Business Intelligence platform must be available including appropriate resources, user rights, licenses and other platform-specific requirements and configurations.

- i** ▶ **Note:** VoiceObjects Analyzer packages contain schema and report definitions. The packages don't provide any Business Intelligence software or software license.

As shown in the diagram below VoiceObjects Analyzer provides access to the data logged by VoiceObjects Server into the Infostore database tables. To provide a language-specific representation of standard lookup data and to pre-calculate some data on the database level the Infostore data is accessed through a view layer.

This view layer must be installed and needs to be accessed by VoiceObjects Analyzer in order to work correctly. The installation process is described in the paragraph The language-specific view layer below.



The language-specific view layer

To provide an easy way for the user to create multi-lingual reports out-of-the-box, the statistics data model supports localization. This means that the descriptions for the relevant attributes (e.g. day, month, exit type, etc.) are stored in multiple



languages. Currently the same languages as for VoiceObjects Desktop are supported (i.e. English and German).

Regarding the physical schema, this fact implies that some lookup tables incorporate a column *Locale_ID* into their physical table key. When building reports on top of the analytic data model it is important to always use this combined key. Not using this key may result in inaccurate data (double counting).

VoiceObjects also provides a set of SQL scripts that create one set of views for each supported language.

To generate the language-specific view layers, do the following:

1. In the database, create one user for each language that you intend to support.



Note: It is recommended to indicate the different language layers by the schema name (table prefix), which allows switching between the different languages without changing the physical data structure. Also keep a hint to the language in the user name to simplify identification of the different view layers, e.g. the user for the German view layer should be named *vologusr_de*, the English *vologusr_en*, etc.

2. Grant all users the privilege to execute an SQL Select command on the logging tables. The following shows an example syntax:

```
GRANT SELECT ON voadmin.VOLDDLGSTS TO vologusr_de
```

3. In the subfolder *Platform\WEB-INF\driver\db* of your VoiceObjects installation path, open the folder that corresponds to your database system. Open the script *LDVWCreate_De.sql* in a text editor and replace the prefix *voadmin* with the database user ID you have used to create the System Logging Repository.
4. Execute this SQL script with the database user ID that is going to be associated with this language.
5. Repeat these steps for each language that you intend to support.

Installing VoiceObjects Analyzer for BusinessObjects

VoiceObjects Analyzer for BusinessObjects is available for BusinessObjects XI Release 2, minimum Service Pack 3 (SP3).

It is provided as a Business Intelligence Archive Resource (BIAR) file containing the BusinessObjects Universe and the report definitions.

To import VoiceObjects Analyzer, a BusinessObjects XI R2 installation must be setup and configured. For detailed information on how to setup a BusinessObjects installation and how to import and configure universes and reports refer to the BusinessObjects documentation.

Import VoiceObjects Analyzer into a BusinessObjects installation

To import VoiceObjects Analyzer into an existing BusinessObjects installation, do the following:

1. Start the BusinessObjects Import Wizard.
2. Select the BIAR file *VoiceObjectsAnalyzer_<version_number>_forBusinessObjects.biar* as source system.
3. As target, select the BusinessObjects CMS into which VoiceObjects Analyzer should be imported.



4. In the **Object Selection** dialog, select at least the *Public Categories, Folders and Objects, Repository Objects* and *Universes*.
5. Proceed with specifying the defaults for the import options of *Universes* and *Incremental Import*.
6. In the **Category Selection** dialog, select all three categories.
7. In the **Folder and Object Selection** dialog, select all three object folders.
8. Select the according application folder.
9. Finally, confirm the import configuration and start the import by clicking **Finish**.

Configure the universe connection

As described above VoiceObjects Analyzer is based on the language view layer. The previously installed universe and reports need to get access to the language view layer. By default, VoiceObjects Analyzer is configured with a universe connection *vologusr_en* to access the Infostore data. This connection must be available on the BusinessObjects system or an according connection must be provided. To modify the universe connection in Business Objects, do the following:

1. Start the BusinessObjects Designer.
2. Import the universe by using the **Import** function provided in the **File** menu.
3. From the **Tools** menu, select **Connections**.
4. Configure the connection to the language view layer of the Infostore database.
5. From the **File** menu, select **Parameters**.
6. Make sure that the previously configured *Connection* is set accordingly.
7. Finally, select **Export** from the **File** menu to update the BusinessObjects CMS.

Installing VoiceObjects Analyzer for Cognos

VoiceObjects Analyzer for Cognos is available for Cognos 8.2.

The Cognos metadata are provided as archive containing the Cognos deployment archive which stores the report definition and the Cognos model used by Framework Manager.

To import VoiceObjects Analyzer, a Cognos 8.2 installation must be setup and configured. For detailed information on how to setup a Cognos installation and how to import and configure a project refer to the Cognos documentation.

Note that VoiceObjects Analyzer is based on the language view layer as described above. A connection must be available to access this view layer.

Import VoiceObjects Analyzer into a Cognos installation

To import VoiceObjects Analyzer into an existing Cognos installation, do the following:

Import and setup within Cognos Connection:

1. Extract the *VoiceObjectsAnalyzer_<versionnumber>_DeploymentArchive.zip* archive into the *deployment* directory of your Cognos installation.
2. Extract the other files into an empty directory accessible by Framework Manager.



3. Start *Cognos Connection*.
4. From the **Tools** menu, select **Content Administration**.
5. Create a new import.
6. Select the package *VoiceObjectsAnalyzer_<versionnumber>_DeploymentArchive*.
7. Some installations require an encryption password. The password is *voiceobjects*.
8. Enter a name and description (optional) for the import.
9. On the **Public folder content** page, leave the default settings and continue.
10. On the **Directory Content** page, select the options *Include data sources and connections* and *Include sign-ons*.
11. On the **General Options** page, leave the default settings and continue.
12. Review your settings and finish (save and run once) the import.
13. After importing, select **Directory** from the **Tools** menu.
14. Select the **Data Source** tab and select the *Infostore* data source.
15. Select the *Infostore* connection and open the *vologusr_en* preferences.
16. Set the according database login on the **Sign-on** tab and assign the Cognos users that should have the permission to use this sign-on.
17. Save the changes and return to the list of connections.
18. Open the preferences of the *Infostore* connection and set the according database and sign-on preferences on the **Connection** tab.
19. Test the connection and make sure the test succeeds.
20. Save the changes.

Depending on the configuration the data source of the project might need to be modified:

1. Start Framework Manager.
2. Open the Framework model you previously extracted.
3. Open the *Data Sources* folder and select the *Infostore* data source.
4. Set the according properties for *Catalog* and *Schema*.
Refer to the Cognos documentation to identify which setting is required for your database.
Example: Catalog = VO73Infostore, Schema = vologusr_en.
5. Save the project and publish the package VoiceObjects Analyzer.



Installing VoiceObjects Analyzer for MicroStrategy

VoiceObjects Analyzer for MicroStrategy is available for MicroStrategy 8.

The MicroStrategy metadata are provided as a Microsoft Access database file.

To import VoiceObjects Analyzer, a MicroStrategy 8 installation must be setup and configured. For detailed information on how to setup a MicroStrategy installation and how to import and configure a project refer to the MicroStrategy documentation.

Note that VoiceObjects Analyzer is based on the language view layer as described above. A connection must be available to access this view layer.

Import VoiceObjects Analyzer into a MicroStrategy installation

To import VoiceObjects Analyzer into an existing MicroStrategy installation, do the following:

1. Start the MicroStrategy Project Mover.
2. Select the MDB file
VoiceObjectsAnalyzer_<version_number>_forMicroStrategy.mdb as source.
3. Select the *VoiceObjects Analyzer* project.
4. As target, select the connection to the MicroStrategy Metadata Repository.
5. Proceed with the default to attach the project to the existing metadata.
6. Provide the login details for the MicroStrategy metadata.
7. Configure the connection to the language view layer of the Infostore database.
8. Specify the project source name and define the MicroStrategy Intelligence Server.
9. Start the import.
10. Start MicroStrategy Desktop and validate if the database instance of the newly created project source is set to the according Infostore language view layer.
11. Depending the Infostore database configuration the table schema (prefix) get adjusted. To do so, use the **Warehouse Catalogue** editor in the **Schema** menu in MicroStrategy Desktop.

Configuring VoiceObjects Desktop for VoiceObjects Analyzer

To point to your Business Intelligence installation from the **Tools** menu of your VoiceObjects Desktop, do the following:

1. Open the command line or a bash window and navigate to the subfolder *Platform/WEB-INF/bin* of your VoiceObjects installation directory.
2. Execute the file *SetAnalyzerURL.bat* or *SetAnalyzerURL.sh*.
3. You need to supply the URL to the Web server of your Business Intelligence environment via command line parameter.

Example configuration for BusinessObjects:

```
SetAnalyzerURL.bat http://<Server>:<Port>/businessobjects/  
enterprise115/desktoplaunch/InfoView/logon/logon.do
```

Example configuration for MicroStrategy:

```
SetAnalyzerURL.bat http://<Server>:<Port>/MicroStrategy/asp/
```

4. Activate the link from VoiceObjects Desktop to VoiceObjects Analyzer by restarting VoiceObjects Desktop.

Accessing VoiceObjects Analyzer from VoiceObjects Desktop

To access VoiceObjects Analyzer from Desktop for Web, do the following:

- In the **Tools** menu of Desktop for Web, click **VoiceObjects Analyzer**.



3 Report Library

The information provided by VoiceObjects Analyzer is presented in reports. Reports typically contain one table and one diagram and are designed to answer a particular business question.

This reference describes the reports that are provided by VoiceObjects Analyzer - grouped into functional categories.

For each report the following information is given:

- The **report layout** showing sample data
- A **business description** including typical usage scenarios
- Additional **report details** like prompts and filters or drill paths

The reports described here are based on the VoiceObjects Analyzer for Cognos package. There might be differences between the information presented here and the VoiceObjects Analyzer packages available for other Business Intelligence tools.

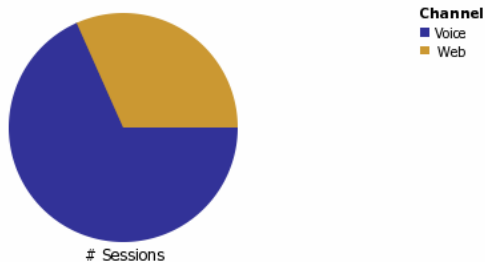


Administration and Maintenance

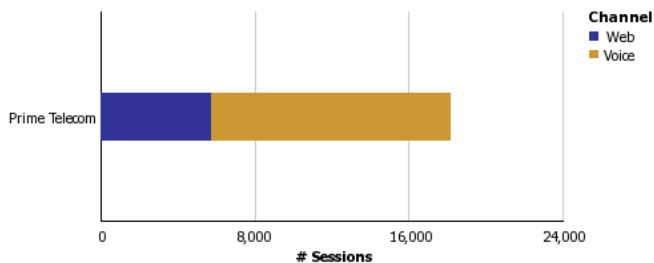
The reports in the *Administration and Maintenance* category are primarily focused on administrators of service environments. They help to identify peaks, both highs and lows, in the usage of the deployed services, the average usage, throughput and other useful figures.

Channel and Driver Distribution

Report layout



| Channel | Media Platform Driver | # Sessions | Duration (min.) | Avg Duration (sec.) |
|----------------|----------------------------|---------------|-----------------|---------------------|
| Voice | Visbridge VoiceXML Gateway | 12,420 | 15,905 | 77 |
| Voice | | 12,420 | 15,905 | 77 |
| Web | Mobile Web XHTML 1.0 | 5,740 | 4,663 | 49 |
| Web | | 5,740 | 4,663 | 49 |
| Summary | | 18,160 | 20,568 | 63 |



| Service | Channel | # Sessions | Duration (min.) | Avg Duration (sec.) |
|----------------------|---------|---------------|-----------------|---------------------|
| Prime Telecom | Voice | 12,420 | 15,905 | 77 |
| | Web | 5,740 | 4,663 | 49 |
| Prime Telecom | | 18,160 | 20,568 | 63 |
| Summary | | 18,160 | 20,568 | 63 |

Business description

Use the *Channel and Driver distribution* report to identify through which channels and browsers the system is accessed. The report also provides an overview on the channel distribution across services and the channel distribution within a single service.

The first graph/table combination shows the number of sessions by channel and driver along with the total and the average session duration. The second combination additionally lists those metrics by service and channel.

**Report details**

- First graph, number of sessions by channel

| Item | Description |
|-------------|-----------------------------------|
| Channel | The phone channel of the session. |
| # Sessions | Number of sessions by channel. |

- First grid, session information by channel and media platform driver

| Column | Description |
|-----------------------|---|
| Channel | The phone channel of the session. |
| Media Platform Driver | The media platform driver used to process the session. |
| # Sessions | Number of sessions by channel and media platform driver. |
| Duration (min.) | Total session duration in minutes by channel and media platform driver. |
| Avg Duration (sec.) | Average session duration in seconds by channel and media platform driver. |

- Second graph, number of sessions by service, stacked by channel

| Item | Description |
|-------------|--|
| Service | The service of the session. |
| Channel | The phone channel of the session. |
| # Sessions | Number of sessions by service, stacked by channel. |

- Second grid, session information by service and channel

| Column | Description |
|-----------------|---|
| Service | The service of the session. |
| Channel | The phone channel of the session. |
| # Sessions | Number of sessions by service and channel. |
| Duration (min.) | Total session duration in minutes by service and channel. |



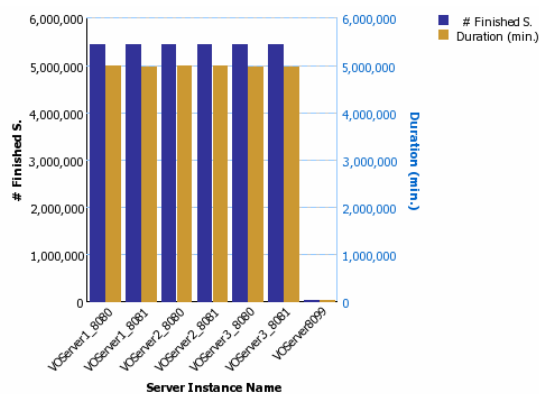
| Column | Description |
|---------------------|---|
| Avg Duration (sec.) | Average session duration in seconds by service and channel. |

- Prompts: The user is prompted to select a reporting period.



Cluster Efficiency

Report layout



| Server Instance Name | Server Instance IP | Server Instance Port | Duration (min.) | % Duration | # Finished S. | % Finished S. | Avg Mem. Used (MB) | Max Mem. Used (MB) |
|----------------------|--------------------|----------------------|-------------------|------------|-------------------|---------------|--------------------|--------------------|
| VOserver1_8080 | 219.36.3.10 | 8080 | 4,979,951 | 17% | 5,446,328 | 17% | 351 | 983 |
| VOserver1_8081 | 219.36.3.10 | 8081 | 4,977,681 | 17% | 5,449,030 | 17% | 354 | 981 |
| VOserver2_8080 | 219.36.3.11 | 8080 | 4,978,257 | 17% | 5,447,599 | 17% | 357 | 989 |
| VOserver2_8081 | 219.36.3.11 | 8081 | 4,980,432 | 17% | 5,444,055 | 17% | 354 | 993 |
| VOserver3_8080 | 219.36.3.12 | 8080 | 4,977,005 | 17% | 5,442,925 | 17% | 357 | 990 |
| VOserver3_8081 | 219.36.3.12 | 8081 | 4,974,621 | 17% | 5,447,709 | 17% | 357 | 992 |
| VOserver8099 | 127.0.0.1 | 8099 | 20,570 | 0% | 18,163 | 0% | 226 | 409 |
| Summary | | | 29,888,517 | | 32,695,809 | | 337 | 993 |

Business description

The *Cluster Efficiency* report shows the distribution of sessions across each of your clustered servers. It can be used to ensure that the load balancer distributes the sessions across your cluster servers evenly.

If you discover an uneven distribution of load throughout your clusters, you should follow up with the *Cluster Efficiency Trend* report to exactly identify the point in time when the load balancer failed.

The diagram shows the total number and duration of sessions per server instance for the period selected by the user. The additional table lists the sum of session duration in minutes and number of sessions, the appropriate percent to total values and the average and maximum amount of memory that was consumed by each instance.

Report details

- Graph

| Item | Description |
|----------------------|---|
| Server Instance Name | The server instances of the selected server. |
| # Finished S. | The number of finished sessions per server instance for the selected server and reporting period. |



| Item | Description |
|-----------------|---|
| Duration (min.) | Total session duration in minutes per server instance for the selected server and reporting period. |

- Grid

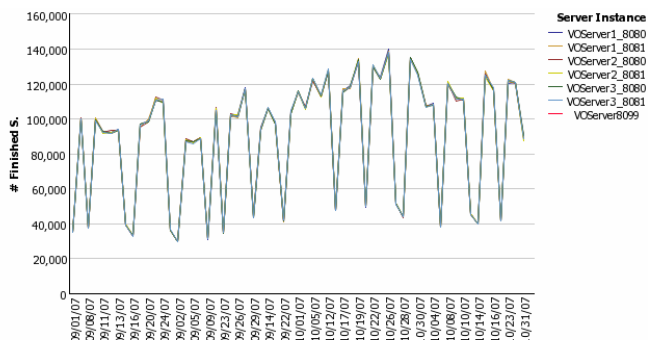
| Column | Description |
|----------------------|---|
| Server Instance Name | The server instances of the selected server. |
| Server Instance IP | The IP address of the server instance. |
| Server Instance Port | The Port of the server instance. |
| Duration (min.) | Total session duration in minutes by service instance for the selected server and reporting period. |
| % Duration | Session duration on server instance as a percentage of all sessions. |
| # Finished S. | Number of finished sessions by service instance for the selected server and reporting period. |
| % Finished S. | Sessions on server instance as a percentage of all sessions. |
| Avg Mem. Used (MB) | Average memory in megabytes used by the server instance during the reporting period. |
| Max Mem. Used (MB) | Maximum memory in megabytes used by the server instance during the reporting period. |

- Prompts: The user is prompted to select a server and a reporting period.



Cluster Efficiency Trend

Report layout



| | VOserver1_8080 | | VOserver1_8081 | | VOserver2_8080 | | VOserver2_8081 | | VOserver3_8080 | | VOserver3_8081 | |
|----------|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|---|
| | Duration (min.) | # Finished S. | Duration (min.) | # Finished S. | Duration (min.) | # Finished S. | Duration (min.) | # Finished S. | Duration (min.) | # Finished S. | Duration (min.) | # |
| 09/02/07 | 42,430 | 29,858 | 42,373 | 29,924 | 41,617 | 29,417 | 42,184 | 29,820 | 42,053 | 29,710 | 41,970 | |
| 09/03/07 | 82,576 | 93,675 | 82,162 | 93,726 | 83,403 | 95,127 | 82,947 | 93,985 | 82,366 | 94,150 | 82,946 | |
| 09/04/07 | 70,074 | 88,042 | 69,381 | 86,946 | 69,983 | 88,778 | 70,306 | 87,866 | 70,156 | 87,833 | 68,740 | |
| 09/05/07 | 72,891 | 87,110 | 72,418 | 86,827 | 72,284 | 86,923 | 72,770 | 86,420 | 73,218 | 86,928 | 72,176 | |
| 09/06/07 | 75,311 | 89,467 | 75,125 | 89,210 | 75,246 | 89,253 | 75,156 | 89,280 | 74,626 | 88,658 | 74,488 | |
| 09/09/07 | 44,091 | 31,111 | 44,240 | 31,268 | 44,642 | 31,527 | 44,685 | 31,519 | 44,199 | 31,300 | 44,512 | |
| 09/14/07 | 90,558 | 105,953 | 90,712 | 106,510 | 90,605 | 105,806 | 90,421 | 106,190 | 90,496 | 105,830 | 91,097 | |
| 09/17/07 | 91,450 | 104,377 | 92,139 | 105,507 | 93,386 | 106,475 | 93,329 | 106,241 | 92,254 | 104,962 | 91,887 | |
| 09/18/07 | 78,178 | 98,496 | 77,164 | 97,301 | 77,305 | 96,878 | 77,244 | 96,993 | 77,246 | 96,804 | 77,868 | |
| 09/22/07 | 56,773 | 41,248 | 56,496 | 41,122 | 56,845 | 41,463 | 57,660 | 42,026 | 57,245 | 41,537 | 57,813 | |

Business description

Use the *Cluster Efficiency Trend* report to pinpoint days where the load was unevenly distributed throughout your clustered servers. You can also find out if downtime of individual server instances affected overall availability of your applications.

The diagram shows the total number of sessions per day for the period selected by the user. It displays one line for each server instance. The table additionally lists the sum of session duration in minutes.

Report details

- Graph

| Item | Description |
|----------------------|---|
| Server Instance Name | The server instances of the selected server. |
| Day | Day of the sessions. |
| # Finished S. | Number of finished sessions by service instance and day for the reporting period. |



- Grid

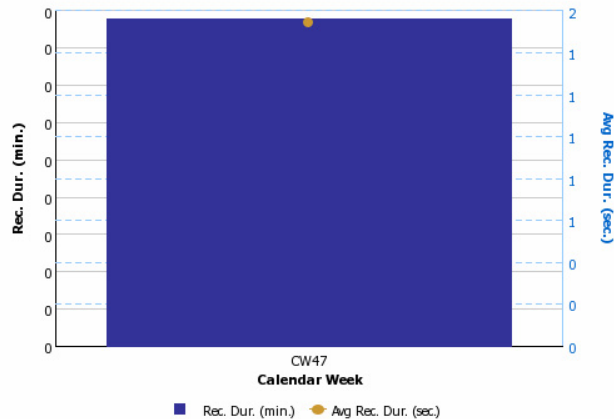
| Column | Description |
|----------------------|---|
| Server Instance Name | The server instances of the selected server. |
| Day | Day of the sessions. |
| Duration (min.) | Total session duration in minutes by service instance and day for the selected server and reporting period. |
| # Finished S. | Number of finished sessions by service instance and day for the selected server and reporting period. |

- Prompts: The user is prompted to select a server and a reporting period.



Number of Recordings

Report layout



| Service | Calendar Week | # Recordings | Rec. Dur. (min.) | Avg Rec. Dur. (sec.) | Rec. Size (MB) | Avg Rec. Size (kB) |
|----------------------|---------------|--------------|------------------|----------------------|----------------|--------------------|
| Prime Telecom | CW47 | 17 | 0 | 2 | 0 | 14 |
| Prime Telecom | | 17 | 0 | 2 | 0 | 14 |
| Summary | | 17 | 0 | 2 | 0 | 14 |

Business description

Use the *Number of Recordings* report to get an overview on the total duration of recordings and the storage capacity occupied by recordings. The report can help you to manage your infrastructure or to plan further tasks like call transcription.

The diagram shows the total recording duration as bars and the average recording duration as line by week. The table additionally lists the total number of recordings per service and week along with the total recording duration, the average recording duration, the size of all recordings and the average size of a recording.

Report details

- Graph

| Item | Description |
|-----------------------|---|
| Calendar Week | Calendar week of the sessions. |
| Rec. Dur. (min.) | Total duration of utterance recordings by calendar week for the selected reporting period. |
| Avg. Rec. Dur. (sec.) | Average duration of a single recording in seconds by calendar week for the selected reporting period. |



- Grid

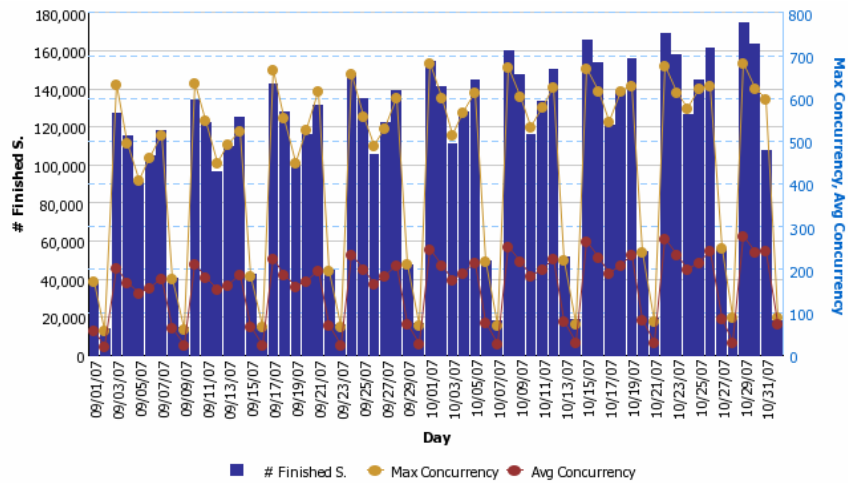
| Column | Description |
|----------------------|--|
| Service | The service of the sessions. |
| Calendar Week | Calendar week of the sessions. |
| # Recordings | Number of recordings by service and calendar week for the selected reporting period. |
| Rec. Dur. (min.) | Total duration of the recordings in minutes by service and calendar week for the selected reporting period. |
| Avg Rec. Dur. (sec.) | Average duration of a recording in seconds by service and calendar week for the selected reporting period. |
| Rec. Size (MB) | Total size of the recorded audio files in megabyte by service and calendar week for the selected reporting period. |
| Avg Rec. Size (MB) | Average size of a recording in megabytes by service and calendar week for the selected reporting period. |

- Prompts: The user is prompted to select a reporting period.



Number of Sessions by Day

Report layout



| Day | # Finished S. | # Aborted S. | # Rejected S. | # Total S. | Max Concurrency | Avg Concurrency | Duration (min.) | Avg Duration (sec.) |
|----------|---------------|--------------|---------------|------------|-----------------|-----------------|-----------------|---------------------|
| 09/01/07 | 38,120 | 0 | 0 | 38,120 | 173 | 60 | 65,446 | 103 |
| 09/02/07 | 13,662 | 0 | 0 | 13,662 | 57 | 22 | 23,186 | 102 |
| 09/03/07 | 127,364 | 0 | 0 | 127,364 | 634 | 204 | 225,594 | 106 |
| 09/04/07 | 115,626 | 0 | 0 | 115,626 | 498 | 172 | 190,357 | 99 |
| 09/05/07 | 91,086 | 0 | 0 | 91,086 | 410 | 146 | 160,960 | 106 |
| 09/06/07 | 104,824 | 0 | 0 | 104,824 | 464 | 158 | 174,774 | 100 |
| 09/07/07 | 117,749 | 0 | 0 | 117,749 | 515 | 179 | 197,660 | 101 |
| 09/08/07 | 40,686 | 0 | 0 | 40,686 | 179 | 63 | 69,825 | 103 |
| 09/09/07 | 14,475 | 0 | 0 | 14,475 | 61 | 23 | 24,573 | 102 |
| 09/10/07 | 134,441 | 0 | 0 | 134,441 | 638 | 215 | 238,518 | 106 |
| 09/11/07 | 122,561 | 0 | 0 | 122,561 | 550 | 182 | 201,856 | 99 |

Business description

The *Number of Sessions by Day* report helps you to identify recent trends in the usage frequency of your services. Use this report to discover both lows and highs in access frequency of your services.

The chart shows the total number of sessions per day as bars and the maximum and average number of concurrent sessions as lines for the period selected by the user. The additional table lists the number of aborted and rejected sessions and the total number of sessions. Additionally the maximum and average number of concurrent sessions for the selected services and the total and average duration is shown.

Report details

- Graph

| Item | Description |
|------|--------------------------|
| Day | The day of the sessions. |



| Item | Description |
|-----------------|---|
| # Finished S. | Number of finished sessions by day for the selected service and reporting period. |
| Max Concurrency | Maximum number of concurrent sessions by day and selected service. |
| Avg Concurrency | Average number of concurrent sessions by day and selected service. |

- Grid

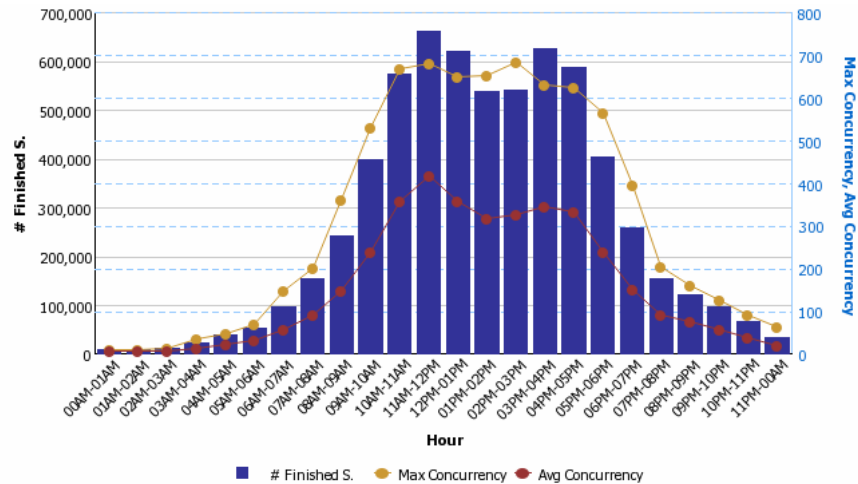
| Column | Description |
|---------------------|--|
| Day | The day of the sessions. |
| # Finished S. | Number of finished sessions by day for the selected service and reporting period. |
| # Aborted S. | Number of aborted sessions by day for the selected service and reporting period. |
| # Rejected S. | Number of rejected sessions by day for the selected service and reporting period. |
| # Total S. | Sum of finished, aborted and rejected sessions by day for the selected service and reporting period. |
| Max Concurrency | Maximum number of concurrent sessions by day and selected service. |
| Avg Concurrency | Average number of concurrent sessions by day and selected service. |
| Duration (min.) | Total duration of sessions in minutes by day for the selected service and reporting period. |
| Avg Duration (sec.) | Average session duration in seconds by day for the selected service and reporting period. |

- Prompts: The user is prompted to select a service and the reporting period.



Number of Sessions by Hour of Day

Report layout



| Hour | # Finished S. | # Aborted S. | # Rejected S. | # Total S. | Max Concurrency | Avg Concurrency | Duration (min.) | Avg Duration (sec.) |
|-----------|---------------|--------------|---------------|------------|-----------------|-----------------|-----------------|---------------------|
| 00AM-01AM | 10,230 | 0 | 0 | 10,230 | 12 | 7 | 17,897 | 105 |
| 01AM-02AM | 10,232 | 0 | 0 | 10,232 | 12 | 7 | 16,893 | 99 |
| 02AM-03AM | 11,714 | 0 | 0 | 11,714 | 15 | 8 | 20,610 | 106 |
| 03AM-04AM | 23,810 | 0 | 0 | 23,810 | 35 | 15 | 40,075 | 101 |
| 04AM-05AM | 39,150 | 0 | 0 | 39,150 | 50 | 23 | 64,916 | 99 |
| 05AM-06AM | 54,154 | 0 | 0 | 54,154 | 70 | 33 | 91,527 | 101 |
| 06AM-07AM | 97,066 | 0 | 0 | 97,066 | 150 | 57 | 161,868 | 100 |
| 07AM-08AM | 154,683 | 0 | 0 | 154,683 | 203 | 91 | 256,328 | 99 |
| 08AM-09AM | 242,339 | 0 | 0 | 242,339 | 361 | 150 | 421,337 | 104 |
| 09AM-10AM | 400,126 | 0 | 0 | 400,126 | 533 | 239 | 676,570 | 101 |
| 10AM-11AM | 575,343 | 0 | 3,154 | 578,497 | 670 | 358 | 1,004,734 | 105 |
| 11AM-12PM | 663,393 | 0 | 17,348 | 680,741 | 683 | 417 | 1,169,024 | 106 |
| 12PM-01PM | 621,088 | 0 | 6,862 | 627,950 | 650 | 358 | 1,067,061 | 103 |
| 01PM-02PM | 540,015 | 0 | 88 | 540,103 | 653 | 319 | 941,790 | 105 |

Business description

Use this report to find out at what time of the day system uptime is most crucial and to identify the most frequented hours.

The diagram shows the total number of sessions as bars and the maximum and average number of concurrent sessions as lines by hour of day for the selected reporting period selected by the user. The additional table lists the number of aborted and rejected sessions and the total number of sessions. Additionally the maximum and average number of concurrent sessions for the selected services and the total and average duration is shown.

**Report details**

- Graph

| Item | Description |
|-----------------|---|
| Hour of Day | The hour of a session. |
| # Finished S. | Number of finished sessions by hour of day for the selected service and reporting period. |
| Max Concurrency | Maximum number of concurrent sessions by hour of day and selected service. |
| Avg Concurrency | Average number of concurrent sessions by hour of day and selected service. |

- Grid

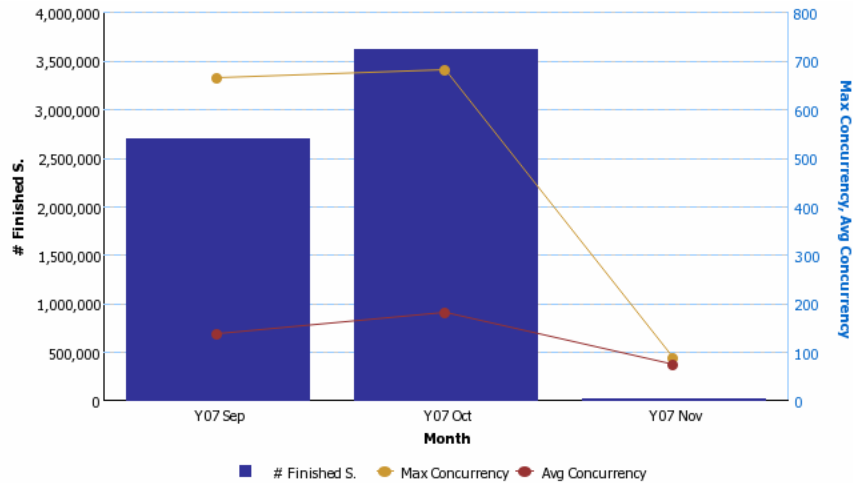
| Column | Description |
|---------------------|--|
| Hour of Day | The hour of a session. |
| # Finished S. | Number of finished sessions by hour of day for the selected service and reporting period. |
| # Aborted S. | Number of aborted sessions by hour of day for the selected service and reporting period. |
| # Rejected S. | Number of rejected sessions by hour of day for the selected service and reporting period. |
| # Total S. | Sum of finished, aborted and rejected sessions by hour of day for the selected service and reporting period. |
| Max Concurrency | Maximum number of concurrent sessions by hour of day and selected service. |
| Avg Concurrency | Average number of concurrent sessions by hour of day and selected service. |
| Duration (min.) | Total duration of sessions in minutes by hour of day for the selected service and reporting period. |
| Avg Duration (sec.) | Average session duration in seconds by hour of day for the selected service and reporting period. |

- Prompts: The user is prompted to select a service and the reporting period.



Number of Sessions by Month

Report layout



| Month | # Finished S. | # Aborted S. | # Rejected S. | # Total S. | Max Concurrency | Avg Concurrency | Duration (min.) | Avg Duration (sec.) |
|----------------|------------------|--------------|---------------|------------------|-----------------|-----------------|-------------------|---------------------|
| Y07 Sep | 2,703,737 | 0 | 532 | 2,704,269 | 667 | 139 | 4,612,893 | 102 |
| Y07 Oct | 3,615,275 | 0 | 39,797 | 3,655,072 | 684 | 182 | 6,175,406 | 102 |
| Y07 Nov | 18,163 | 0 | 0 | 18,163 | 90 | 75 | 20,570 | 68 |
| Summary | 6,337,175 | 0 | 40,329 | 6,377,504 | 684 | 132 | 10,808,869 | 91 |

Business description

This information can be used to find out about long-term usage trends of your services. It can also serve as a starting point to identify unusual effects in call frequency from that you can drill down to more detailed data.

The diagram shows the total number of sessions as bars and the maximum and average number of concurrent sessions as lines by month for the reporting period selected by the user. The additional table lists the number of aborted and rejected sessions and the total number of sessions. Additionally the maximum and average number of concurrent sessions for the selected services and the total and average duration is shown.

Report details

- Graph

| Item | Description |
|-----------------|---|
| Month | The month of the sessions. |
| # Finished S. | Number of finished sessions by month for the selected service and reporting period. |
| Max Concurrency | Maximum number of concurrent sessions by month and selected service. |



| Item | Description |
|-----------------|--|
| Avg Concurrency | Average number of concurrent sessions by month and selected service. |

- Grid

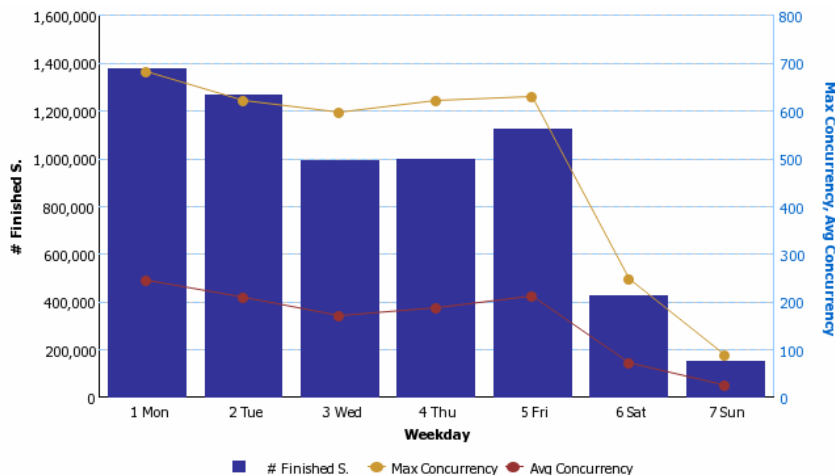
| Column | Description |
|---------------------|--|
| Month | The month of the sessions. |
| # Finished S. | Number of finished sessions by month for the selected service and reporting period. |
| # Aborted S. | Number of aborted sessions by month for the selected service and reporting period. |
| # Rejected S. | Number of rejected sessions by month for the selected service and reporting period. |
| # Total S. | Sum of finished, aborted and rejected sessions by month for the selected service and reporting period. |
| Max Concurrency | Maximum number of concurrent sessions by month and selected service. |
| Avg Concurrency | Average number of concurrent sessions by month and selected service. |
| Duration (min.) | Total duration of sessions in minutes by month for the selected service and reporting period. |
| Avg Duration (sec.) | Average session duration in seconds by month for the selected service and reporting period. |

- Prompts: The user is prompted to select a service and the reporting period.



Number of Sessions by Weekday

Report layout



| Weekday | # Finished S. | # Aborted S. | # Rejected S. | # Total S. | Max Concurrency | Avg Concurrency | Duration (min.) | Avg Duration (sec.) |
|----------------|------------------|--------------|---------------|------------------|-----------------|-----------------|-------------------|---------------------|
| 1 Mon | 1,376,785 | 0 | 26,672 | 1,403,457 | 684 | 245 | 2,440,190 | 106 |
| 2 Tue | 1,266,020 | 0 | 8,003 | 1,274,023 | 624 | 209 | 2,085,425 | 99 |
| 3 Wed | 994,597 | 0 | 0 | 994,597 | 599 | 171 | 1,746,439 | 105 |
| 4 Thu | 997,987 | 0 | 75 | 998,062 | 623 | 188 | 1,662,591 | 100 |
| 5 Fri | 1,123,888 | 0 | 5,579 | 1,129,467 | 630 | 213 | 1,885,912 | 101 |
| 6 Sat | 425,449 | 0 | 0 | 425,449 | 250 | 73 | 729,677 | 103 |
| 7 Sun | 152,449 | 0 | 0 | 152,449 | 88 | 26 | 258,635 | 102 |
| Summary | 6,337,175 | 0 | 40,329 | 6,377,504 | 684 | 161 | 10,808,869 | 102 |

Business description

The *Number of Sessions by Weekday* report can be used to identify the most active days of the week, as well as the days when system maintenance downtime has the least impact on active sessions.

The diagram shows the total number of sessions as bars and the maximum and average number of concurrent sessions as lines by weekday for the reporting period selected by the user. The additional table lists the number of aborted and rejected sessions and the total number of sessions. Additionally the maximum and average number of concurrent sessions for the selected services and the total and average duration is shown.

Report details

- Graph

| Item | Description |
|---------------|---|
| Weekday | The weekday of the sessions. |
| # Finished S. | Number of finished sessions by weekday for the selected service and reporting period. |



| Item | Description |
|-----------------|--|
| Max Concurrency | Maximum number of concurrent sessions by weekday and selected service. |
| Avg Concurrency | Average number of concurrent sessions by weekday and selected service. |

- Grid

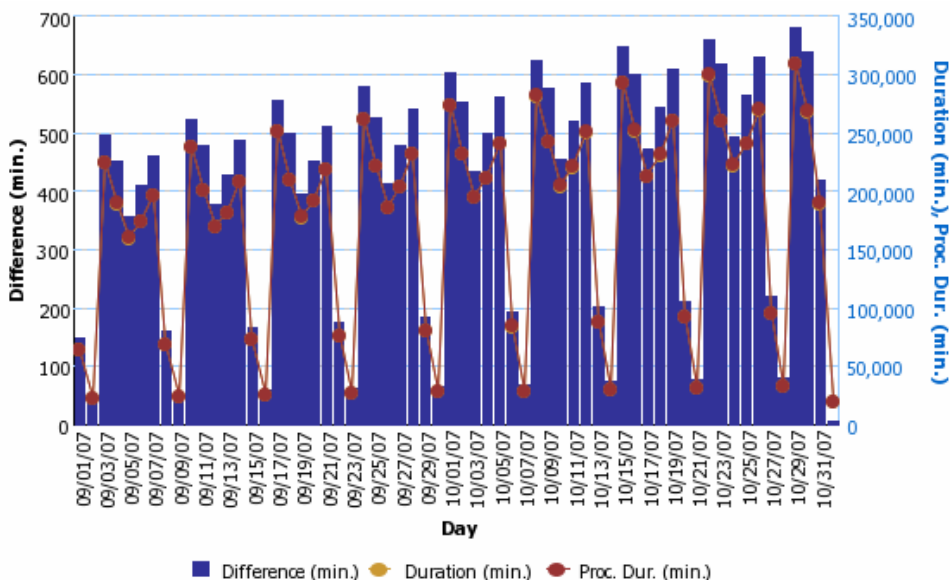
| Column | Description |
|---------------------|--|
| Weekday | The weekday of the sessions. |
| # Finished S. | Number of finished sessions by weekday for the selected service and reporting period. |
| # Aborted S. | Number of aborted sessions by weekday for the selected service and reporting period. |
| # Rejected S. | Number of rejected sessions by weekday for the selected service and reporting period. |
| # Total S. | Sum of finished, aborted and rejected sessions by weekday for the selected service and reporting period. |
| Max Concurrency | Maximum number of concurrent sessions by weekday and selected service. |
| Avg Concurrency | Average number of concurrent sessions by weekday and selected service. |
| Duration (min.) | Total duration of sessions in minutes by weekday for the selected service and reporting period. |
| Avg Duration (sec.) | Average session duration in seconds by weekday for the selected service and reporting period. |

- Prompts: The user is prompted to select a service and the reporting period.



Processing vs. Session Duration

Report layout



| Day | Duration (min.) | Proc. Dur. (min.) | Difference (min.) |
|----------|-----------------|-------------------|-------------------|
| 09/01/07 | 65,446 | 65,594 | 149 |
| 09/02/07 | 23,186 | 23,239 | 53 |
| 09/03/07 | 225,594 | 226,091 | 497 |
| 09/04/07 | 190,357 | 190,808 | 451 |
| 09/05/07 | 160,960 | 161,315 | 355 |
| 09/06/07 | 174,774 | 175,183 | 409 |
| 09/07/07 | 197,660 | 198,119 | 459 |

Business description

Use the *Processing vs. Session Duration* report to find out if dialog end processing is a performance bottleneck in your applications.

The diagram shows both the session duration and the processing duration in minutes per day for the reporting period selected by the user. In addition the difference between these figures in minutes is visualized through a bar.

Whereas the session duration represents the time from the start of the dialog until an exit was triggered, the processing duration consists of the session duration plus the time used for dialog end processing.

Report details

- Graph

| Item | Description |
|------|--------------------------|
| Day | The day of the sessions. |



| Item | Description |
|-------------------|--|
| Duration (min.) | Total session duration in minutes by day for the selected service and reporting period. |
| Proc. Dur. (min.) | Total processing duration (session duration + dialog end processing) by day for the selected service and reporting period. |
| Difference (min.) | Difference between <i>Duration (min.)</i> and <i>Proc. Dur. (min)</i> in minutes by day. |

- Grid

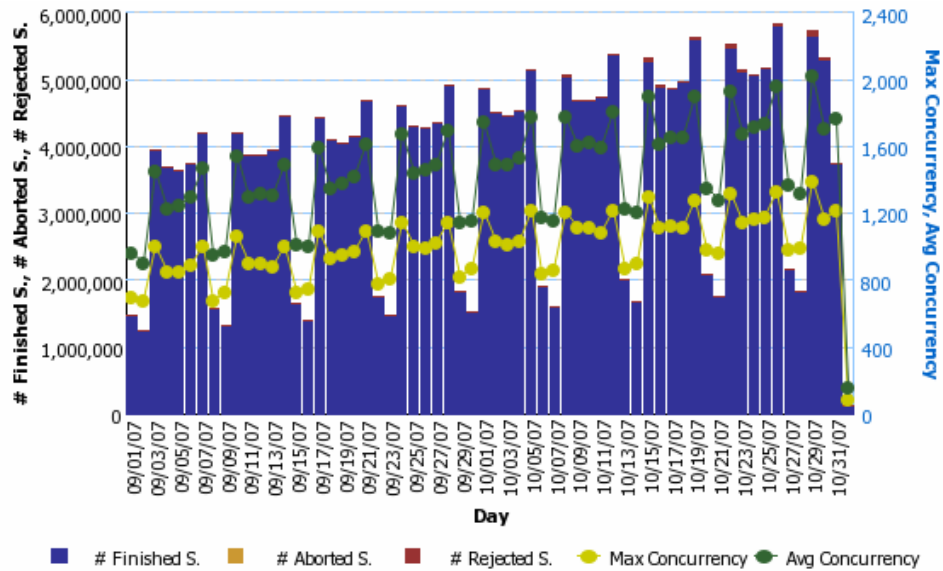
| Column | Description |
|-------------------|--|
| Day | The day of the sessions. |
| Duration (min.) | Total session duration in minutes by day for the selected service and reporting period. |
| Proc. Dur. (min.) | Total processing duration (session duration + dialog end processing) by day for the selected service and reporting period. |
| Difference (min.) | Difference between <i>Duration (min.)</i> and <i>Proc. Dur. (min)</i> in minutes by day. |

- Prompts: The user is prompted to select a service and the reporting period.



Server Statistics

Report layout



| Day | # Total S. | % Finished S. | % Aborted S. | % Rejected S. | Avg Concurrency | Max Concurrency |
|----------|------------|---------------|--------------|---------------|-----------------|-----------------|
| 09/01/07 | 211,260 | 100.00% | 0.00% | 0.00% | 263 | 700 |
| 09/02/07 | 178,392 | 100.00% | 0.00% | 0.00% | 229 | 679 |
| 09/03/07 | 565,150 | 100.00% | 0.00% | 0.00% | 450 | 1,006 |
| 09/04/07 | 526,212 | 100.00% | 0.00% | 0.00% | 378 | 850 |
| 09/05/07 | 520,013 | 100.00% | 0.00% | 0.00% | 395 | 854 |
| 09/06/07 | 534,635 | 100.00% | 0.00% | 0.00% | 406 | 896 |

Business description

Use the *Server Statistics* report to identify what percentage of sessions was not completed successfully because they were rejected or forcibly aborted. You can also find out if there is a trend in aborted or rejected sessions or if there are days with a high number of not completed sessions.

The diagram shows the average and maximum number of concurrent sessions per day represented by lines. Each bar is divided into three different colors to visualize the total number of finished, aborted and rejected sessions. The table additionally lists the total number of sessions per day along with the percentage of finished, aborted and rejected sessions and the average and maximum concurrency for the selected service.

Report details

- Graph

| Item | Description |
|------|--------------------------|
| Day | The day of the sessions. |



| Item | Description |
|--|---|
| # Finished S., # Aborted S., # Rejected S. | The number of finished, aborted and rejected sessions as stacked bar by day for the selected server and reporting period. |
| Avg Concurrency | Average number of concurrent sessions by day and selected server. |
| Max Concurrency | Maximum number of concurrent sessions by day and selected server. |

- Grid

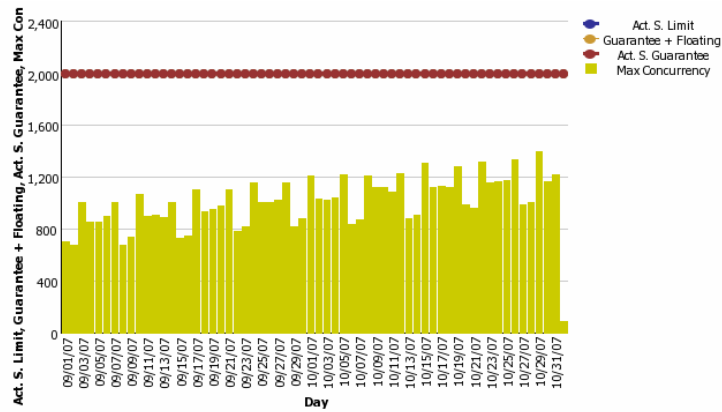
| Column | Description |
|-----------------|---|
| Day | The day of the sessions. |
| # Total S. | The sum of finished, aborted and rejected sessions by day for the selected server and reporting period. |
| % Finished S. | The number of finished sessions as percentage to the total number of sessions. |
| % Aborted S. | The number of aborted sessions as percentage to the total number of sessions. |
| % Rejected S. | The number of rejected sessions as percentage to the total number of sessions. |
| Avg Concurrency | Average number of concurrent sessions by day and selected server. |
| Max Concurrency | Maximum number of concurrent sessions by day and selected server. |

- Prompts: The user is prompted to select a service and the reporting period.

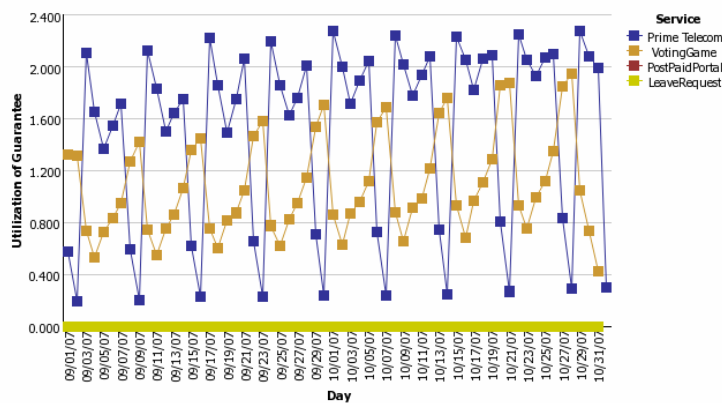


Session Partitioning Analysis

Report layout



| Server | Max Concurrency | Act. S. Guarantee | Utilization of Guarantee | Act. Floating S. | Utilization of Floating | Act. S. Limit | Utilization of Limit |
|-----------|-----------------|-------------------|--------------------------|------------------|-------------------------|---------------|----------------------|
| VO Server | 1,396 | 2,000 | 69.80% | 0 | | 2,000 | 69.80% |



| Service | Max Concurrency | Act. S. Guarantee | Utilization of Guarantee | Act. Floating S. | Utilization of Floating | Act. S. Limit | Utilization of Limit |
|----------------|-----------------|-------------------|--------------------------|------------------|-------------------------|---------------|----------------------|
| LeaveRequest | 83 | 0 | | 1,200 | 6.92% | 200 | 41.50% |
| PostPaidPortal | 545 | 0 | | 1,200 | 45.42% | 0 | |
| Prime Telecom | 684 | 300 | 228.00% | 1,200 | 32.00% | 600 | 114.00% |
| VotingGame | 974 | 500 | 194.80% | 1,200 | 39.50% | 0 | |
| 974 | | | | | | | |

Business description

The *Session Partitioning Analysis* report helps you to get an overview on your concurrent session limits for servers and services.

The first diagram/table combination shows the session limits and concurrency per server. The diagram shows the session limit, the session guarantee and the session guarantee plus floating sessions as lines and the maximum number of concurrent sessions on this server as bars.

The second combination provides this information on the service level. The diagram shows the utilization of the guaranteed session limit for each service. The table provides the detailed numbers on maximum concurrency, session guarantee, floating sessions and the maximum session limit, including the appropriate utilization metrics for each service.

**Report details**

- First graph

| Item | Description |
|----------------------|---|
| Day | The day of the sessions. |
| Act. S. Limit | The configured session limit for the server. |
| Guarantee + Floating | Available guaranteed and floating session capacity for the server by day. |
| Act. S. Guarantee | The configured guaranteed sessions for the server. |
| Max Concurrency | Maximum concurrent sessions by server |

- First grid

| Column | Description |
|--------------------------|---|
| Server | The selected server. |
| Max Concurrency | Maximum concurrent sessions by service for the selected reporting period. |
| Act S. Guarantee | The configured guaranteed sessions for the server. |
| Utilization of Guarantee | Maximum concurrency as percentage by the <i>Act. S. Guarantee</i> . |
| Act. Floating S. | The configured floating sessions for the server. |
| Utilization of Floating | Maximum concurrency as percentage by the <i>Act. Floating S.</i> |
| Act S. Limit | The configured session limit for the server. |
| Utilization of Limit | Maximum concurrency as percentage by the <i>Act. S. Limit</i> . |

- Second graph

| Item | Description |
|--------------------------|---|
| Day | The day of the sessions. |
| Service | The services of the selected server. |
| Utilization of Guarantee | Maximum concurrency as percentage by the <i>Act. S. Guarantee</i> by day and service. |



- Second grid

| Column | Description |
|--------------------------|---|
| Service | The services of the selected server. |
| Max Concurrency | Maximum concurrent sessions by service for the selected reporting period. |
| Act S. Guarantee | The configured guaranteed sessions for the service. |
| Utilization of Guarantee | Maximum concurrency as percentage by the <i>Act. S. Guarantee</i> . |
| Act. Floating S. | The configured floating sessions for the service. |
| Utilization of Floating | Maximum concurrency as percentage by the <i>Act. Floating S.</i> |
| Act S. Limit | The configured session limit for the service. |
| Utilization of Limit | Maximum concurrency as percentage by the <i>Act. S. Limit</i> . |

- Prompts: The user is prompted to select the reporting period.

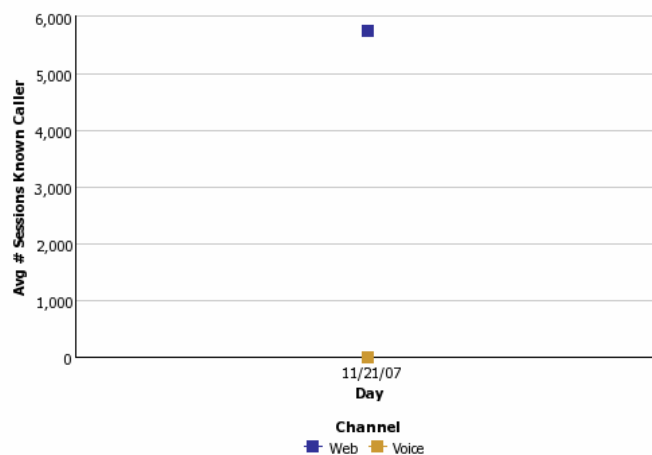


Application Development and Tuning

The reports in the *Application Development and Tuning* category target at application designers. They provide information on the usage of the different applications, about the average time that callers spend within the application and give hints on trends in the usage of the dialogs.

Average Number of Sessions

Report layout



| Channel | Month | Day | Avg # Sessions Known Caller | Avg Duration (sec.) | # Sessions | # Known Caller |
|----------------|---------|----------|-----------------------------|---------------------|---------------|----------------|
| Voice | Y07 Nov | 11/21/07 | 2 | 77 | 12,405 | 5,927 |
| Voice | | | 2 | 77 | 12,405 | |
| Web | Y07 Nov | 11/21/07 | 5,740 | 49 | 5,740 | 1 |
| Web | | | 5,740 | 49 | 5,740 | |
| Summary | | | 2,871 | 63 | 18,145 | |

Business description

The *Average Number of Sessions* report gives you information on the overall session frequency for your services. Depending on the content of your applications it might be appropriate to view this report on a higher level e.g. calendar week or month.

The diagram shows the average number of sessions per caller by day for the period selected by the user. The table shows this figure for the day and additionally lists the average session duration per caller in seconds, the total number of sessions, and the total number of callers. This report only shows sessions from known callers. A known caller is a caller whose ANI was transmitted to the server. Sessions without ANI are not counted in this report.

**Report details**

- Graph

| Item | Description |
|-----------------------------|---|
| Day | The day of the sessions. |
| Channel | The channel of the sessions. |
| Avg # Sessions Known Caller | The average number of known callers by day and channel for the selected service and reporting period. |

- Grid

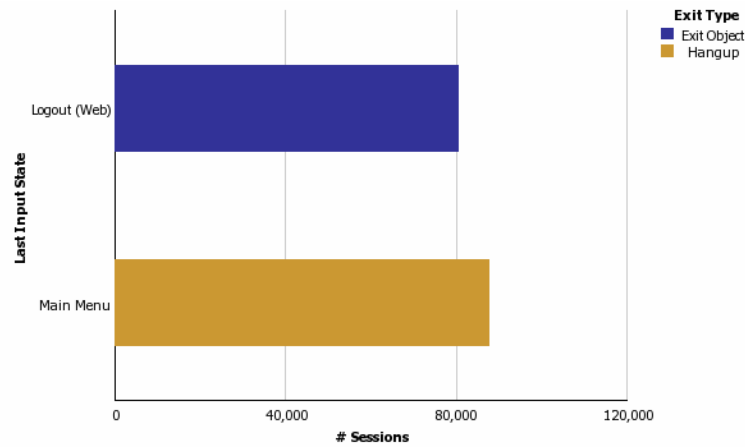
| Column | Description |
|-----------------------------|---|
| Channel | The channel of the sessions. |
| Month | The month of the sessions. |
| Day | The day of the sessions. |
| Avg # Sessions Known Caller | Average number of sessions by known caller, channel and day for the selected service. |
| Avg Duration (sec.) | Average session duration in seconds by channel and day for the selected service. |
| # Sessions | Total number of sessions by channel and day for the selected service. |
| # Known Caller | Number of known callers by channel and day for the selected service. |

- Prompts: The user is prompted to select a service and the reporting period.



Caller Exits by Input States

Report layout



| Last Input State | Input Type | Exit Type | # Sessions | % for Input State | % by Exit Type |
|---------------------------------|------------|-------------|------------|-------------------|----------------|
| Main Menu | Menu | Hangup | 87,752 | 47.7% | 100.0% |
| Logout (Web) | Exit | Exit Object | 80,360 | 43.6% | 100.0% |
| Transfer (All) | Transfer | Hangup | 4 | 3.3% | 0.1% |
| Transfer (All) | Transfer | Transfer | 6,080 | 3.3% | 99.9% |
| Transfer on Recognition Failure | Transfer | Hangup | 9 | 2.4% | 0.2% |
| Transfer on Recognition Failure | Transfer | Transfer | 4,464 | 2.4% | 99.8% |
| Transfer (Platinum only) | Transfer | Hangup | 3 | 1.2% | 0.1% |
| Transfer (Platinum only) | Transfer | Transfer | 2,289 | 1.2% | 99.9% |
| Service Plan Manager Menu | Menu | Hangup | 1,004 | 0.5% | 100.0% |
| Get PIN | Input | Hangup | 554 | 0.3% | 100.0% |
| Customer Data | Menu | Hangup | 460 | 0.2% | 100.0% |
| Get Credit Card Expiration date | Input | Hangup | 312 | 0.2% | 100.0% |

Business description

The *Caller Exits by Input State* report helps you to find out at what points of your application callers most frequently exit on the detailed level of input states. It can be used to find out if callers use the predefined exit paths or drop out pre-maturely. Depending on your environment it can also be used to identify the input states where callers are transferred to a live agent to receive further information.

The diagram shows the number of sessions by exit type that were ended in the respective input state. The table additionally provides the percentage of exits by input state to the total number of input states and the percentage of exits by exit type for each input state.

Report details

- Graph

| Item | Description |
|------------------|---|
| Last Input State | The last input state processed for a session. |



| Item | Description |
|-------------|---|
| Exit Type | The exit types of the sessions. |
| # Sessions | The number of exits in the input state, stacked by the exit type for the selected service and reporting period. |

- Grid

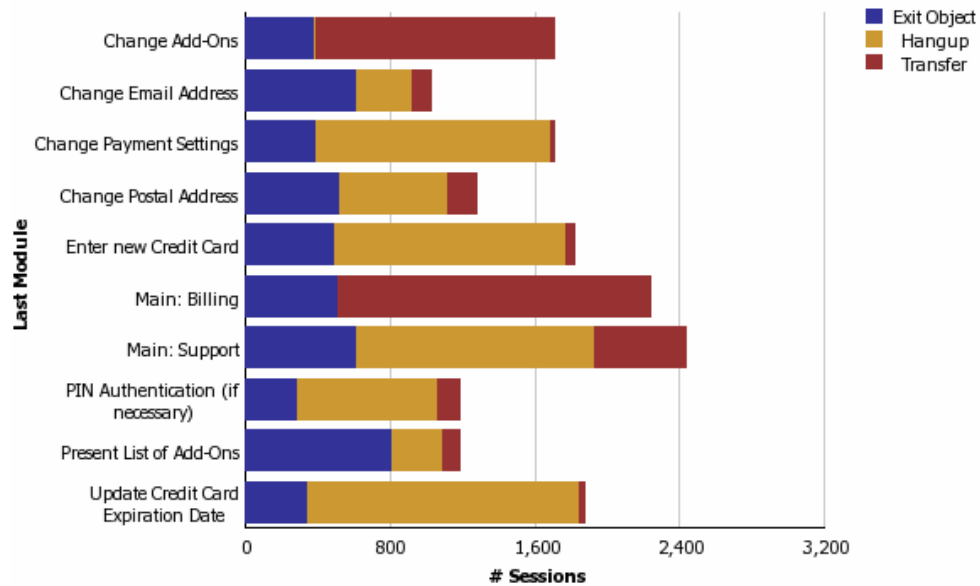
| Column | Description |
|-------------------|---|
| Last Input State | The last input state processed for a session. |
| Input Type | The object type of the input state. |
| Exit Type | The exit types of the sessions. |
| # Sessions | The number of exits in the input state by exit type for the selected service and reporting period. |
| % for Input State | The percentage of exits within the input state to all sessions for the selected service and reporting period. |
| % by Exit Type | The number of exits by exit type as percentage to all exits within the input state. |

- Prompts: The user is prompted to select a service and the reporting period.
- Filter: The diagram only shows input states with more than 5% of total exits.



Caller Exits by Modules

Report layout



| Last Module | % Exits by Module | Exit Type | # Sessions | % by Exit Type |
|---|-------------------|-------------|------------|----------------|
| <u>Main: Support</u> | 13.38% | Exit Object | 615 | 25% |
| | | Hangup | 1,314 | 54% |
| | | Transfer | 501 | 21% |
| <u>Main: Billing</u> | 12.33% | Exit Object | 513 | 23% |
| | | Hangup | 4 | 0% |
| | | Transfer | 1,723 | 77% |
| <u>Update Credit Card Expiration Date</u> | 10.30% | Exit Object | 342 | 18% |
| | | Hangup | 1,507 | 81% |
| | | Transfer | 22 | 1% |

Business description

The *Caller Exits by Modules* report helps you to find out at what points of your application callers most frequently exit on the high-level of modules. Use this information to identify modules with unreasonable high numbers of exits. For those modules you might follow up by using for example the *Recognition Quality* report, *Dominant Path* report or *Subsequence Analysis* report. Depending on your environment the data provided can also indicate the modules where callers are transferred to a live agent to receive further information.

The diagram shows the number of sessions by exit type that were ended in the respective module. The table additionally provides the percentage of exits by module and the percentage of exits by exit type for each module.

**Report details**

- Graph

| Item | Description |
|-------------|---|
| Last Module | The last module processed during a session. |
| Exit Type | The exit types of the sessions. |
| # Sessions | The number of exits in the input state, stacked by the exit type for the selected service and reporting period. |

- Grid

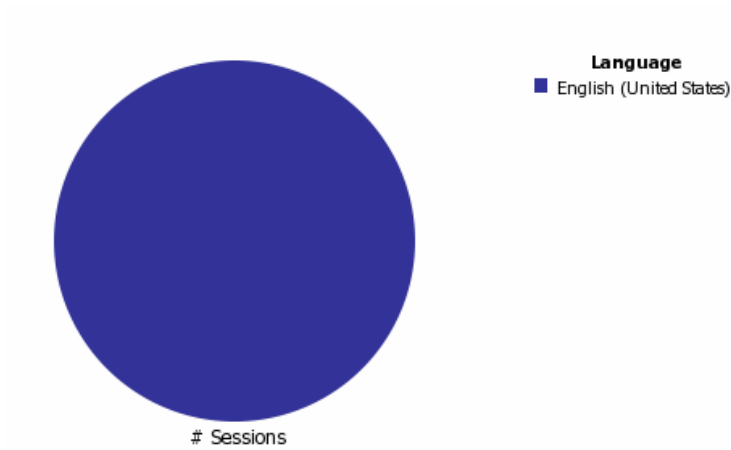
| Column | Description |
|-------------------|--|
| Last Module | The last module processed during a session. |
| Exit Type | The exit types of the sessions. |
| # Sessions | The number of exits in the module by exit type for the selected service and reporting period. |
| % Exits by Module | The percentage of exits within the module to all sessions for the selected service and reporting period. |
| % by Exit Type | The number of exits by exit type as percentage to all exits within the module. |

- Prompts: The user is prompted to select a service and the reporting period.
- Filter: The diagram only shows modules with more than 5% of total exits.



Dialog Language

Report layout



| Month | Language | # Sessions | % per Month | Avg Duration (sec.) |
|----------------|-------------------------|---------------|-------------|---------------------|
| Y07 Nov | English (United States) | 18,160 | 100% | 68 |
| Y07 Nov | | 18,160 | | 68 |
| Summary | | 18,160 | | 68 |

Business description

The *Dialog Language* report helps you to identify the distribution of different languages throughout the sessions. This way you can find out which languages are mainly used and which are abandoned.

The pie chart shows the percentage of sessions for each language for the period selected by the user. The table shows the absolute number of sessions, percentage of sessions by language for each month and the average session duration per language and month.

Report details

- Graph

| Item | Description |
|------------|---|
| Language | The dialog language of the sessions. |
| # Sessions | The number of sessions by processed language for the selected service and reporting period. |

- Grid

| Column | Description |
|--------|----------------------------|
| Month | The month of the sessions. |



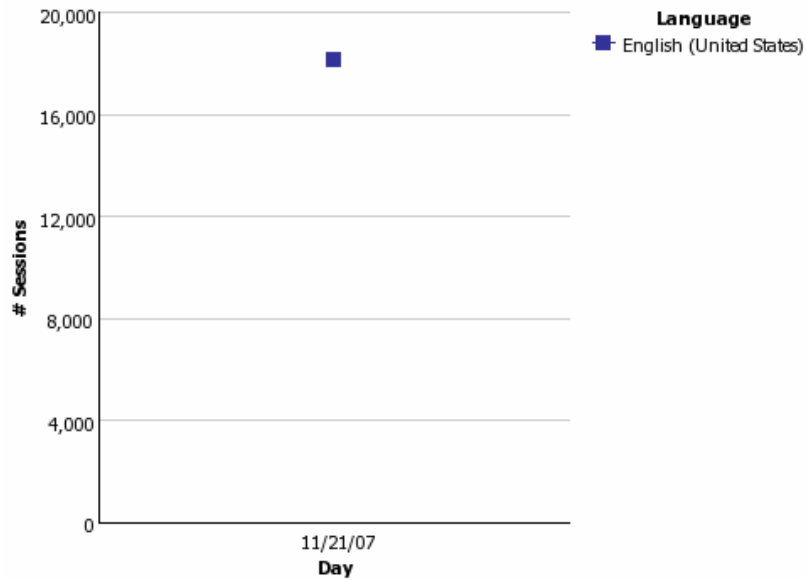
| Column | Description |
|---------------------|---|
| Language | The dialog language of the sessions. |
| # Sessions | The number of sessions by month and language for the selected service and reporting period. |
| % per Month | The number of sessions by language as percentage to all sessions for a month. |
| Avg Duration (sec.) | Average session duration in seconds by language and month for the selected service. |

- Prompts: The user is prompted to select a service and the reporting period.



Dialog Language Trend

Report layout



| # Sessions | English (United States) |
|------------|-------------------------|
| CW47 | 18,160 |

Business description

The *Dialog Language Trend* report helps you to find out if changes in language-specific content or grammars led to changes in the callers' choice for dialog language.

The diagram shows the number of sessions by day for each dialog language in the month selected by the user. The table shows the same figures, but grouped per calendar week.

Report details

- Graph

| Item | Description |
|------------|--|
| Language | The dialog language of the sessions. |
| Day | The day of the sessions. |
| # Sessions | The number of sessions by processed language and day for the selected service. |



- Grid

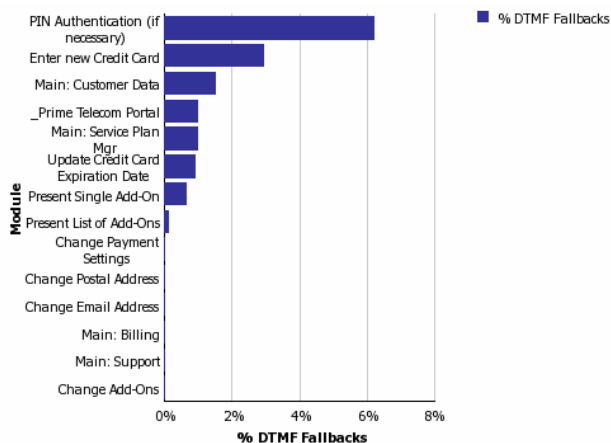
| Column | Description |
|---------------|--|
| Calendar Week | The calendar week of the sessions. |
| Language | The dialog language of the sessions. |
| # Sessions | The number of sessions by processed language and calendar week for the selected service. |

- Prompts: The user is prompted to select a service and the reporting period.



DTMF Fallback Analysis

Report layout



| Module | # Input States | # DTMF Fallbacks | % DTMF Fallbacks | Avg # No Match Events before DTMF Fallback | Avg # DTMF Fallbacks per Session | # Sessions | Avg # No Input per Input State | Avg # No Match (Voice) per Input State | Avg # No Match (DTMF) per Input State |
|--|----------------|------------------|------------------|--|----------------------------------|------------|--------------------------------|--|---------------------------------------|
| <u>PIN Authentication (if necessary)</u> | 9,117 | 563 | 6.18% | 1.38 | 0.07 | 8,368 | 0.12 | 0.16 | 0.09 |
| <u>Enter new Credit Card</u> | 10,027 | 294 | 2.93% | 1.38 | 0.15 | 1,982 | 0.12 | 0.17 | 0.09 |
| <u>Main: Customer Data</u> | 8,149 | 121 | 1.48% | 1.40 | 0.02 | 6,226 | 0.14 | 0.14 | 0.01 |
| <u>_Prime Telecom Portal</u> | 17,002 | 166 | 0.98% | 1.46 | 0.01 | 12,362 | 0.09 | 0.13 | 0.01 |
| <u>Main: Service Plan</u> | 35,217 | 341 | 0.97% | 1.49 | 0.05 | 6,489 | 0.37 | 0.10 | 0.02 |

Business description

The *DTMF Fallback Analysis* report shows how many DTMF fallbacks occurred in your application. A DTMF fallback is defined as one or more unsuccessful voice inputs followed by a successful DTMF input. Use this report to find spots where the callers cannot complete an input state by using voice input, but rather falls back to using DTMF.

The diagram on the top shows the percentage of DTMF fallbacks by module as a proportion to the total number of inputs within this module. The table shows the total number of input states, the number of DTMF fallbacks, the percentage of fallbacks and the average number of No Match events before the DTMF fallback occurred per module. Additionally it provides the average number of fallbacks per session, the number of sessions and the average number of No Input, No Match (Voice) and No Match (DTMF) per input state.

Report details

- Graph

| Item | Description |
|--------|-------------------------|
| Module | The application module. |



| Item | Description |
|------------------|---|
| % DTMF Fallbacks | The number of DTMF fallbacks as percentage to all inputs within a module. |

- Grid

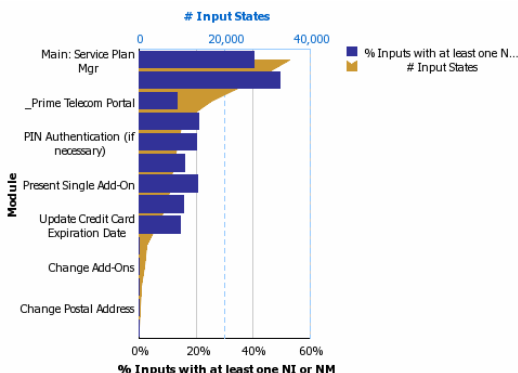
| Column | Description |
|--|---|
| Module | The application module. |
| # Input States | The number of processed input states within the module for the selected service and reporting period. |
| # DTMF Fallbacks | The number of DTMF fallbacks within the module for the selected service and reporting period. |
| % DTMF Fallbacks | The number of DTMF fallbacks within the module as percentage to the total number of processed input states within the module. |
| Avg # No Match events before DTMF Fallback | The average number of No Match events before the DTMF fallback occurred by module for the selected reporting period. |
| Avg # DTMF Fallbacks per Session | The average number of DTMF fallbacks per session within the module for the selected reporting period. |
| # Sessions | The number of sessions that visited the module for the selected reporting period. |
| Avg # No Input per Input State | The average number of No Input events per processed input state. |
| Avg # No Match (Voice) per Input State | The average number of No Match (Voice) events per processed input state. |
| Avg # No Input (DTMF) per Input State | The average number of No Match (DTMF) events per processed input state. |

- Prompts: The user is prompted to select a service and the reporting period.



Event Distribution

Report layout



| Module | % Inputs with at least one NI or NM | % Inputs - 1 No Input | % Inputs - 2 No Input | % Inputs - 3 No Input | % Inputs - 4 No Input | % Inputs - 1 No Match | % Inputs - 2 No Match | % Inputs - 3 No Match | % Inputs - 4 No Match | Avg No Input per Input | Avg No Match per Input | Avg No Match (Voice) per Input | Avg No Match (DTMF) per Input | Avg Help Events | Avg Turns | # Input States |
|-----------------------------------|-------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|--------------------------------|-------------------------------|-----------------|-----------|----------------|
| Present List of Add-Ons | 49% | 42% | 2% | 1% | 0% | 9% | 5% | 2% | 0% | 0.44 | 0.15 | 0.09 | 0.05 | 0.00 | 1.19 | 27,025 |
| Main: Service Plan Mgr | 40% | 34% | 2% | 1% | 0% | 8% | 4% | 1% | 0% | 0.37 | 0.14 | 0.10 | 0.02 | 0.00 | 1.19 | 35,217 |
| Enter new Credit Card | 21% | 7% | 4% | 1% | 0% | 17% | 8% | 3% | 0% | 0.12 | 0.28 | 0.17 | 0.09 | 0.00 | 1.37 | 10,027 |
| Present Single Add-On | 21% | 11% | 5% | 1% | 0% | 13% | 7% | 2% | 0% | 0.17 | 0.22 | 0.12 | 0.09 | 0.00 | 1.36 | 7,390 |
| PIN Authentication (if necessary) | 20% | 7% | 4% | 1% | 0% | 16% | 8% | 2% | 0% | 0.12 | 0.26 | 0.16 | 0.09 | 0.00 | 1.35 | 9,117 |

Business description

The *Event Distribution* report helps you to identify modules with a high frequency of No Match or No Input events. For example may a high number of No Match events indicate an urgent need of grammar tuning, as it aids to caller frustration. A high number of No Match 1 events suggests well-designed No Match 1 prompts, but a need of improvement for the initial prompts.

The chart shows the percentage of input states with at least one No Match or No Input event as bar. The background area shows the total number of input states to indicate the relevance of the module within the application. The table shows the percentage of input states with at least one No Match or No Input event and the percentages for at least 1, 2, 3, 4 No Match events and at least 1,2,3, 4 No Input events. Additionally, the average number of events per input state and the total number of input states per module is shown.

Report details

- Graph

| Item | Description |
|----------------|---|
| Module | The application module. |
| # Input States | The number of processed input states within a module. |



| Item | Description |
|---|--|
| % Input States with at least one NI or NM | The number of input states with at least one No Input or No Match event at percentage to the total number of input states by module. |

- Grid

| Column | Description |
|---|--|
| Module | The application module. |
| % Input States with at least one NI or NM | The number of input states with at least one No Input or No Match event as percentage to the total number of input states by module. |
| % Inputs – 1 No Input | The number of input states with at least one No Input event as percentage to the total number of input states by module. |
| % Inputs – 2 No Input | The number of input states with at least two No Input events as percentage to the total number of input states by module. |
| % Inputs – 3 No Input | The number of input states with at least three No Input events as percentage to the total number of input states by module. |
| % Inputs – 4 No Input | The number of input states with at least four No Input events as percentage to the total number of input states by module. |
| % Inputs – 1 No Match | The number of input states with at least one No Match event as percentage to the total number of input states by module. |
| % Inputs – 2 No Match | The number of input states with at least two No Match events as percentage to the total number of input states by module. |
| % Inputs – 3 No Match | The number of input states with at least three No Match events as percentage to the total number of input states by module. |
| % Inputs – 4 No Match | The number of input states with at least four No Match events as percentage to the total number of input states by module. |
| Avg No Input per Input | The average number of No Input events per processed input state. |
| Avg No Match per Input | The average number of No Match events per processed input state. |



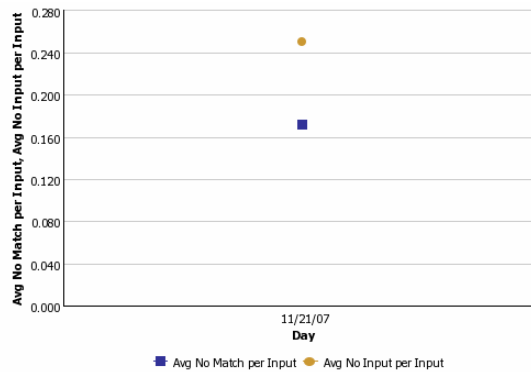
| Column | Description |
|----------------------------------|---|
| Avg # No Match (Voice) per Input | The average number of No Match (Voice) events per processed input state. |
| Avg # No Input (DTMF) per Input | The average number of No Match (DTMF) events per processed input state. |
| Avg Help Events | The average number of help events per processed input state. |
| Avg Turns | The average number of turns per processed input state. |
| # Input States | The number of processed input states within the module for the selected service and reporting period. |

- Prompts: The user is prompted to select a service and the reporting period.



Events by Day

Report layout



| Day | # Sessions | Avg Back Events per Input State | Avg Forward Events per Input | Avg Repeat Events per Input | Avg Help Events per Input | Avg No Match (Voice) per Input | Avg No Match (DTMF) per Input | Avg No Match per Input | Avg No Input per Input |
|----------|------------|---------------------------------|------------------------------|-----------------------------|---------------------------|--------------------------------|-------------------------------|------------------------|------------------------|
| 11/21/07 | 12,420 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.04 | 0.17 | 0.25 |

Business description

The *Events by Day* report helps you to identify trends in the frequency of No Match/No Input events and standard navigation commands. It can also be used if tuning actions show effect and lead to a decrease on the number of events.

The diagram shows the average number of No Match and No Input events by day. The table shows the overall number of sessions, the number of standard navigation commands (Back, Forward, Repeat), the number of help commands, the number of No Match events for each input mode, and the number of No Input events per day.

Report details

- Graph

| Item | Description |
|--------------------------|--|
| Day | The day of the sessions. |
| Avg # No Match per Input | The average number of No Match events per processed input state by day for the selected service. |
| Avg # No Input per Input | The average number of No Input events per processed input state by day for the selected service. |

- Grid

| Column | Description |
|--------|--------------------------|
| Day | The day of the sessions. |



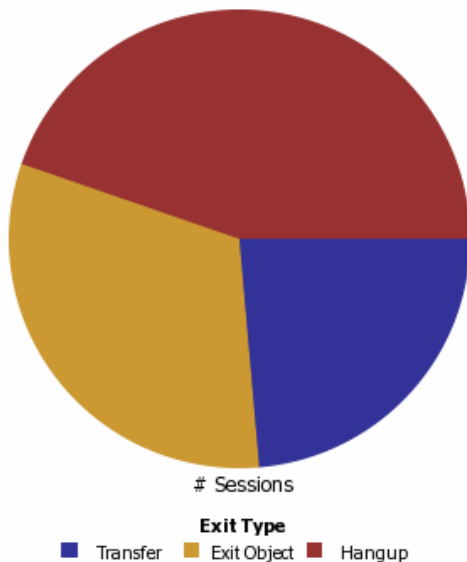
| Column | Description |
|--------------------------------------|---|
| # Sessions | The number of sessions by day for the selected service. |
| Avg # Back Events per Input State | The average number of back events per input state by day for the selected service. |
| Avg # Forward Events per Input State | The average number of forward events per input state by day for the selected service. |
| Avg # Repeat Events per Input State | The average number of repeat events per input state by day for the selected service. |
| Avg Help Events | The average number of help events per processed input state. |
| Avg # No Match (Voice) per Input | The average number of No Match (Voice) events per processed input state. |
| Avg # No Input (DTMF) per Input | The average number of No Match (DTMF) events per processed input state. |
| Avg # No Match (Voice) per Input | The average number of No Match (Voice) events per processed input state. |
| Avg # No Input (DTMF) per Input | The average number of No Match (DTMF) events per processed input state. |

- Prompts: The user is prompted to select a month.
- Filter: The report is filtered on the channels voice and video.



Exit Type Distribution

Report layout



| Month | Exit Type | # Sessions | % per Month | Avg Duration (sec.) |
|---------|-------------|------------|-------------|---------------------|
| Y07 Nov | Hangup | 8,121 | 45% | 86 |
| | Exit Object | 5,740 | 32% | 49 |
| | Transfer | 4,299 | 24% | 59 |

Business description

The *Exit Type Distribution* report provides information on how callers finished the dialogs. Use this report to find out how callers end their dialogs in the services. A high percentage of hang-ups most likely indicates caller discontentment with the application.

The *Exit Type Distribution* report can also be used to identify if there is a high number of exceptions.

The information provided by the table helps to discover a possible correlation between exit type and length of sessions.

The pie chart shows the percentage of sessions for each exit type for the time period selected by the user. The table shows the absolute number of sessions, the percentage of sessions by exit type for each month and the average session duration per exit type and month.

Report details

- Graph

| Item | Description |
|-----------|--------------------------------|
| Exit Type | The exit type of the sessions. |



| Item | Description |
|-------------|--|
| # Sessions | The number of sessions by exit type for the selected service and reporting period. |

- Grid

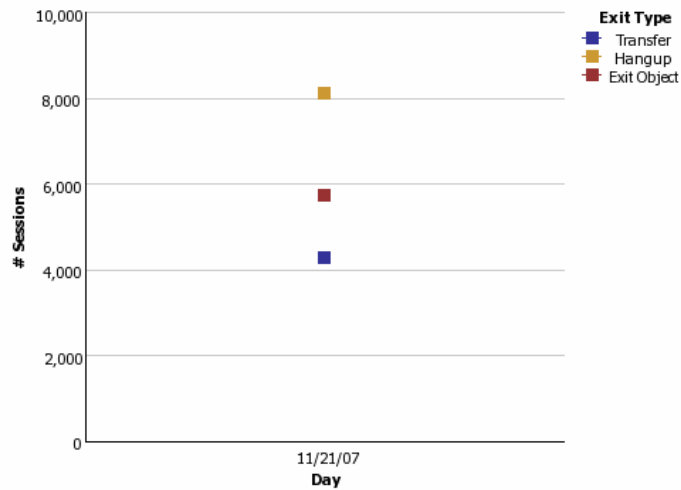
| Column | Description |
|---------------------|---|
| Month | The day of the sessions. |
| Exit Type | The exit type of the sessions. |
| # Sessions | The number of session exits by month and exit type for the selected service. |
| % per Month | The number of exits by exit type as percentage of all sessions during a month for the selected service. |
| Avg Duration (sec.) | The average number of forward events per input state by day for the selected service. |

- Prompts: The user is prompted to select a month.



Exit Types Trend

Report layout



| # Sessions | Voice | | | | | | Web | | | | | | Summary | | |
|----------------|--------------|-----|--------------|-----|-------------|---|------------|---|------------|---|-------------|---|--------------|------|---------------|
| | Transfer | | Hangup | | Exit Object | | Transfer | | Hangup | | Exit Object | | | | |
| | # Sessions | % | # Sessions | % | # Sessions | % | # Sessions | % | # Sessions | % | # Sessions | % | | | |
| CW47 | 4,299 | 35% | 8,121 | 65% | | | | | | | | | 5,740 | 100% | 18,160 |
| Summary | 4,299 | | 8,121 | | | | | | | | | | 5,740 | | 18,160 |

Business description

The *Exit Types Trend* report helps you to find out if callers have changed their exit behavior recently. You might for example check if a change in the dialog design led to the intended decrease in premature caller hang-ups.

The diagram shows the number of sessions by day for each exit type for the month selected by the user. The table shows the same figures, but grouped per calendar week.

Report details

- Graph

| Item | Description |
|------------|---|
| Day | The day of the sessions. |
| Exit Type | The exit type of the sessions. |
| # Sessions | The number of sessions by day and exit type for the selected service. |



- Grid

| Column | Description |
|---------------|--|
| Calendar Week | The calendar week of the sessions. |
| Channel | The channel of the sessions. |
| Exit Type | The exit type of the sessions. |
| # Sessions | The number of sessions during a calendar week by channel and exit type for the selected service. |
| % | The number of sessions by exit type as percentage to the total number of sessions by channel during a calendar week. |
| Summary | The total number of sessions by calendar week for the selected service. |

- Prompts: The user is prompted to select a service and the reporting period.



Input State Frequency

Report layout

| Input State | Input Type | # Sessions | # Visits per S. | Avg No Input per Input | Avg No Match per Input | Avg No Match (Voice) per Input | Avg No Match (DTMF) per Input | Confidence |
|--|------------|------------|-----------------|------------------------|------------------------|--------------------------------|-------------------------------|------------|
| Main Menu | Menu | 18,104 | 2.5 | 0.06 | 0.11 | 0.09 | 0.01 | 0.873 |
| Get PIN | Input | 11,673 | 1.0 | 0.09 | 0.20 | 0.12 | 0.07 | 0.964 |
| Customer Data | Menu | 9,116 | 1.2 | 0.10 | 0.12 | 0.10 | 0.01 | 0.868 |
| Service Plan Manager Menu | Menu | 9,113 | 2.3 | 0.09 | 0.18 | 0.13 | 0.03 | 0.855 |
| Order Add-On | Menu | 7,681 | 1.2 | 0.13 | 0.17 | 0.08 | 0.07 | 0.864 |
| Credit Card | Menu | 6,905 | 1.2 | 0.09 | 0.16 | 0.13 | 0.02 | 0.822 |
| Present Current Products (Voice/Video) | Input | 6,489 | 1.6 | 1.00 | 0.00 | 0.00 | 0.00 | |
| Logout (Web) | Exit | 5,741 | 1.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| List of Add-Ons | List | 5,641 | 4.6 | 0.44 | 0.11 | 0.06 | 0.04 | 0.855 |
| Get Credit Card Expiration date | Input | 4,629 | 1.2 | 0.09 | 0.17 | 0.10 | 0.05 | 0.883 |
| Transfer (All) | Transfer | 3,042 | 1.0 | 0.00 | 0.00 | 0.00 | 0.00 | |

Business description

The *Input State Frequency* report helps you to find out what your most frequented input states are.

The table shows the type of the input, the number of sessions, the average number of visits per session, the number of No Input and No Match events and the average confidence for each input state.

Report details

- Grid

| Column | Description |
|------------------------|--|
| Input State | The input states for the selected service. |
| Input Type | The object type of an input state. |
| Exit Type | The exit type of the sessions. |
| # Sessions | The number of sessions that visited the input state during the selected reporting period. |
| # Visits per S. | The average number of input state executions per session during the selected reporting period. |
| Avg No Input per Input | The average number of No Input events per processed input state. |
| Avg No Match per Input | The average number of No Match events per processed input state. |



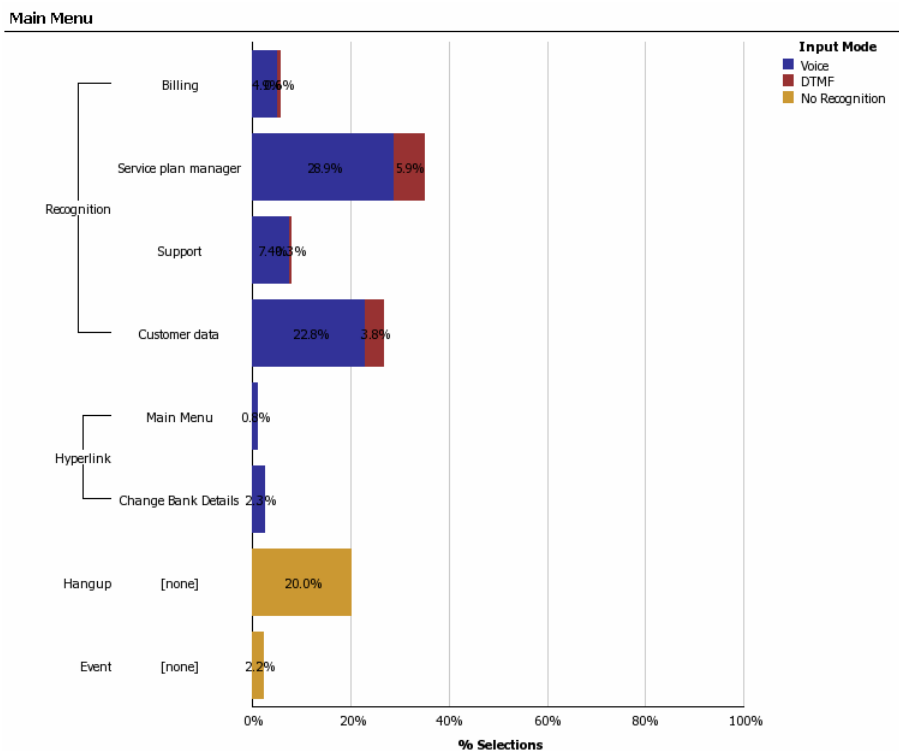
| Column | Description |
|----------------------------------|---|
| Avg # No Match (Voice) per Input | The average number of No Match (Voice) events per processed input state. |
| Avg # No Match (DTMF) per Input | The average number of No Match (DTMF) events per processed input state. |
| Confidence | The average confidence for all voice inputs by input state for the selected reporting period. |

- Prompts: The user is prompted to select a service and the reporting period.



Menu Navigation Analysis

Report layout



Business description

Use the *Menu Navigation Analysis* report to find out how callers navigate through the application, identify preferred or less used menu choices, hyperlink usage or event occurrences.

The diagram shows a bar for each selected menu item, hyperlink or event. The bars show the percentage of selections based on all selections and events in this menu. The bar is clustered by the input mode.

The report provides a graph for each menu of the service.

Report details

- Graph

| Item | Description |
|--------------|---|
| Input State | The menu objects for the selected service. |
| Input Mode | The input mode for the inputs. |
| % Selections | The users' choices by Menu object and Menu item, stacked by the input mode. |



- Prompts: The user is prompted to select a service, the reporting period and optionally the channel.
- Filter: the report is filtered on input type, selecting menus only.



Module Analysis

Report layout

| Module | # Sessions | # Module Occ. | Avg Module Occur. | Avg # Input States (per visit) | Avg Dur. in Module (per visit) (sec.) | Avg # No Input per Input State | Avg # No Match per Input State | Avg # Help Events per Input State | Avg # Turns per Input State | Confidence |
|------------------------------------|------------|---------------|-------------------|--------------------------------|---------------------------------------|--------------------------------|--------------------------------|-----------------------------------|-----------------------------|------------|
| Main: Billing | 2481 | 2,522 | 1.0 | 1 | 0 | 0.00 | 0.00 | 0.00 | 1.00 | |
| Main: Customer Data | 9650 | 11,714 | 1.2 | 1 | 0 | 0.14 | 0.17 | 0.00 | 1.28 | 0.807 |
| Change Email Address | 1440 | 1,493 | 1.0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 1.00 | |
| Change Payment Settings | 6945 | 8,142 | 1.2 | 1 | 0 | 0.11 | 0.20 | 0.00 | 1.28 | 0.773 |
| Change Postal Address | 1661 | 1,711 | 1.0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 1.00 | |
| Enter new Credit Card | 2671 | 2,812 | 1.1 | 4 | 0 | 0.12 | 0.28 | 0.00 | 1.37 | 0.847 |
| Update Credit Card Expiration Date | 2540 | 2,696 | 1.1 | 2 | 0 | 0.08 | 0.19 | 0.00 | 1.25 | 0.804 |
| Prime Telecom Portal | 18148 | 18,148 | 1.0 | 1 | 0 | 0.09 | 0.16 | 0.00 | 1.23 | 0.803 |
| PIN Authentication (if necessary) | 11672 | 11,897 | 1.0 | 1 | 0 | 0.12 | 0.26 | 0.00 | 1.35 | 0.942 |
| Main: Service Plan Mgr | 9412 | 14,002 | 1.5 | 3 | 0 | 0.37 | 0.14 | 0.00 | 1.19 | 0.806 |
| Change Add-Ons | 1884 | 1,901 | 1.0 | 1 | 0 | 0.00 | 0.00 | 0.00 | 1.00 | |

Business description

The *Module Analysis* report gives you an overview on the main characteristics for the modules of your services. By evaluating these figures you can quickly identify modules that produce a high number of No Match/No Input events or a low recognition confidence. In addition you can find out which modules are most frequently accessed and which ones are more than once accessed during one dialog. In this report you can drill down to input state to further pinpoint areas for improvement.

The table shows the number of sessions per module, the number of module occurrences describing how often one module was processed, the average number of occurrences per session, the average number of processed input states within this module, the number of events (No Input, No Match, Help, Repeat), and the average confidence throughout all input states.

Report details

- Grid

| Column | Description |
|-----------------|---|
| Module | The modules for the selected service. |
| # Sessions | The number of sessions that visited the module during the reporting period. |
| # Module Occ. | The total number of visits within the module during the reporting period. |
| Avg Module Occ. | The average number of visits during a session. |



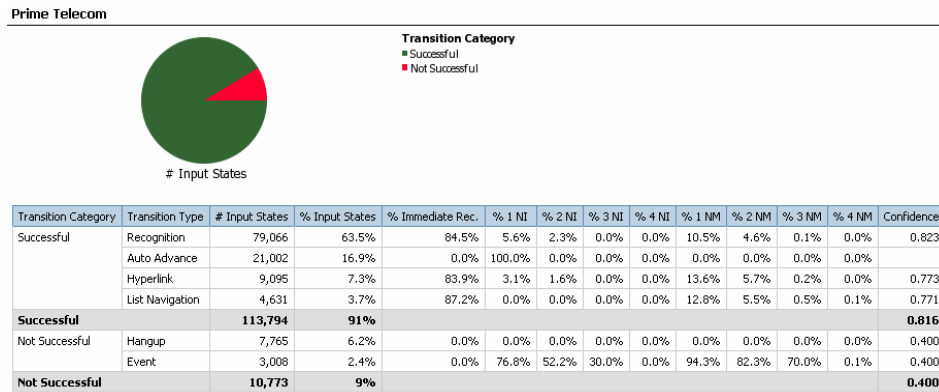
| Column | Description |
|------------------------------------|---|
| Avg # Input States (per visit) | The average number of executed input states during a module visit. |
| Avg Duration in Module (per visit) | Average duration in seconds per module visit. |
| Avg # No Input per Input State | Average number of No Input events per processed input state. |
| Avg # No Match per Input State | Average number of No Match events per processed input state. |
| Avg # Help Events per Input State | Average number of Help events per processed input state. |
| Avg # Turns per Input State | Average number of turns per processed input state. |
| Confidence | Average recognition confidence for all voice inputs by input state. |

- Prompts: The user is prompted to select a service and the reporting period.



Recognition Quality

Report layout



Business description

Use the *Recognition Quality* report to control and monitor the recognition quality on service level and for detailed analysis down to a single input state. The report provides information on the success rate of input states and can help to identify critical input states.

The table provides recognition quality numbers by service and the input state transition type. By using the drill function data can be analyzed down to a single input state. It provides the total number of input states and the percentage of input states that are successfully completed. The percentage of immediate recognition contains all input states without No Match, No Input, Repeat and Help event. The event-related percentages provide information on frequency and relevance of error events, showing the percentage of input states with at least 1-4+ No Input or No Match events. Finally the average confidence is provided for inputs with successful recognitions.

Report details

- Graph

| Item | Description |
|---------------------|--|
| Service | The selected service. |
| Transition Category | The successful / not successful categorization of transition types. |
| # Input States | The number of input states with a successful or not successful recognition (transition). |



- Grid

| Column | Description |
|-------------------------|---|
| Transition Category | The successful / not successful categorization of transition types. |
| Transition Type | The type of transition for an input. |
| # Input States | The number of input states by transition type for the selected service and reporting period. |
| % Input States | The number of input states as percentage to all input states for the selected service and reporting period. |
| % Immediate Recognition | The percentage of inputs with an immediate recognition. Immediate recognition is defined as recognition without previous No Input, No Match, Help and Repeat event. |
| % 1 NI | The percentage of inputs with at least one No Input event. |
| % 2NI | The percentage of inputs with at least two No Input events. |
| % 3 NI | The percentage of inputs with at least three No Input events. |
| % 4 NI | The percentage of inputs with at least four No Input events. |
| % 1 NM | The percentage of inputs with at least one No Match event. |
| % 2 NM | The percentage of inputs with at least two No Match events. |
| % 3 NM | The percentage of inputs with at least three No Match events. |
| % 4 NM | The percentage of inputs with at least four No Match events. |
| Confidence | The average recognition confidence for all voice recognitions by service and transition type for the reporting period. |

- Prompts: The user is prompted to select a service and the reporting period.



Recordings by Input State

Report layout

| Day | Minute | ANI | Rec. Count | Recording Type | Rec. Utt. | Rec. Confidence | Rec. Dur. (s) | Recording |
|----------|-----------------|------------|------------|----------------|----------------|-----------------|---------------|------------------------|
| 11/21/07 | 04:24PM-04:25PM | 0201590464 | 3 | NoMatch 1 | credit card | 0.4 | 1 | listen |
| | | | 4 | NoMatch 2 | bank details | 0.7 | 1 | listen |
| | | | 5 | NoMatch 3 | address change | 0.4 | 1 | listen |

Business description

Use the *Recordings by Input State* report to analyze the caller behavior for a selected input state. It provides access to the recording files to listen to what callers really said at a specific point within the dialog. This information can help designers to optimize for example prompts or grammars of this input state.

The table provides access to the recording files for a given input state. The table is structured by day and minute of the session, the ANI and the recording step. It additionally provides the recording type, the utterance, slot, recording confidence and the recording duration.

Report details

- Grid

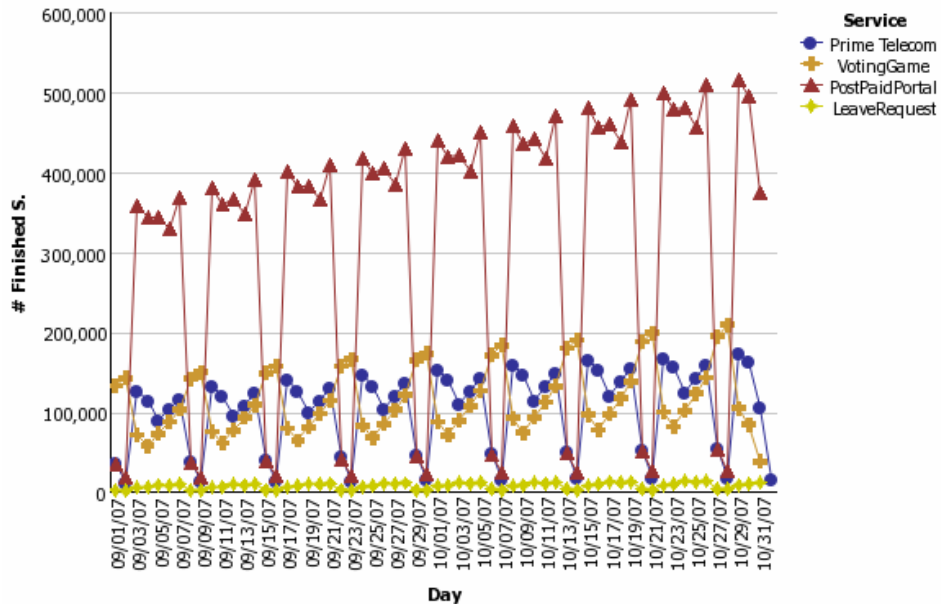
| Column | Description |
|-----------------|--|
| Day | The day of the session start. |
| Minute | The minute of the session start. |
| ANI | The ANI of the session. |
| Rec. Count | A sequential count of the session's recordings. |
| Recording Type | The type of the recording. |
| Rec. Utt. | The utterance returned by the recognizer. |
| Rec. Confidence | The confidence value returned by the recognizer. |
| Rec. Dur. | The recording duration in seconds. |
| Recording | The URL to access and listen to the recording. |

- Prompts: The user is prompted to select a day and an input state.



Service Analysis

Report layout



| Service | # Finished S. | % Sessions | Max Concurrency | Avg Concurrency | Duration (min.) | % Duration |
|----------------|-------------------|------------|-----------------|-----------------|-------------------|------------|
| Prime Telecom | 6,337,175 | 19% | 684 | 159 | 10,808,869 | 36% |
| VotingGame | 7,114,632 | 22% | 974 | 161 | 10,815,869 | 36% |
| PostPaidPortal | 18,728,783 | 57% | 545 | 106 | 7,121,262 | 24% |
| LeaveRequest | 515,219 | 2% | 83 | 17 | 1,142,517 | 4% |
| Summary | 32,695,809 | | 974 | 111 | 29,888,517 | |

Business description

The *Service Analysis* report provides information on the usage of the services. It helps you to identify trends in caller behavior across services and to review the effect of changes you made to the applications.

The diagram shows the number of sessions by day for all deployed services. The table additionally lists the maximum and average number of concurrent sessions and the sum of session duration in minutes. Furthermore, the percent to total values are shown.

Report details

- Graph

| Item | Description |
|---------|---------------------------------------|
| Service | The services for the selected server. |
| Day | The day of the sessions. |



| Item | Description |
|---------------|---|
| # Finished S. | The number of finished sessions by day and service for the selected server. |

- Grid

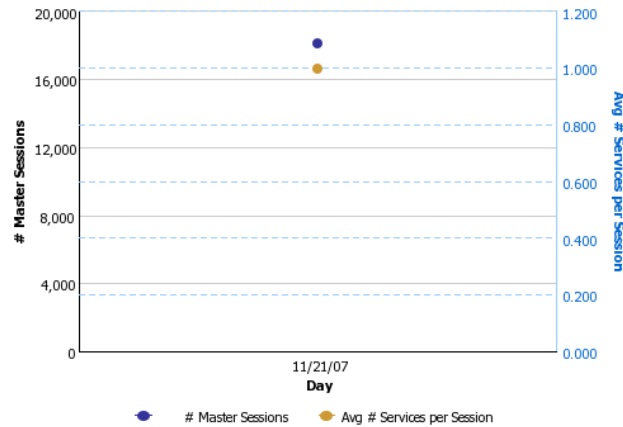
| Column | Description |
|-----------------|---|
| Service | The services for the selected server. |
| # Finished S. | The number of finished sessions by service. |
| % Sessions | The number of finished sessions as percentage to all finished sessions for the selected server and reporting period. |
| Max Concurrency | The maximum number of concurrent sessions by service during the reporting period. |
| Avg Concurrency | The average number of concurrent sessions by service during the reporting period. |
| Duration (min.) | The total session duration by service. |
| % Duration | The session duration as percentage to the total duration of all sessions on the selected server and reporting period. |

- Prompts: The user is prompted to select the reporting period.



Service Chain Session Analysis

Report layout



| Service Chain Exit Service | Exit Type | # Master Sessions | Avg # Services per Session | Avg Duration (sec.) | Duration (min.) | % Successful Input States |
|----------------------------|-------------|-------------------|----------------------------|---------------------|-----------------|---------------------------|
| Prime Telecom | Exit Object | 5,740 | 1 | 49 | 4,663 | 88.2% |
| | Hangup | 8,121 | 1 | 86 | 11,690 | 74.7% |
| | Transfer | 4,299 | 1 | 59 | 4,215 | 65.5% |

| Day | # Master Sessions | Avg # Services per Session | Avg Duration (sec.) | Duration (min.) | % Successful Input States |
|----------|-------------------|----------------------------|---------------------|-----------------|---------------------------|
| 11/21/07 | 18,160 | 1 | 68 | 20,568 | 76.5% |

Business description

The *Service Chain Session Analysis* report provides information of sessions along a chain of executed services. It helps you to track the caller behavior for services that are based on multiple deployed services and that make use of the service chain functionality.

The diagram shows the number of sessions by day and the average number of visited services for sessions of a selected starting service. The first table lists the service in which these sessions ended including the exit type. The second table additionally provides the session statistics by day, including the metrics on sessions, average visited services, average and total duration, and the percentage of successful input states.

Report details

- Graph

| Item | Description |
|---------------------------|---|
| Day | The day of the sessions. |
| # Master Sessions | The number of sessions for the selected reporting period and the initial service. |
| Avg # Service per Session | The average number of executed services during a session. |



- Grid

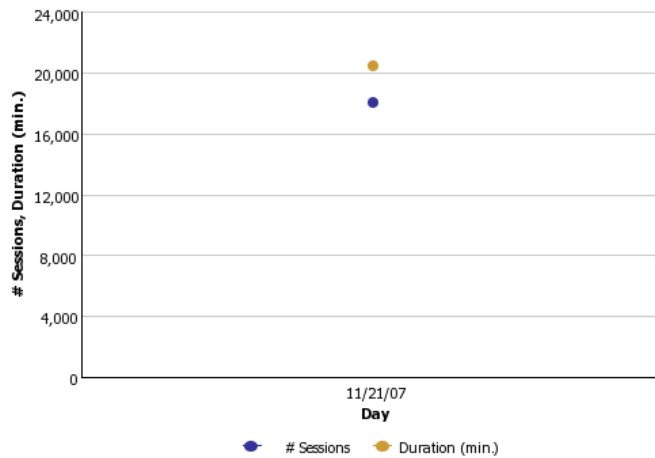
| Column | Description |
|----------------------------|---|
| Service Chain Exit Service | The last service of a session. |
| Exit Type | The type of exit. |
| # Master Sessions | The number of sessions by exit type that ended in the listed service. |
| Avg # Service per Session | The average number of executed services during a session by exit type and exit service. |
| Avg Duration (sec.) | The average session duration in seconds by exit type and exit service. |
| Duration (min) | The total duration in minutes by exit type and exit service. |
| % Successful Input States | The percentage of successful inputs by exit type and exit service. |

- Prompts: The user is prompted to select the reporting period and the service from which the sessions started.



Service Deployment History

Report layout



| Deployment Date | Deployment | Day | # Sessions | Duration (min.) | Avg Duration (sec.) | % Successful Input States | Avg Confidence (Voice) |
|-----------------|-------------|----------|------------|-----------------|---------------------|---------------------------|------------------------|
| 10/15/07 | Version 2.1 | 11/21/07 | 18,160 | 20,568 | 68 | 76.5% | 0.157 |

Business description

The *Service Deployment History* report provides information on service usage along the history of service re-deployments. Using this report can help to control the success of changes and enhancements and to monitor the caller behavior across multiple versions of a service.

The diagram shows the number of sessions and the duration by day. The additional table provides the overall call metrics by day, grouped by the deployment history, including deployment date and project version name. Metrics included are number of sessions, total duration and average session duration, percentage of successful inputs and the average confidence.

Report details

- Graph

| Item | Description |
|-----------------|--|
| Day | The day of the sessions. |
| # Sessions | The number of sessions by day for the selected service. |
| Duration (min.) | The total duration in minutes by day for the selected service. |



- Grid

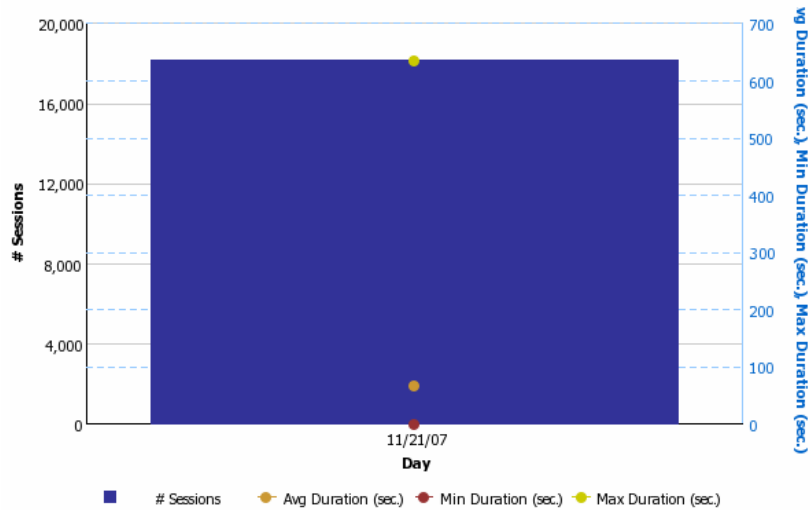
| Column | Description |
|---------------------------|---|
| Deployment Date | The date of the service (re-) deployment. |
| Deployment | The version description of the deployed project version. |
| Day | The day of the sessions. |
| # Sessions | The number of sessions by day for the selected service. |
| Duration (min.) | The total duration in minutes by day for the selected service. |
| Avg Duration (sec.) | The average session duration in seconds. |
| % Successful Input States | The percentage of successful inputs. |
| Avg Confidence (Voice) | The average recognition confidence for all input states with voice input. |

- Prompts: The user is prompted to select the reporting period and the service.



Session Duration Benchmark

Report layout



| Day | # Sessions | Avg Duration (sec.) | Min Duration (sec.) | Max Duration (sec.) |
|----------|------------|---------------------|---------------------|---------------------|
| 11/21/07 | 18,160 | 68 | 0 | 635 |

Business description

The *Session Duration Benchmark* report provides information on the duration of sessions. Use it in context with your application. Some applications might create shorter sessions whereas others, more complex in nature, are designed to prolong the caller's stay in the dialog.

Aside from that, the *Session Duration Benchmark* report also helps in identifying recent trends in the length of the sessions.

The diagram shows the average, minimum and maximum session duration per day as a line series along with the number of sessions as a bar series. The additional table shows these figures for the reporting period selected by the user.

Report details

- Graph

| Item | Description |
|---------------------|---|
| Day | The day of the sessions. |
| # Sessions | The number of sessions by day for the selected service. |
| Avg Duration (sec.) | The average session duration by day. |
| Max Duration (sec.) | The maximum session duration by day. |



| Item | Description |
|---------------------|--------------------------------------|
| Min Duration (sec.) | The minimum session duration by day. |

- Grid

| Column | Description |
|---------------------|---|
| Day | The day of the sessions. |
| # Sessions | The number of sessions by day for the selected service. |
| Avg Duration (sec.) | The average session duration by day. |
| Max Duration (sec.) | The maximum session duration by day. |
| Min Duration (sec.) | The minimum session duration by day. |

- Prompts: The user is prompted to select a service and the reporting period.



Session Input State Analysis

Report layout

11/21/07 04:24PM-04:25PM

| Input State Step | Input State | Input Type | Slot | Utterance | Transition Type | # No Input | # No Match | # Help Events | Rec. No Match 1 | Rec. No Match 2 | Rec. No Match 3 | Rec. No Match 4 | Rec. Recognition |
|------------------|---------------|------------|--|----------------------------------|-----------------|------------|------------|---------------|------------------------|------------------------|------------------------|-----------------|------------------------|
| 0 | Main Menu | Menu | Customer data | customer data | Recognition | 0 | 0 | 0 | | | | | listen |
| 1 | Get PIN | Input | sITMP=0e1be98067c6c73c8a1250d2baa681f9 | 68fee10378254c2bd128957f8f9c480c | Recognition | 0 | 0 | 0 | | | | | listen |
| 2 | Customer Data | Menu | 0 | address change | Event | 0 | 9 | 0 | listen | listen | listen | | |

11/21/07 04:32PM-04:33PM

| Input State Step | Input State | Input Type | Slot | Utterance | Transition Type | # No Input | # No Match | # Help Events | Rec. No Match 1 | Rec. No Match 2 | Rec. No Match 3 | Rec. No Match 4 | Rec. Recognition |
|------------------|--|--------------|--|----------------------------------|-----------------|------------|------------|---------------|------------------------|-----------------|-----------------|-----------------|------------------------|
| 0 | Main Menu | Menu | Support | support | Recognition | 0 | 0 | 0 | | | | | listen |
| 1 | Main Menu | Menu | Change Bank Details | I have a new credit card | Hyperlink | 0 | 0 | 0 | | | | | listen |
| 2 | Get PIN | Input | sITMP=bf5d232e6c54a84b97769a91adb1642f | 9d9c77eb5784a6d850fda8a35f42b38d | Recognition | 0 | 1 | 0 | listen | | | | |
| 3 | Credit Card | Menu | Enter new card | enter new card | Recognition | 0 | 0 | 0 | | | | | listen |
| 4 | Get Credit Card Type | Input | sITMP=Visa | its a visa | Recognition | 0 | 0 | 0 | | | | | listen |
| 5 | Get Credit Card Number (or correct Credit Card type) | Input | sITMP=3f409fa3e742b7f7d49ac76a32837ab7 | 064dd5c51ca8140ab02f8e665ff0a0c | Recognition | 0 | 0 | 0 | | | | | listen |
| 6 | Get Credit Card Expiration date | Input | sITMP=122009 | december two thousand nine | Recognition | 0 | 0 | 0 | | | | | listen |
| 7 | Confirm Credit Card | Confirmation | [deny] | no | Recognition | 0 | 0 | 0 | | | | | listen |
| 8 | Confirm Credit Card | Confirmation | Correct Credit Card Number | the number is wrong | Recognition | 0 | 0 | 0 | | | | | listen |

Business description

Use the *Session Input State Analysis* report for analysis of single calls. It provides detailed information on how callers use the dialogs and helps to identify input states that need further improvement. The referenced recordings can be used to listen to what callers said at a specific point in the dialog.

The report has sections on single calls showing the call start date and time as section header and the call details as table.

The table lists all input states for a single call. It provides the input state, input type, the slot value, utterance and confidence. Along with that it provides the number of No Match and No Input events. Additionally, it provides direct access to the recorded utterances for the recording types No Match 1-4, the recording for the recognition and hyperlink.

Report details

- Grid

| Item | Description |
|------------------|--|
| Day, Minute | The day and minute of the session as sections. |
| Input State Step | The consecutive number of inputs. |
| Input State | The processed input state. |
| Input Type | The object type of the processed input state. |
| Slot | The slot value returned by the media platform. |



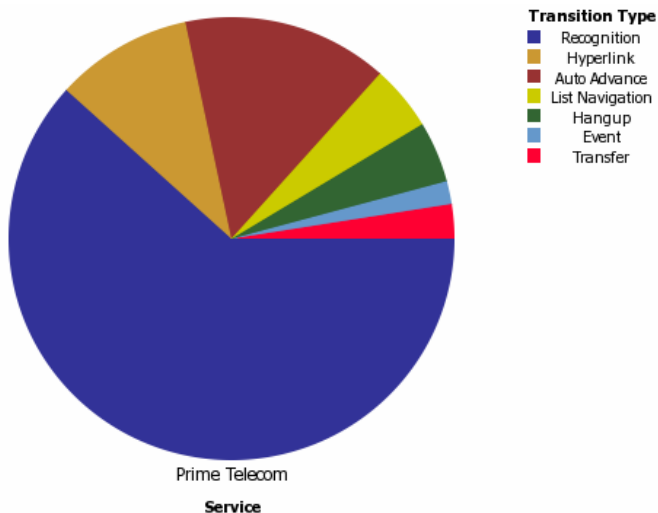
| Item | Description |
|------------------|--|
| Utterance | The recognized utterance returned by the media platform. |
| Transition Type | The transition type for this input. |
| # No Input | The number of No Input events during this input state. |
| # No Match | The number of No Match events during this input state. |
| # Help | The number of Help events during this input state. |
| Rec. No Match 1 | The URL to listen to the recording for the first No Match event. |
| Rec. No Match 2 | The URL to listen to the recording for the second No Match event. |
| Rec. No Match 3 | The URL to listen to the recording for the third No Match event. |
| Rec. No Match 4 | The URL to listen to the recording for the fourth No Match event. |
| Rec. Recognition | The URL to listen to the recording for the recognition. |
| Rec. Hyperlink | The URL to listen to the recording for the Hyperlink navigation event. |

- Prompts: The user is prompted to select the callers ANI for a specific service and the reporting period.



Transition Types

Report layout



| Service | Transition Type | % Input States | Avg # Input States | Avg Duration (sec.) | Confidence |
|---------------|-----------------|----------------|--------------------|---------------------|------------|
| Prime Telecom | Recognition | 61.59% | 6.1 | 8 | 0.872 |
| | Auto Advance | 15.05% | 2.2 | 1 | |
| | Hyperlink | 10.00% | 1.6 | 8 | 0.884 |
| | List Navigation | 4.87% | 2.1 | 7 | 0.878 |
| | Hangup | 4.37% | 1.0 | 2 | 0.400 |
| | Transfer | 2.42% | 1.0 | 0 | |
| | Event | 1.69% | 1.2 | 23 | 0.400 |

Business description

The *Transition Types* report helps you to get insight into how callers most frequently leave the input states.

The pie chart shows the percentage of inputs per transition type. The table in addition shows the average number of occurrences per session, the average duration in minutes, the average confidence and the percentage of input states as a proportion through the total number of input states.

Report details

- Graph

| Item | Description |
|-----------------|--|
| Service | The selected service. |
| Transition Type | The input state transition types. |
| # Sessions | The number of sessions by service and transition type for the selected reporting period. |



- Grid

| Column | Description |
|---------------------|--|
| Service | The selected service. |
| Transition Type | The input state transition types. |
| % Input States | The number of input states as percentage to all processed input states of the service. |
| Avg # Input States | The average number of input states with this transition type per session. |
| Avg Duration (sec.) | The average duration per input states with this transition type per session. |
| Confidence | The average confidence for all input states with this transition type. |

- Prompts: The user is prompted to select a service and the reporting period.



Utterance Analysis (Voice, DTMF, Text)

Report layout

| Input State | Input Type | # Input States | Avg Words | Min Words | Max Words | % 1 Word | % 2 Words | % 3 Words | % 4 Words | % 5 Words | % 6+ Words | Conf. 1 Word | Conf. 2 Words | Conf. 3 Words | Conf. 4 Words | Conf. 5 Words | Conf. 6 Words | Lit. Variations |
|--|--------------|----------------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|------------|--------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| Confirm Credit Card | Confirmation | 2,479 | 1.9 | 1 | 4 | 43.1% | 23.5% | 30.9% | 2.5% | 0.0% | 0.0% | -0.227 | -0.579 | -0.444 | -0.955 | -1.000 | -1.000 | 27 |
| Confirm Credit Card Expiration Date | Menu | 1,922 | 1.6 | 1 | 4 | 57.8% | 28.3% | 12.8% | 1.1% | 0.0% | 0.0% | 0.025 | -0.500 | -0.773 | -0.980 | -1.000 | -1.000 | 13 |
| Confirm Selected Add-On | Input | 2,872 | 1.5 | 1 | 6 | 61.7% | 32.3% | 3.7% | 0.7% | 0.0% | 1.6% | 0.106 | -0.421 | -0.935 | -0.988 | -1.000 | -0.971 | 21 |
| Credit Card | Menu | 6,077 | 3.1 | 1 | 8 | 5.0% | 22.9% | 41.4% | 24.0% | 3.8% | 2.9% | -0.912 | -0.594 | -0.267 | -0.574 | -0.933 | -0.949 | 27 |
| Customer Data | Menu | 6,144 | 2.4 | 1 | 6 | 0.0% | 77.6% | 0.0% | 22.4% | 0.0% | 0.0% | -1.000 | 0.375 | -1.000 | -0.606 | -1.000 | -1.000 | 6 |
| Get Credit Card Expiration date | Input | 3,016 | 3.3 | 2 | 4 | 0.0% | 18.1% | 34.1% | 47.8% | 0.0% | 0.0% | -1.000 | -0.677 | -0.390 | -0.142 | -1.000 | -1.000 | 181 |
| Get Credit Card Number (or correct Credit Card type) | Input | 770 | 12.3 | 2 | 16 | 0.0% | 6.4% | 5.6% | 8.2% | 5.8% | 74.0% | -1.000 | -0.885 | -0.901 | -0.854 | -0.895 | 0.321 | 336 |
| Get Credit Card Type | Input | 1,662 | 2.8 | 1 | 6 | 23.3% | 27.0% | 11.8% | 22.1% | 13.4% | 2.3% | -0.582 | -0.517 | -0.789 | -0.603 | -0.762 | -0.959 | 31 |
| Get PIN | Input | 1,757 | 4.0 | 4 | 6 | 0.0% | 0.0% | 0.0% | 99.9% | 0.0% | 0.1% | -1.000 | -1.000 | -1.000 | 0.765 | -1.000 | -0.998 | 893 |
| List of Add-Ons | List | 9,595 | 2.7 | 1 | 4 | 31.4% | 7.3% | 24.7% | 36.6% | 0.0% | 0.0% | -0.444 | -0.870 | -0.563 | -0.352 | -1.000 | -1.000 | 5 |
| Main Menu | Menu | 20,902 | 3.0 | 1 | 8 | 18.3% | 18.7% | 36.5% | 15.6% | 0.0% | 10.8% | -0.677 | -0.669 | -0.354 | -0.723 | -1.000 | -0.808 | 29 |
| Order Add-On | Menu | 5,737 | 1.6 | 1 | 6 | 58.9% | 27.6% | 12.5% | 0.8% | 0.0% | 0.2% | 0.052 | -0.507 | -0.778 | -0.985 | -1.000 | -0.997 | 22 |
| Service Plan Manager Menu | Menu | 12,768 | 3.8 | 3 | 4 | 0.0% | 0.0% | 16.7% | 83.3% | 0.0% | 0.0% | -1.000 | -1.000 | -0.704 | 0.475 | -1.000 | -1.000 | 4 |

Business description

Use the *Utterance Analysis* reports to analyze the user responses. They can be used to measure the complexity of utterances and can help to optimize input states and grammars.

Utterance Analysis reports are available in three versions representing the channel specific metrics. The tables list all input states by service.

The selected report for the voice channel provides statistics about the number of words used within the input states utterances. Along with that it provides the percentage and average confidence of input states by the number of words used. The report on DTMF utterances provides metrics on the character length. The text version provides metrics on number of words and lengths.

Report details

- Grid

| Column | Description |
|----------------|---|
| Input State | The input states of the selected service. |
| Input Type | The object type of the input state. |
| # Input States | The number of input state executions for the selected reporting period. |
| Avg Words | Average number of words in recognized utterance by input state. |
| Min Words | Minimum number of words in recognized utterance by input state. |
| Max Words | Maximum number of words in recognized utterance by input state. |
| % 1 Word | Percentage of inputs with utterance length of one word. |



| Column | Description |
|---------------|--|
| % 2 Words | Percentage of inputs with utterance length of two words. |
| % 3 Words | Percentage of inputs with utterance length of three words. |
| % 4 Words | Percentage of inputs with utterance length of four words. |
| % 5 Words | Percentage of inputs with utterance length of five words. |
| % 6 Words | Percentage of inputs with utterance length of six words. |
| Conf. 1 Word | Confidence for utterances with length of one word. |
| Conf. 2 Words | Confidence for utterances with length of two words. |
| Conf. 3 Words | Confidence for utterances with length of three words. |
| Conf. 4 Words | Confidence for utterances with length of four words. |
| Conf. 5 Words | Confidence for utterances with length of five words. |
| Conf. 6 Words | Confidence for utterances with length of six words. |

- Prompts: The user is prompted to select a service and the reporting period.



Utterances by Input States

Report layout

| Slot | % | Input Mode | Utterance | # Input States | % Input States | Avg Confidence | Min Confidence | Max Confidence | % at least 1 No Match |
|-----------|--------|------------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------------|
| Confirm | 88.52% | Voice | yes | 524 | 19.40% | 0.773 | 0.610 | 0.940 | 9.92% |
| | | Text | 1 | 491 | 18.18% | 1.000 | 1.000 | 1.000 | 0.00% |
| | | Voice | yes okay | 217 | 8.03% | 0.770 | 0.610 | 0.930 | 8.76% |
| | | Voice | yeah | 210 | 7.77% | 0.776 | 0.600 | 0.930 | 8.10% |
| | | Voice | thats right | 196 | 7.26% | 0.773 | 0.610 | 0.930 | 14.80% |
| | | Voice | okay | 189 | 7.00% | 0.775 | 0.610 | 0.930 | 7.94% |
| | | Voice | yes thats right | 170 | 6.29% | 0.778 | 0.610 | 0.920 | 7.65% |
| | | Voice | thats correct | 130 | 4.81% | 0.770 | 0.610 | 0.900 | 20.00% |
| | | Voice | correct | 87 | 3.22% | 0.764 | 0.600 | 0.930 | 14.94% |
| | | Voice | yep | 58 | 2.15% | 0.776 | 0.610 | 0.890 | 5.17% |
| | | Voice | confirm | 43 | 1.59% | 0.771 | 0.640 | 0.890 | 11.63% |
| | | Voice | yes thats correct | 43 | 1.59% | 0.735 | 0.650 | 0.890 | 11.63% |
| | | Voice | yep thats right | 33 | 1.22% | 0.808 | 0.670 | 0.920 | 12.12% |
| | | 0 | 5.37% | No Recognition | 0 | 145 | 5.37% | | |
| Deny | 4.59% | Text | 2 | 124 | 4.59% | 1.000 | 1.000 | 1.000 | 0.00% |
| Main Menu | 0.81% | Voice | back to main menu | 22 | 0.81% | 0.783 | 0.630 | 0.860 | 13.64% |
| Logout | 0.70% | Text | 2 | 19 | 0.70% | 1.000 | 1.000 | 1.000 | 0.00% |

Business description

The *Utterances by Input States* report gives you insight into what callers say in a specific prompt. This information can be used to tune the underlying grammar, e.g. by removing rarely or never used entries. By further examining the confidence benchmark figures you can also identify grammar entries that need adjustments to produce better confidence values.

The table shows all utterances grouped by slots and ordered by the slot occurrence. Along with that the input mode is shown, the number of occurrences of this utterance and the appropriate percentage. Furthermore, the average, minimum and maximum confidence, and the percentage of inputs with at least 1 No Match event.

Report details

- Grid

| Column | Description |
|------------|---|
| Slot | The slot value returned by the recognizer. |
| Input Mode | The mode of the input (recognition). |
| Utterance | The number of input state executions for the selected reporting period. |
| Avg Words | Average number of words in recognized utterance by input state. |
| Min Words | Minimum number of words in recognized utterance by input state. |
| Max Words | Maximum number of words in recognized utterance by input state. |



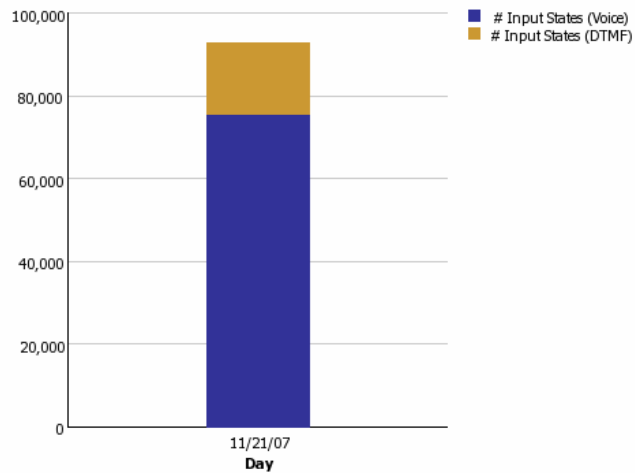
| Column | Description |
|---------------|--|
| % 1 Word | Percentage of inputs with utterance length of one word. |
| % 2 Words | Percentage of inputs with utterance length of two words. |

- Prompts: The user is prompted to select an input state and the reporting period.



Voice vs. DTMF Input

Report layout



| Day | # Sessions | # Input States (Voice) | % Input States (Voice) | # Input States (DTMF) | % Input States (DTMF) | # No Match (Voice) | # No Match (DTMF) | % Unsuccessful Voice Inputs | % Unsuccessful DTMF Inputs |
|----------|------------|------------------------|------------------------|-----------------------|-----------------------|--------------------|-------------------|-----------------------------|----------------------------|
| 11/21/07 | 12,420 | 75,698 | 81.58% | 17,090 | 18.42% | 15,058 | 4,958 | 19.89% | 29.01% |

Business description

The *Voice vs. DTMF* report helps you to identify how many input states were successfully completed by using voice input. Especially when migrating from a DTMF-only application, this report can give you insight into performance of the recognition engine depending on the input mode.

The bar diagram shows the number of inputs by day divided into voice and DTMF inputs. The table in addition shows the number of No Match events for each input mode and the percentage of No Match events as a proportion of all successful inputs.

Report details

- Graph

| Item | Description |
|---|---|
| Day | The day of the sessions. |
| # Input States (Voice), # Input States (DTMF) | The number of input states with voice and DTMF input by day for the selected service. |



- Grid

| Column | Description |
|-----------------------------|---|
| Day | The day of the sessions. |
| # Sessions | The number of sessions by day for the selected service and reporting period. |
| # Input States (Voice) | The number of input states with voice inputs. |
| % Input States (Voice) | The number of input states with voice inputs as percentage to the total number of inputs. |
| # Input States (DTMF) | The number of input states with DTMF inputs. |
| % Input States (DTMF) | The number of input states with DTMF inputs as percentage to the total number of inputs. |
| # No Match (Voice) | The number of No Match (Voice) events. |
| # No Match (DTMF) | The number of No Match (DTMF) events. |
| % Unsuccessful Voice Inputs | Percentage of unsuccessfully completed input states with voice recognition. |
| % Unsuccessful DTMF Inputs | Percentage of unsuccessfully completed input states with DTMF recognition. |

- Prompts: The user is prompted to select a service and the reporting period.

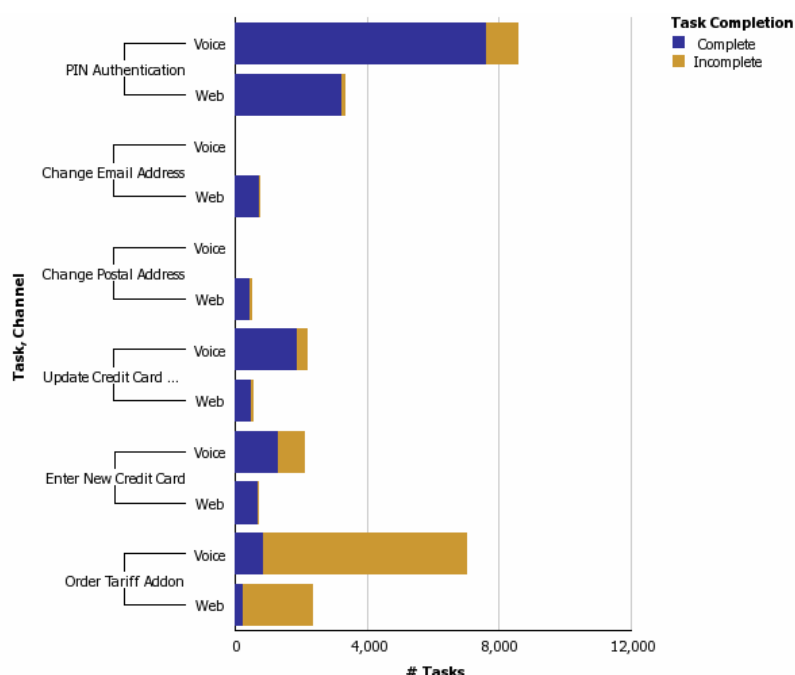


Business and Caller Analysis

The reports in the *Business and Caller Analysis* category target at marketing people or CRM analysts. They primarily provide information on business tasks and on the callers and their acceptance of the applications, i.e. how well the service is addressing caller needs, how many of the callers are coming back, and how often they visit.

Business Task Completion Rates

Report layout



Voice

| | | Complete | | Incomplete | | | | # Tasks | | |
|----------------|------------------------------------|---------------|-----|--------------|-----|---------------------|-----|--------------|---------------------|---------------|
| | | Complete | | Caller abort | | Recognition failure | | | Session termination | |
| | | # Tasks | % | # Tasks | % | # Tasks | % | | # Tasks | % |
| Authentication | PIN Authentication | 7,640 | 89% | 119 | 1% | 280 | 3% | 552 | 6% | 8,591 |
| Transaction | Enter New Credit Card | 1,300 | 62% | 131 | 6% | 327 | 16% | 343 | 16% | 2,101 |
| | Order Tariff Addon | 883 | 13% | 5,751 | 82% | 245 | 4% | 115 | 2% | 6,994 |
| | Update Credit Card Expiration Date | 1,900 | 87% | 37 | 2% | 96 | 4% | 147 | 7% | 2,180 |
| Summary | | 11,723 | | 6,038 | | 948 | | 1,157 | | 19,866 |

Business description

The *Business Task Completion Rates* report provides information on how successful tasks are completed. It helps to monitor the frequency of task usage and helps to identify reasons for aborted tasks.

The diagram shows the task completion for each task and channel. The table additionally shows the number of executed tasks and percentage based on the task status.

**Report details**

- Graph

| Item | Description |
|-----------------|--|
| Task Completion | Task completion (complete, incomplete). |
| Task | The business tasks for the selected service. |
| Channel | The channel of the sessions. |
| # Tasks | The number of task executions by task and channel, stacked by task completion for the selected service and reporting period. |

- Grid

| Column | Description |
|-----------------|---|
| Channel | The channel of the sessions. |
| Task Completion | Task completion (complete, incomplete). |
| Task Status | The more detailed task status. |
| Task Type | The type of the business task. |
| Task | The business tasks for the selected service. |
| # Tasks | The number of task executions by channel, task and task status for the selected service and reporting period. |
| % | The number of task executions by task status as percentage to the total number of task executions per task. |

- Prompts: The user is prompted to select a service and the reporting period.

**Business Task Data****Report layout****Enter New Credit Card**

| Task Completion | Task Data Key | Task Data Value | Count |
|-----------------|----------------|-----------------|-------|
| Complete | CreditCardType | AmEx | 366 |
| | | MC | 894 |
| | | Visa | 722 |

| Task Completion | Task Data Key | Total | Min | Max | Avg |
|-----------------|------------------|-----------|------|-------|-------------|
| Complete | CreditCardType | | | | |
| | AddonMonthlyRate | 15,778.77 | 9.99 | 39.99 | 14.05055209 |

Business description

The *Business Task Data* report shows the task-related data for the selected business task.

The first table provides a count of occurrences for all alphanumeric data, grouped by task completion and data key.

The second table provides a calculation of totals, minimum, maximum and average for all numeric data values.



Note: This report provides a generic view on the task data logged. You might adapt this report and create custom filters and metrics to accordingly reflect the data stored by the application.

Report details

- First grid

| Column | Description |
|-----------------|---|
| Task | The business task. |
| Task Completion | Task completion (complete, incomplete). |
| Task Data Key | The key of the task data. |
| Task Data Value | The different values logged for the <i>Task Data Key</i> . |
| Count | A count of alphanumeric data values for the reporting period. |



- Second grid

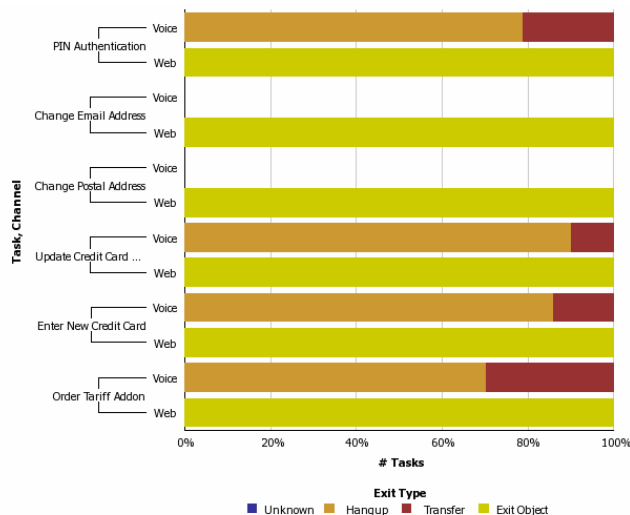
| Column | Description |
|-----------------|---|
| Task | The business task. |
| Task Completion | Task completion (complete, incomplete). |
| Task Data Key | The key of the task data. |
| Total | Total sum of numerical values by data key for the reporting period. |
| Min | Minimum numerical value by data key for the reporting period. |
| Max | Maximum numerical value by data key for the reporting period. |
| Avg | Average value by data key for the reporting period. |

- Prompts: The user is prompted to select a business task and the reporting period.



Business Task Session Analysis

Report layout



Voice

| Task | Task Completion | # Tasks | % | Avg Act. Phases | Avg Inact. P. | Avg Input States | % Succes. | Avg Input - No Match | Avg Input - No Input |
|------------------------------------|-----------------|---------|-------|-----------------|---------------|------------------|-----------|----------------------|----------------------|
| Enter New Credit Card | Complete | 1,300 | 46.2% | 1.0 | 0.0 | 5.2 | 100.0% | 0.8 | 0.3 |
| | Incomplete | 801 | 28.5% | 1.0 | 0.0 | 3.3 | 74.8% | 0.8 | 0.4 |
| Order Tariff Addon | Complete | 883 | 9.5% | 1.6 | 0.6 | 1.0 | 100.0% | 0.1 | 0.1 |
| | Incomplete | 6,111 | 65.4% | 1.0 | 0.0 | 1.0 | 94.8% | 0.1 | 0.1 |
| PIN Authentication | Complete | 7,640 | 64.2% | 1.0 | 0.0 | 1.0 | 100.0% | 0.1 | 0.1 |
| | Incomplete | 951 | 8.0% | 1.0 | 0.0 | 1.0 | 36.0% | 0.3 | 0.2 |
| Update Credit Card Expiration Date | Complete | 1,900 | 70.4% | 1.0 | 0.0 | 2.0 | 100.0% | 0.2 | 0.1 |
| | Incomplete | 280 | 10.4% | 1.0 | 0.0 | 1.6 | 45.6% | 0.4 | 0.3 |

Business description

The *Business Task Session Analysis* report provides further details on the task execution. It helps to identify reasons why tasks may not have been completed as successfully as expected.

The diagram shows the percentage of call exits for each task and channel, clustered by the dialog exit type. The table additionally lists the task completion, the average number of active and inactive phases, the average number of input states, the percentage of successful input states and the average number of inputs with a No Match and No Input event.

Report details

- Graph

| Item | Description |
|-----------|-------------------------------|
| Task | The business task. |
| Channel | The channel of the session. |
| Exit Type | The exit type of the session. |



| Item | Description |
|-------------|--|
| # Tasks | The number of tasks by task and channel, stacked by the session exit type. |

- Grid

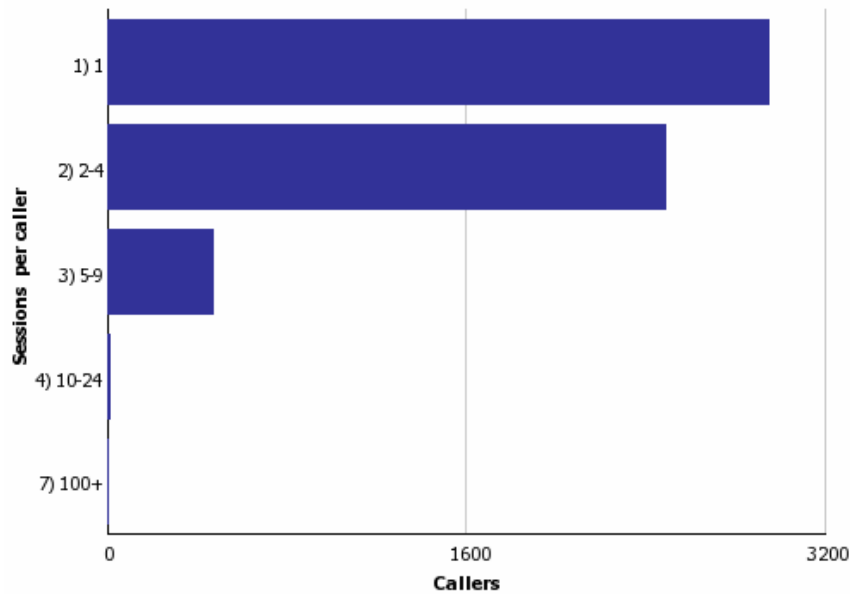
| Column | Description |
|----------------------|---|
| Task | The business task. |
| Task Completion | Task completion (complete, incomplete). |
| # Tasks | The number of task executions by task and task completion. |
| % | Percentage of complete and incomplete task executions per task. |
| Avg Act. Phases | Average number of active phases per task execution. |
| Avg Inact. Phases | Average number of inactive phases per task execution. |
| Avg Input States | Average number of input states per task execution. |
| % Success | Percentage of successful inputs per task execution. |
| Avg Input – No Match | Average number of inputs with at least one No Match event per task execution. |
| Avg Input – No Input | Average number of inputs with at least one No Input event per task execution. |

- Prompts: The user is prompted to select a service and the reporting period.



Caller Frequency

Report layout



| Month | # Sessions | # Known Callers | Avg # Ses. Known Callers |
|---------|------------|-----------------|--------------------------|
| Y07 Nov | 18,145 | 5,928 | 3.06 |

Business description

The *Caller Frequency* report provides information on how often the same caller initiates sessions to your applications. Use this information to find out how loyal your callers are and if your applications make callers come back. Usually, a high number of recurring sessions is desired. However, some applications might require the caller to call only once, so interpretation of this data is dependent on the application context.

The diagram shows the number of callers grouped by their session frequency for the month selected by the user. Available frequency bands are *1 time*, *2-4 times*, *5-9 times*, *10-24 times*, *25-49 times*, *50-99 times* and *more than 100 times*. The table lists the total number of sessions, total number of callers, and the average number of sessions per caller for the selected month. This report only shows sessions from known callers. Callers whose ANI was not transmitted are not counted in this report.

Report details

- Graph

| Item | Description |
|---------------------|--|
| Callers | The number of callers. |
| Sessions per caller | The number of sessions per caller per month. |



- Grid

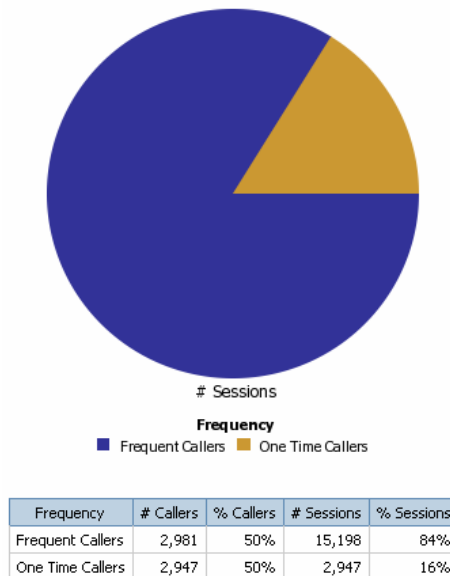
| Column | Description |
|-------------------------|--|
| Month | The month of the sessions. |
| # Sessions | The number of sessions for the month and the selected service. |
| # Known Caller | The number of known callers. A known caller is a caller whose ANI was transmitted. |
| Avg # Ses. Known Caller | Average number of sessions per known caller. |

- Prompts: The user is prompted to select a service and the reporting period.



Caller Loyalty

Report layout



Business description

The *Caller Loyalty* report provides information on how many of your callers call repeatedly and how many of them are one-time-callers. Use this report to see how caller loyalty changes through time.

Typically a desired behavior is turning as many of your callers from one-time to repeated callers. With help of this report you can also identify if the churn rate of your callers is increasing.

The pie chart shows the percentage of sessions by frequent and one time callers. The table additionally shows the number of callers and sessions, including the appropriate percentages split by frequent and one time callers.

Report details

- Graph

| Item | Description |
|------------|--|
| Frequency | A categorization into one time callers and frequent callers per month. |
| # Sessions | The number of sessions by one time callers and frequent callers. |



- Grid

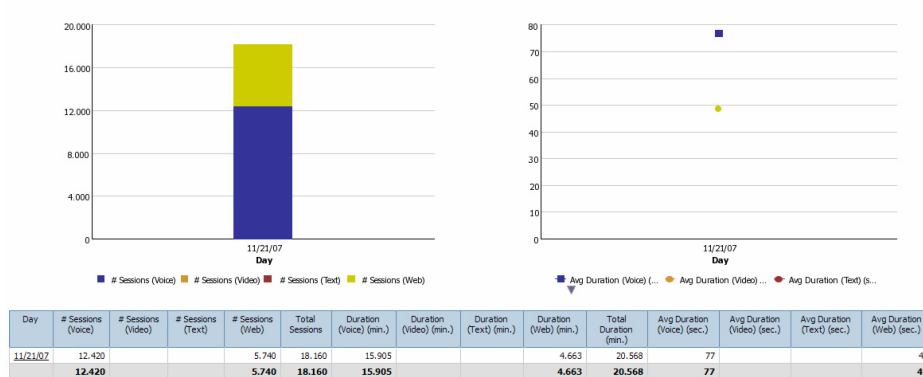
| Column | Description |
|---------------|--|
| Frequency | A categorization into one time callers and frequent callers per month. |
| # Callers | The number of known callers by frequency. |
| % Callers | The number of known callers as percentage to all callers. |
| # Sessions | The number of sessions by frequency. |
| % Sessions | The number of sessions as percentage to all sessions. |

- Prompts: The user is prompted to select a service and the reporting period.



Channel Trend Analysis

Report layout



Business description

Use the *Channel Trend Analysis* report to get detailed information on the service usage across channels over time. By changing the report from week to weekday or hour the report can be used to identify if users prefer channels at specific days or daytimes.

The left diagram shows the total session duration by day. The bar is split into the different channels through which the service is available. The right diagram shows the average session duration by day. Each line represents a channel. The table lists the number of sessions, the total duration and the average session duration for each channel by week.

Report details

- Left graph

| Item | Description |
|--|--|
| Day | The day of the sessions. |
| Avg Duration (Voice, Video, Text, Web) | The number of sessions by day, stacked by channel for the selected service and reporting period. |

- Right graph

| Item | Description |
|--------------------------------------|---|
| Day | The day of the sessions. |
| # Sessions (Voice, Video, Text, Web) | The average session duration in seconds by day and channel. |



- Grid

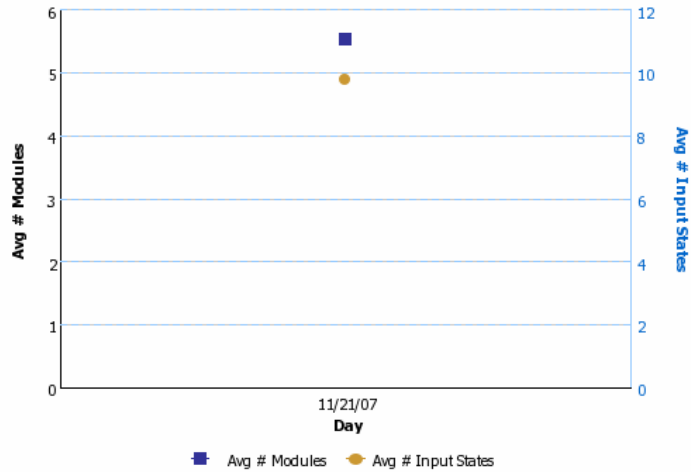
| Column | Description |
|----------------------|--|
| Day | The day of the sessions. |
| # Sessions (Voice) | The number of sessions by day and voice channel. |
| # Sessions (Video) | The number of sessions by day and video channel. |
| # Sessions (Text) | The number of sessions by day and text channel. |
| # Sessions (Web) | The number of sessions by day and Web channel. |
| Total Sessions | Total sessions by day for the selected service. |
| Duration (Voice) | Total duration in minutes by day and voice channel. |
| Duration (Video) | Total duration in minutes by day and video channel. |
| Duration (Text) | Total duration in minutes by day and text channel. |
| Duration (Web) | Total duration in minutes by day and Web channel. |
| Total Duration | Total duration in minutes by day for the selected service. |
| Avg Duration (Voice) | Average session duration by day and voice channel. |
| Avg Duration (Video) | Average session duration by day and video channel. |
| Avg Duration (Text) | Average session duration by day and text channel. |
| Avg Duration (Web) | Average session duration by day and Web channel. |

- Prompts: The user is prompted to select a service and the reporting period.



Dialog Depth

Report layout



| Day | # Sessions | # Distinct Modules | # Modules | Avg # Modules | # Distinct Input States | # Input States | Avg # Input States |
|----------|------------|--------------------|-----------|---------------|-------------------------|----------------|--------------------|
| 11/21/07 | 18,104 | 15 | 100,243 | 6 | 24 | 177,642 | 10 |

Business description

The *Dialog Depth* report helps you to assess how deeply callers are exploring your applications. The information contained helps you to find out if the content of your services makes your callers explore many different areas of your applications or if callers are able to complete their transactions by using a low number of input states.

The diagram shows the average number of modules and the average number of input states per session by day. The table in addition shows the total number of sessions, processed modules and input states along with the average number per session.

Report details

- Graph

| Item | Description |
|--------------------|--|
| Day | The day of the sessions. |
| Avg # Modules | The average number of processed modules during a session. |
| Avg # Input States | The average number of processed input states during a session. |



- Grid

| Column | Description |
|-------------------------|--|
| Day | The day of the sessions. |
| # Sessions | The number of sessions by day for the selected service and reporting period. |
| # Distinct Modules | The number of processed distinct modules. |
| # Modules | The number of processed modules. |
| Avg # Modules | The average number of processed modules per session. |
| # Distinct Input States | The number of processed distinct input states. |
| # input States | The number of processed input states. |
| Avg # Input States | The average number of processed input states per session. |

- Prompts: The user is prompted to select a service and the reporting period.



Dominant Path Analysis

Report layout

| Start Module | % | Module 2 | % | End Module | % Abs. | # Occurrences | # Sessions | |
|-----------------------|---------------|------------------------|-------------------------|-------------------------|------------------------|-----------------------------------|------------|-------|
| _Prime Telecom Portal | 43.9% | Main: Service Plan Mgr | 79.0% | Present Single Add-On | 34.7% | 6,294 | 6,294 | |
| | | | 12.7% | Present List of Add-Ons | 5.6% | 1,010 | 1,010 | |
| | | | 3.0% | Change Add-Ons | 1.3% | 236 | 236 | |
| | | | 2.4% | [End of Dialog] | 1.1% | 193 | 193 | |
| | | | 1.2% | Main: Service Plan Mgr | 0.5% | 98 | 98 | |
| | | | 1.0% | Main: Customer Data | 0.4% | 80 | 80 | |
| | | | 0.5% | Main: Support | 0.2% | 39 | 39 | |
| | | | 0.2% | Main: Billing | 0.1% | 17 | 17 | |
| | | | 0.0% | Change Payment Settings | 0.0% | 2 | 2 | |
| | | | 35.7% | Main: Customer Data | 99.8% | PIN Authentication (if necessary) | 35.7% | 6,470 |
| | | | | 0.2% | [End of Dialog] | 0.1% | 14 | 14 |
| | | 9.6% | Main: Support | 73.8% | [End of Dialog] | 7.1% | 1,283 | 1,283 |
| | | | | 10.6% | Main: Service Plan Mgr | 1.0% | 185 | 185 |
| | | | | 10.3% | Main: Customer Data | 1.0% | 179 | 179 |
| | | 3.0% | Main: Support | 0.3% | 53 | 53 | | |
| | | 2.0% | Main: Billing | 0.2% | 34 | 34 | | |
| | | 0.3% | Change Payment Settings | 0.0% | 5 | 5 | | |
| 7.5% | Main: Billing | 84.9% | [End of Dialog] | 6.4% | 1,156 | 1,156 | | |
| | | 6.2% | Main: Customer Data | 0.5% | 85 | 85 | | |
| | | 5.0% | Main: Service Plan Mgr | 0.4% | 68 | 68 | | |

Business description

Use the *Dominant Path Analysis* report to get detailed information on how users behave and how users navigate through the application. Analyzing dominant paths can help to identify inefficient experiences, barriers to completion and visits to invalid areas. It provides information on the dominant experiences of the majority of callers and helps to evaluate the usefulness of applications and modules.

The table provides information on how users behave and navigate through an application. It shows the dominant path starting from the left module and the percentage of transition from module to module. The number of occurrences and the number of sessions provide the absolute numbers for the complete path. The

The report is available in five versions, providing dominant path analysis for path depth of two to six modules.

Report details

- Grid

| Column | Description |
|-------------------|--|
| Start Module | The first module of module (sub) sequences. |
| % | The percentage of occurrences a caller navigated from module to module representing the complete module subsequence. |
| Module 2, 3, 4, 5 | Sequence of modules visited by the callers. |



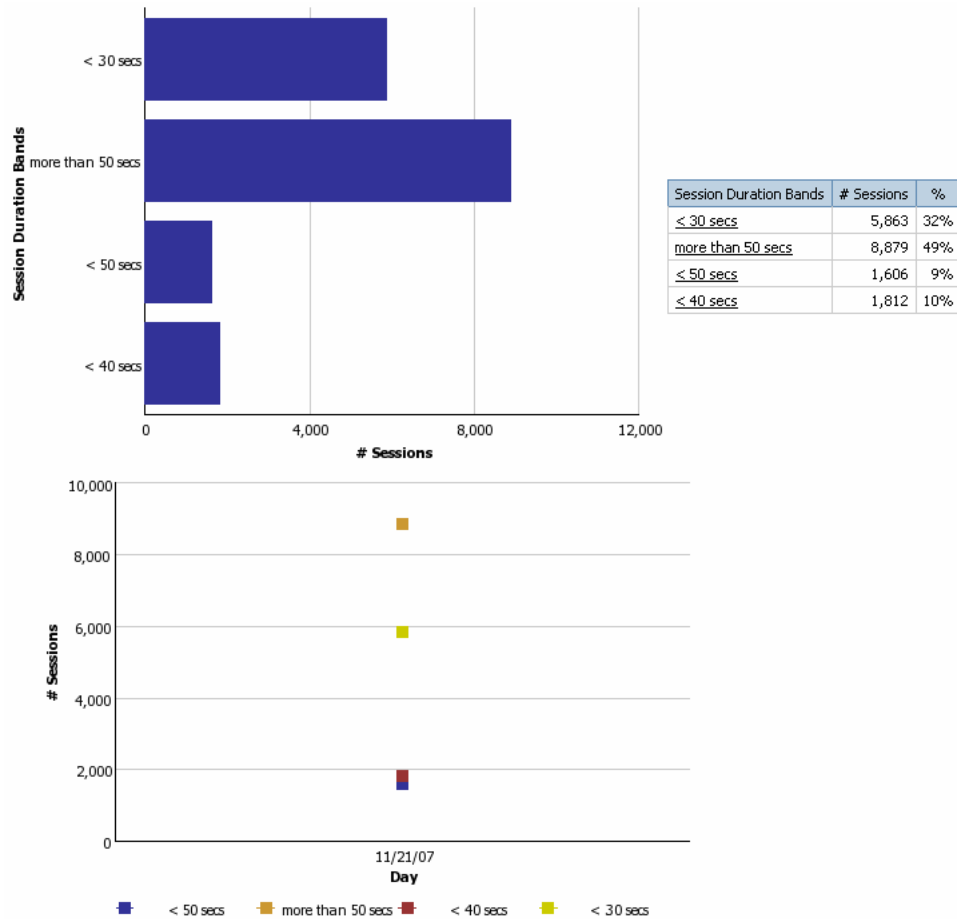
| Column | Description |
|---------------|---|
| End Module | The end module of the (sub) sequence. |
| # Abs | The occurrence of the complete path in relation to all occurrences. |
| # Occurrences | The number of occurrences of the subsequence. |
| # Sessions | The number of sessions that contained the subsequence. |

- Prompts: The user is prompted a start module and the reporting period.



Early Drop-Off Analysis

Report layout



Business description

The *Early Drop-Off Analysis* report provides information on how many callers hang up after a short amount of time.

The *Early Drop-Off Analysis* report shows all sessions grouped by their duration. Available groups are *shorter than 30 seconds*, *30-40 seconds*, *40-50 seconds* and *longer than 50 seconds*. The upper left diagram shows the total number of sessions grouped for the month selected by the user. The diagram below shows this numbers by day to identify trends in the application usage.

Report details

- Top graph

| Item | Description |
|------------------------|--------------------------|
| Session Duration Bands | Lengths of the sessions. |



| Item | Description |
|------------|--|
| # Sessions | The number of sessions by <i>Session Duration Bands</i> for the selected service and reporting period. |

- Grid

| Column | Description |
|------------------------|--|
| Session Duration Bands | Lengths of the sessions. |
| # Sessions | The number of sessions by <i>Session Duration Bands</i> for the selected service and reporting period. |
| % | The number of sessions as percentage to the total number of sessions. |

- Bottom graph

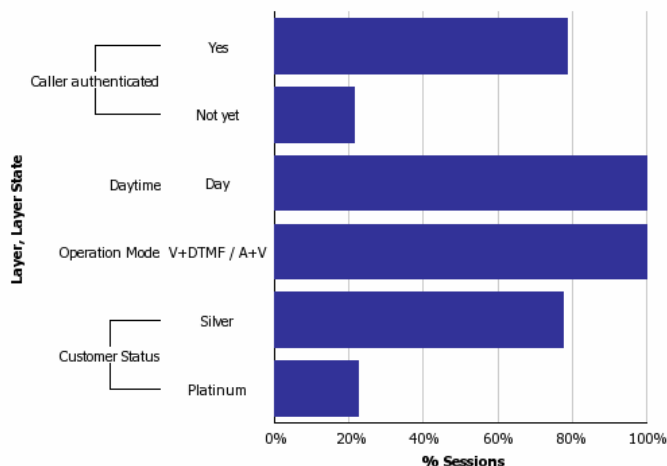
| Item | Description |
|------------------------|--|
| Day | The day of the sessions. |
| Session Duration Bands | Lengths of the sessions. |
| # Sessions | The number of sessions by <i>Session Duration Bands</i> for the selected service and reporting period. |

- Prompts: The user is prompted on service and the reporting period.



Layer Usage Overview

Report layout



| Layer | Layer State | # Sessions | % Sessions | Avg Duration (sec.) | Avg # Input States | % Successful Input States |
|-----------------------------|--------------|---------------|------------|---------------------|--------------------|---------------------------|
| Caller authenticated | Yes | 9,177 | 78.62% | 95 | 13 | 80.51% |
| | Not yet | 2,495 | 21.38% | 70 | 11 | 70.89% |
| Caller authenticated | | 11,672 | | 83 | 12 | 78.76% |
| Customer Status | Silver | 14,064 | 77.56% | 73 | 10 | 76.98% |
| | Platinum | 4,070 | 22.44% | 52 | 8 | 74.08% |
| Customer Status | | 18,134 | | 62 | 9 | 76.46% |
| Daytime | Day | 12,394 | 100.00% | 77 | 10 | 72.00% |
| Daytime | | 12,394 | | 77 | 10 | 72.00% |
| Operation Mode | V+DTMF / A+V | 12,394 | 100.00% | 77 | 10 | 72.00% |
| Operation Mode | | 12,394 | | 77 | 10 | 72.00% |
| Summary | | 54,594 | | 74 | 10 | 75.05% |

Business description

The *Layer Usage Overview* report provides information on the call personalization. It helps to identify frequent user selections or to identify typical user profiles. The report helps you to optimize the call personalization and supports planning future application updates or marketing activities.

The diagram shows the percentage of sessions by the active layer state at the end of the call. The table additionally provides the total number of sessions, the average duration and the average number of input states, and the percentage of successful input states within those sessions.

Report details

- Graph

| Item | Description |
|-------------|---|
| Layer | The Layer objects used within the selected service. |
| Layer State | The layer's layer states. |



| Item | Description |
|-------------|--|
| % Sessions | The number of sessions that finished with the layer state as percentage to the total number of sessions per layer. |

- Grid

| Column | Description |
|---------------------|--|
| Layer | The Layer objects used within the selected service. |
| Layer State | The layer's layer states. |
| # Sessions | The number of sessions that finished with the layer state. |
| % Sessions | The number of sessions that finished with the layer state as percentage to the total number of sessions per layer. |
| Avg Duration (sec.) | The average session duration in seconds for sessions that ended with this layer state. |
| Avg # Input States | The average number of input states for sessions that ended with this layer state. |
| % Successful Inputs | The percentage of successful input states for sessions that ended with this layer state. |

- Prompts: The user is prompted on service and the reporting period.



Module Sequences

Report layout

| Module Sequence | # Sessions | % Sessions | Avg Duration (sec.) | Avg # Input States |
|--|------------|------------|---------------------|--------------------|
| _Prime Telecom Portal,Main: Support | 1,283 | 7.07% | 14 | 2.34 |
| _Prime Telecom Portal,Main: Billing | 1,156 | 6.37% | 14 | 2.33 |
| _Prime Telecom Portal,Main: Customer Data,PIN Authentication (if necessary),Change Payment Settings,Enter new Credit Card | 876 | 4.83% | 82 | 9.68 |
| _Prime Telecom Portal,Main: Customer Data,PIN Authentication (if necessary),Change Payment Settings | 873 | 4.81% | 37 | 5.29 |
| _Prime Telecom Portal,Main: Customer Data,PIN Authentication (if necessary),Change Payment Settings,Update Credit Card Expiration Date | 863 | 4.76% | 53 | 7.33 |
| _Prime Telecom Portal,Main: Customer Data,PIN Authentication (if necessary),Change Postal Address | 776 | 4.28% | 41 | 5.81 |
| _Prime Telecom Portal,Main: Service Plan Mgr,Present Single Add-On,Change Add-Ons | 692 | 3.81% | 27 | 5.30 |
| _Prime Telecom Portal,Main: Customer Data,PIN Authentication (if necessary),Change Email Address | 626 | 3.45% | 46 | 5.88 |
| _Prime Telecom Portal,Main: Service Plan Mgr,Present Single Add-On,Present List of Add-Ons | 588 | 3.24% | 44 | 8.36 |
| _Prime Telecom Portal,Main: Service Plan Mgr,Present Single Add-On | 483 | 2.66% | 24 | 4.79 |
| _Prime Telecom Portal,Main: Customer Data,PIN Authentication (if necessary) | 395 | 2.18% | 20 | 2.45 |
| _Prime Telecom Portal | 302 | 1.66% | 12 | 1.16 |

Business description

The *Module Sequences* report helps you to identify your callers' most popular paths through your applications. You can use the information provided to check if newly added content is accepted by the callers. You can also use the data provided to develop new content or to restructure your application.

The table shows the absolute number of sessions, the percentage number of sessions, the average session duration, and the average number of input states for each module sequence.

Report details

- Grid

| Column | Description |
|---------------------|--|
| Module Sequence | The distinct module sequences callers followed during their sessions. |
| # Sessions | The number of sessions that followed exactly this module sequence. |
| % Sessions | The number of sessions that followed exactly this module sequence as percentage to the total number of sessions. |
| Avg Duration (sec.) | The average session duration for sessions that followed the module sequence. |
| Avg # Input States | The average number of input states for sessions that followed the module sequence. |



- Prompts: The user is prompted on service and the reporting period.



Module Sets

Report layout

| Module Set | # Sessions | % Sessions | Avg Duration (sec.) | Avg # Input States | # Module Sequences |
|--|------------|------------|---------------------|--------------------|--------------------|
| _Prime Telecom Portal,Main: Support | 1,321 | 7.28% | 14 | 2.38 | 3 |
| Main: Billing,_Prime Telecom Portal | 1,171 | 6.45% | 14 | 2.35 | 2 |
| Change Payment Settings,Enter new Credit Card,Main: Customer Data,_Prime Telecom Portal,PIN Authentication (if necessary) | 996 | 5.49% | 86 | 10.10 | 20 |
| Change Payment Settings,Update Credit Card Expiration Date,Main: Customer Data,_Prime Telecom Portal,PIN Authentication (if necessary) | 962 | 5.30% | 56 | 7.64 | 15 |
| Change Payment Settings,Main: Customer Data,_Prime Telecom Portal,PIN Authentication (if necessary) | 915 | 5.04% | 38 | 5.39 | 9 |
| Change Postal Address,Main: Customer Data,_Prime Telecom Portal,PIN Authentication (if necessary) | 799 | 4.40% | 43 | 5.93 | 4 |
| _Prime Telecom Portal,Change Add-Ons,Present Single Add-On,Main: Service Plan Mgr | 759 | 4.18% | 28 | 5.60 | 6 |
| _Prime Telecom Portal,Present List of Add-Ons,Present Single Add-On,Main: Service Plan Mgr | 718 | 3.96% | 48 | 9.21 | 10 |
| Change Email Address,Main: Customer Data,_Prime Telecom Portal,PIN Authentication (if necessary) | 651 | 3.59% | 47 | 6.01 | 6 |
| _Prime Telecom Portal,Present Single Add-On,Main: Service Plan Mgr | 505 | 2.78% | 25 | 4.99 | 3 |
| _Prime Telecom Portal,PIN Authentication (if necessary),Present List of Add-Ons,Order Add-On,Present Single Add-On,Main: Service Plan Mgr | 412 | 2.27% | 79 | 13.32 | 37 |
| Main: Customer Data,_Prime Telecom Portal,PIN Authentication (if necessary) | 399 | 2.20% | 20 | 2.48 | 3 |
| _Prime Telecom Portal | 302 | 1.66% | 12 | 1.16 | 1 |
| _Prime Telecom Portal,Present List of Add-Ons,Main: Service Plan Mgr | 277 | 1.53% | 46 | 8.45 | 8 |
| _Prime Telecom Portal,Change Add-Ons,Main: Service Plan Mgr | 226 | 1.25% | 19 | 4.53 | 5 |
| Change Payment Settings,Enter new Credit Card,Main: Customer Data,_Prime Telecom Portal,PIN Authentication (if necessary),Present List of Add-Ons,Order Add-On,Present Single Add-On,Main: Service Plan Mgr | 220 | 1.21% | 212 | 26.88 | 63 |
| Change Payment Settings,Update Credit Card Expiration Date,Main: Customer Data,_Prime Telecom Portal,PIN Authentication (if necessary),Present List of Add-Ons,Order Add-On,Present Single Add-On,Main: Service Plan Mgr | 219 | 1.21% | 170 | 23.10 | 59 |

Business description

The *Module Sets* report helps you to find out which modules were accessed by callers during one session. With this information you can tune and align the content of your modules.

The table shows the absolute number of sessions, the percentage number of sessions, the average session duration, the average number of input states, and the number of corresponding module sequences for each module set.

Report details

- Grid

| Column | Description |
|------------|--|
| Module Set | The distinct module sets callers visited during their sessions. |
| # Sessions | The number of sessions that exactly visited these modules. |
| % Sessions | The number of sessions that visited these modules as percentage to the total number of sessions. |



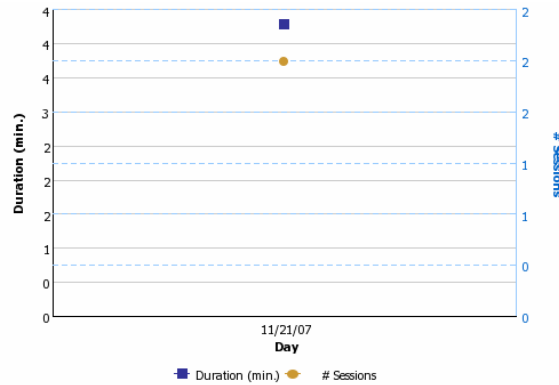
| Column | Description |
|---------------------|---|
| Avg Duration (sec.) | The average session duration for sessions that visited these modules. |
| Avg # Input States | The average number of input states for sessions that visited these modules. |
| # Module Sequences | The number of distinct module sequences that are based on the module set. |

- Prompts: The user is prompted on service and the reporting period.



Session Details

Report layout



| Day | Server | Service | Duration (sec.) | Language | Exit Type | Media Platform ID | Session |
|----------|----------|---------------|-----------------|-------------------------|-----------|-------------------|--|
| 11/21/07 | VOServer | Prime Telecom | 71 | English (United States) | Hangup | 0 | OVAP1fa31755f7659f5c873a0e070000011662ceb7d5 |
| 11/21/07 | VOServer | Prime Telecom | 186 | English (United States) | Hangup | 0 | OVAP1fa31755f7659f5c873a2d140000011662cec263 |

Business description

Use the *Session Details* report to see most detailed information on one specific caller. In combination with the *Top 20 Callers* report this report can be used to find out more about the behavior of your top callers.

The diagram shows the number of sessions and the session duration per day for the ANI selected by the user. The table additionally lists all sessions for this ANI along with its session length, the called service, the language of the dialog, the caller's exit type, the session ID from the media platform, and the session ID of VoiceObjects Server.

Report details

- Graph

| Column | Description |
|-----------------|--|
| Day | The day of the sessions. |
| # Sessions | The number of sessions by day for the selected ANI and reporting period. |
| Duration (min.) | The total session duration in minutes by day for the selected ANI and reporting period |



- Grid

| Column | Description |
|-------------------|--|
| Day | The day of the sessions. |
| Server | The server the session was processed by. |
| Service | The service of the session. |
| Duration (sec.) | The duration of the session. |
| Language | The language of the session. |
| Exit Type | The exit type of the session. |
| Media Platform ID | The media platform ID of the session. |
| Session | The internal session ID of the session. |

- Prompts: The user is prompted on the caller's ANI.

**Subsequence Analysis (Start – End) / (Start) / (End)****Report layout**

| Start Module | Intermediate Modules | End Module | # Intern. Modules | # Sessions | % Ses. | # Occurrences | % Occ. |
|-----------------------|--|-------------------------|-------------------|------------|--------|---------------|--------|
| _Prime Telecom Portal | Main: Customer Data,PIN Authentication (if necessary) | Change Payment Settings | 2 | 3,828 | 68.48% | 3,828 | 70.45% |
| _Prime Telecom Portal | Main: Service Plan Mgr,Present Single Add-On,Present List of Add-Ons,Main: Customer Data,PIN Authentication (if necessary) | Change Payment Settings | 5 | 322 | 5.76% | 322 | 5.93% |
| _Prime Telecom Portal | | Change Payment Settings | 0 | 293 | 5.24% | 293 | 5.39% |
| _Prime Telecom Portal | Main: Service Plan Mgr,Present Single Add-On,Main: Customer Data,PIN Authentication (if necessary) | Change Payment Settings | 4 | 247 | 4.42% | 247 | 4.55% |
| _Prime Telecom Portal | Main: Customer Data,PIN Authentication (if necessary),Change Payment Settings,Enter new Credit Card,Main: Customer Data | Change Payment Settings | 5 | 131 | 2.34% | 131 | 2.41% |
| _Prime Telecom Portal | Main: Support,Main: Customer Data,PIN Authentication (if necessary) | Change Payment Settings | 3 | 100 | 1.79% | 100 | 1.84% |
| _Prime Telecom Portal | Main: Service Plan Mgr,Present List of Add-Ons,Order Add-On,PIN Authentication (if necessary),Main: Customer Data | Change Payment Settings | 5 | 94 | 1.68% | 94 | 1.73% |
| _Prime Telecom Portal | Main: Customer Data,PIN Authentication (if necessary),Change Payment Settings,Update Credit Card Expiration Date,Main: Customer Data | Change Payment Settings | 5 | 81 | 1.45% | 81 | 1.49% |
| _Prime Telecom Portal | Main: Customer Data,PIN Authentication (if necessary),Change Payment Settings,Main: Customer Data | Change Payment Settings | 4 | 77 | 1.38% | 77 | 1.42% |
| _Prime Telecom Portal | Main: Service Plan Mgr,Present List of Add-Ons,Main: Customer Data,PIN Authentication (if necessary) | Change Payment Settings | 4 | 74 | 1.32% | 74 | 1.36% |
| _Prime Telecom Portal | Main: Customer Data,PIN Authentication (if necessary),Change Email Address,Main: Customer Data | Change Payment Settings | 4 | 73 | 1.31% | 73 | 1.34% |
| _Prime Telecom Portal | Main: Customer Data,PIN Authentication (if necessary),Change Postal Address,Main: Customer Data | Change Payment Settings | 4 | 58 | 1.04% | 58 | 1.07% |
| _Prime Telecom Portal | Main: Service Plan Mgr,Main: Customer Data,PIN Authentication (if necessary) | Change Payment Settings | 3 | 56 | 1.00% | 56 | 1.03% |

Business description

Use the *Subsequence Analysis* reports to analyze dialog paths. The reports provide detailed information on how callers navigate through the application and gain insight into the caller behavior. The reports can be used to identify design flaws, frequently used module combinations or the success rate of tasks designed as a sequence of modules.

The table lists the most frequently used sequences of modules. It provides the number of intermediate modules, the number of sessions that followed this subsequence, and the according percentage.

The report is available with three different filter options. The *Subsequence Analysis (Start-End)* prompts for a start and an end module. It allows analyzing the dialog paths between two defined modules.

The *Subsequence Analysis (Start)* prompts for a start module and the maximum number of intermediate modules. It allows analyzing how callers left a module and what have been the next steps.

The *Subsequence Analysis (End)* prompts for the end module and the maximum number of intermediate modules. It allows analyzing how callers navigate through the application before entering the end module.

Report details

- Grid

| Column | Description |
|----------------------|---|
| Start Module | The start module of the module subsequence. |
| Intermediate Modules | The modules visited between start and end module. |



| Column | Description |
|-------------------|--|
| End Module | The last module of the module subsequence. |
| # Interm. Modules | The number of intermediate modules. |
| # Sessions | The number of sessions visiting exactly this subsequence of modules. |
| % Sessions | The number of sessions visiting this subsequence as percentage to the number of all sessions in the report result. |
| # Occurrences | The number of occurrences for exactly this subsequence. (A caller may follow the same subsequence multiple times during a single session.) |
| % Occurrences | The number of occurrences as percentage to the total number of occurrences in the report result. |

- Prompts: The user is prompted on service and the reporting period.

**Top 20 Callers****Report layout**

| Rank | ANI | # Sessions | First Session | Last Session | Min Duration (sec.) | Max Duration (sec.) | Avg Duration (sec.) |
|------|------------------------------|------------|---------------|--------------|---------------------|---------------------|---------------------|
| 1 | 491607460432 | 12 | 11/21/07 | 11/21/07 | 14 | 16 | 15 |
| 1 | 49221270063 | 12 | 11/21/07 | 11/21/07 | 34 | 138 | 110 |
| 3 | 49221289665 | 11 | 11/21/07 | 11/21/07 | 17 | 50 | 46 |
| 3 | 49221293719 | 11 | 11/21/07 | 11/21/07 | 11 | 12 | 11 |
| 3 | 49221482497 | 11 | 11/21/07 | 11/21/07 | 69 | 254 | 235 |
| 3 | 49221764312 | 11 | 11/21/07 | 11/21/07 | 32 | 43 | 41 |
| 7 | 491607190629 | 10 | 11/21/07 | 11/21/07 | 33 | 231 | 191 |
| 7 | 492212257094 | 10 | 11/21/07 | 11/21/07 | 31 | 62 | 34 |
| 7 | 49221300374 | 10 | 11/21/07 | 11/21/07 | 58 | 193 | 179 |
| 7 | 492213379435 | 10 | 11/21/07 | 11/21/07 | 31 | 201 | 133 |
| 7 | 492214737737 | 10 | 11/21/07 | 11/21/07 | 26 | 124 | 104 |
| 7 | 492216900183 | 10 | 11/21/07 | 11/21/07 | 23 | 34 | 25 |
| 7 | 492216963081 | 10 | 11/21/07 | 11/21/07 | 11 | 26 | 21 |
| 7 | 492219694948 | 10 | 11/21/07 | 11/21/07 | 33 | 104 | 61 |
| 15 | 49160236118 | 9 | 11/21/07 | 11/21/07 | 45 | 346 | 169 |
| 15 | 49160583213 | 9 | 11/21/07 | 11/21/07 | 4 | 5 | 5 |
| 15 | 49170794317 | 9 | 11/21/07 | 11/21/07 | 7 | 10 | 9 |
| 15 | 491708230365 | 9 | 11/21/07 | 11/21/07 | 4 | 5 | 5 |
| 15 | 492210215152 | 9 | 11/21/07 | 11/21/07 | 3 | 8 | 5 |
| 15 | 492211116316 | 9 | 11/21/07 | 11/21/07 | 17 | 137 | 122 |

Business description

Use this report to identify the 20 most active callers and to find out the highest number of sessions.

The table shows the top 20 callers ranked by the number of sessions for the month selected by the user. In addition to the number of sessions the table shows the date of the first session from this caller as well as the date of the last session, and the minimum, average and maximum session duration. This report will only show sessions from known callers.

Callers with the same number of sessions will have the same rank.

Report details

- Grid

| Column | Description |
|---------------|---|
| Rank | Ranking of Top 20 callers. |
| ANI | The callers' ANIs. |
| # Sessions | The number of sessions by caller for the selected service and reporting period. |
| First Session | Date of the first session within the reporting period. |



| Column | Description |
|---------------------|---|
| Last Session | Date of the last session within the reporting period. |
| Min Duration (sec.) | Minimal session duration in seconds of the caller's sessions. |
| Max Duration (sec.) | Maximum session duration in seconds of the caller's sessions. |
| Avg Duration (sec.) | Average session duration in seconds of the caller's sessions. |

- Prompts: The user is prompted on service and the reporting period.



A - The Logical Data Model

This appendix provides a comprehensive description of the data that are stored by Infostore. For information on what data are stored in which tables, refer to Chapter 3 – *The Physical Data Model* in the *Infostore Guide*.

Dimensional Attributes and Facts

The following figures show the logical data model of the Infostore Repository.

The logical data model represents all attributes that can be built on top of the physical table structure. Because these attributes are logically grouped into dimensions according to their business contexts, they are called dimensional attributes. Where deemed appropriate, hierarchical relationships are represented graphically.

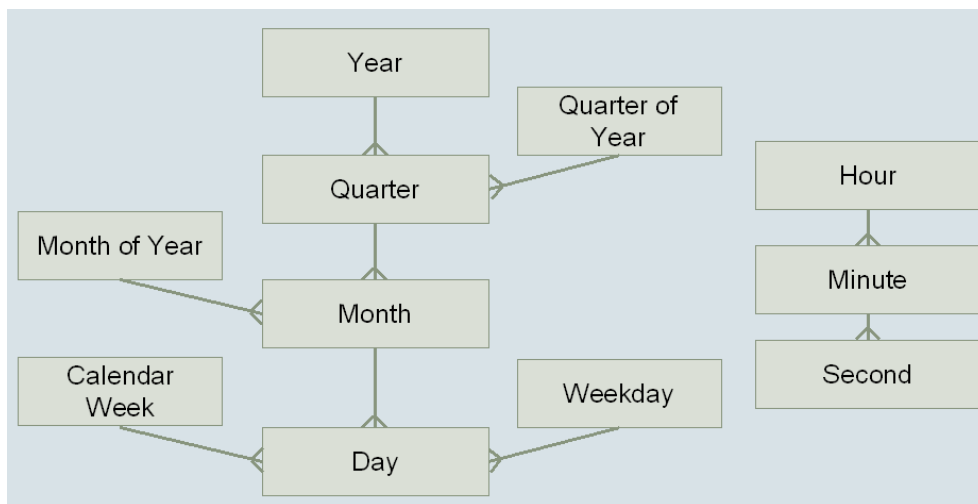
Additionally, a list of the dimensional attributes along with their business descriptions is provided. This reference gives an overview on the different perspectives that can be used for analytic purposes.

Date and Time dimension

The *Date and Time* dimension provides all dimensional attributes that are related to the start time of the dialog (calling time). With help of these dimensional attributes the user can group the data by day, month, year, etc.

This dimension is fully localizable, with date formats, descriptions, etc. provided in various language formats.

For a complete list of all dimensional attributes contained in this hierarchy refer to the following figure:



Modules and Input States dimension

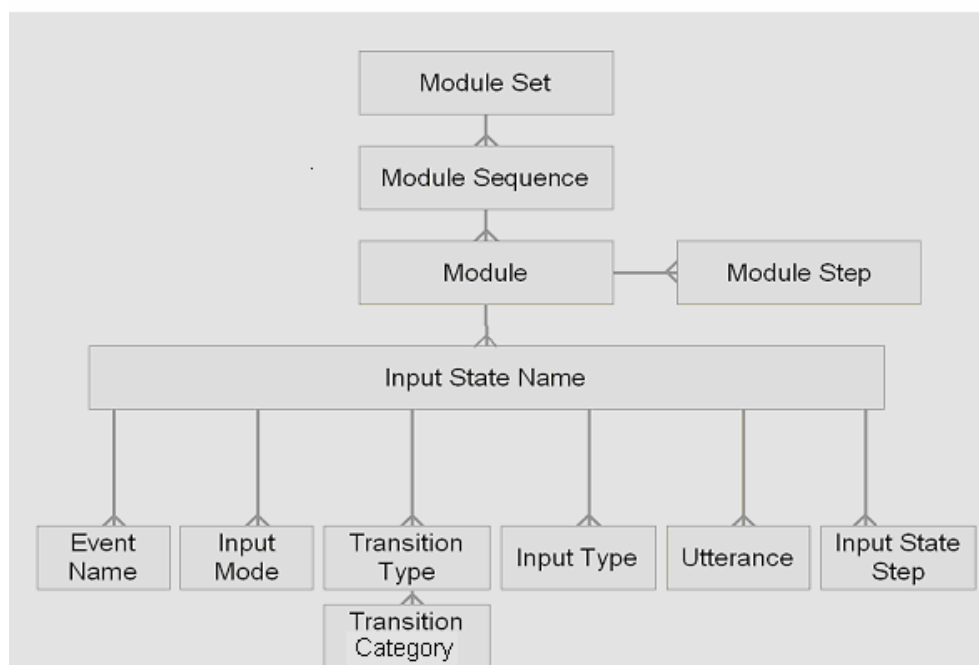
The *Modules and Input States* dimension contains all dimensional attributes regarding module and input state analysis.



| Dimensional Attribute Name | Dimensional Attribute Description |
|----------------------------|---|
| Module | The name of the Module object. |
| Module Step | Consecutive numbering that identifies the order in which the modules were processed. |
| Module Sequence | The sequence of modules that were processed in one session. |
| Module Set | The set of distinct modules, ordered alphabetically, that were processed during one session. |
| Input State Name | The name of the object that led to an input state. |
| Input Mode | The way in which caller input was retrieved. Can be either voice or DTMF. |
| Input State Step | Consecutive numbering that identifies the order in which the input states presented themselves to the caller. |
| Utterance | The input of the caller as matched to the grammar by the recognition engine. If the option Mask Caller Input is selected, the utterance is stored in an encrypted format. |
| Slot | The name of the slot and the assigned value. <slotname>=<slotvalue>. In case of a multi-slot recognition the slots are divided by semicolon. If the option Mask Caller Input is selected, the slot value is stored in an encrypted format. |
| Event Name | The name of the event that led to a transition. Possible event names are: <i>filled, nav.back, disconnect.hangup</i> , etc. |
| Transition Type | The type of the transition. Possible values are: -1 = Undefined (transition type could not be determined) 1 = Recognition (recognition event occurred) 2 = Hyperlink (hyperlink was activated) 3 = Standard Navigation (standard navigation was used) 4 = Hang Up (caller hung up) 5 = Auto Advance (auto advance on a No Match/No Input event was activated) 6 = Error (error occurred) 7 = Event (an event e.g. No Match led to a transition) 8 = List Navigation (a list navigation command was uttered) 9 = Disconnect (session was ended) 10 = Transfer (caller was transferred) 11 = Maximum Processing Time (a timeout occurred) 12 = Grammar Control (Grammar control was activated) |
| Transition Category | The category of the transition type. Possible values are: 1 = Successful 2 = Not Successful |



| Dimensional Attribute Name | Dimensional Attribute Description |
|----------------------------|---|
| Input Type | The type of the object that generated this input state. -1 = Undefined 1 = Input 2 = List 3 = Confirmation 4 = Menu 5 = Transfer 6 = Pause 7 = Hyperlink 8 = Exit 9 = Plug-In |



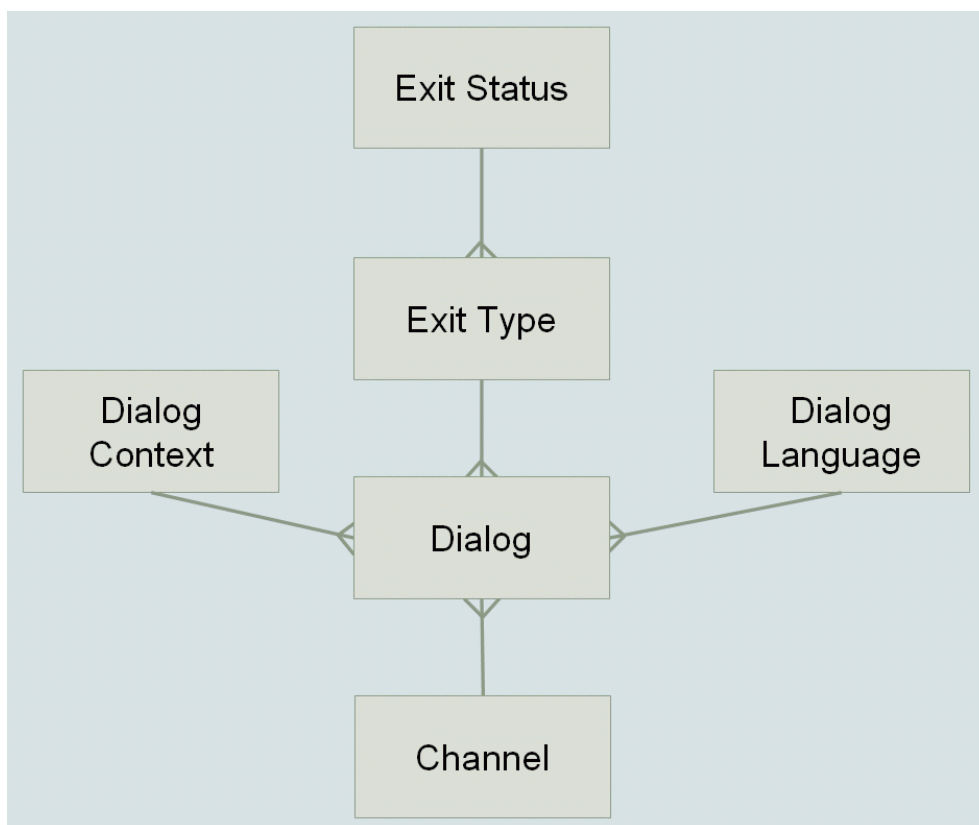
Dialog dimension

The *Dialog* dimension provides the possibility to analyze data through information that is directly associated with the dialog itself.

| Dimensional Attribute Name | Dimensional Attribute Description |
|----------------------------|--|
| Dialog | Uniquely identifies one session. |
| Exit Type | Represents the cause for the caller exit. Currently supports the following values: 0 = Unknown (exit type could not be determined) 1 = Timeout (session timed out) |



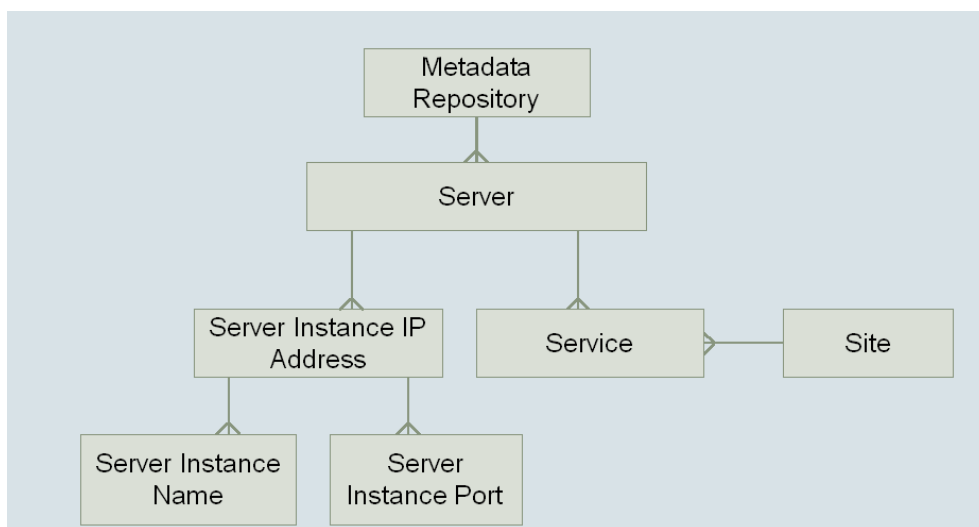
| Dimensional Attribute Name | Dimensional Attribute Description |
|----------------------------|--|
| | 2 = Exception (exception occurred on VoiceObjects Server) 4 = End of Dialog (dialog end was reached without executing the Exit object) 8 = Exit Object (session was ended by the Exit object) 16 = Hang up (caller hung up) 32 = Transfer (caller was transferred to another party) 64 = Redirect (session was redirected to another instance) 128 = Service Chaining (session was transferred to another service) |
| Exit Status | Represents the caller exit status: 0 = Unknown (exit status could not be determined) 1 = Aborted (corresponds to exit types 1 and 2) 2 = Finished (corresponds to exit types 4 through 32) |
| Dialog Context | Represents additional information about the dialog that can be logged through the dialog context. |
| Dialog Language | The language of the dialog, i.e. the last value the language system layer was set to during the dialog. |
| Channel | Represents the channel used in the session: -1 = Unknown 1 = Voice 2 = Video 3 = Text 4 = Web |



Configuration dimension

The *Configuration* dimension contains all dimensional attributes regarding the physical architecture configuration. This includes the names of the servers as well as the cluster configuration, the configured services and the location of the Metadata Repository.

| Name | Description |
|----------------------------|--|
| Service | The service that the caller connected to. |
| Server | The reference ID of the server that handled the session. |
| Server Instance IP Address | The IP address of the server instance that handled the session. |
| Server Instance Name | The name of the server instance that handled the session. |
| Server Instance Port | The port of the server instance that handled the session. |
| Site | The name of the site that the service belongs to. |
| Metadata Repository | Unique description of the Metadata Repository used for this application. |



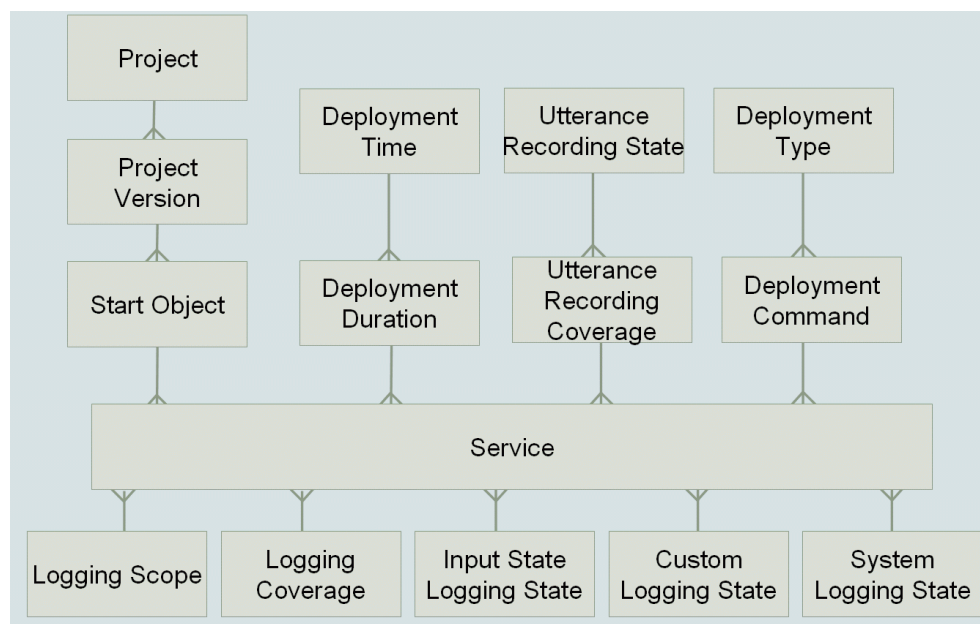
Service dimension

The *Service* dimension contains all dimensional attributes regarding service and deployment history. This includes the service properties like system and custom DB configuration as well as deployment specific information as for instance the name of the deployed start object or the duration of the deployment.

| Name | Description |
|---------------------|---|
| Service | The service that the caller connected to. |
| Deployment Duration | The time period that this service state was deployed. |
| Deployment Time | The day and time when this service state was deployed. |
| Deployment Type | Represents the deployment type: -1 = Unknown 0 = Deployed from Metadata (application definition is stored in metadata) 1 = Deployed from File (application definition is stored in an XDK file) 2 = Deployed from String (application definition is not stored) |
| Deployment Command | Represents the deployment command: -1 = Unknown 0 = Deploy 1 = Restore |
| Start Object | The start object as specified in the Service definition. |
| Project | The source project of the start object. |
| Project Version | The source project version of the start object. |



| Name | Description |
|------------------------------|---|
| System Logging State | Represents the state of System DB logging. |
| Custom Logging State | Represents the state of Custom DB logging. |
| Input State Logging State | Represents the state of Input State logging. |
| Logging Coverage | The logging coverage filter as specified in the Service definition. |
| Logging Scope | Represents the logging scope as specified in the Service definition: -1 = Unknown 0 = System DB 1 = System DB and Custom DB 2 = Input State |
| Utterance Recording State | Represents the state of utterance recording. |
| Utterance Recording Coverage | The utterance recording filter as specified in the Service definition. |

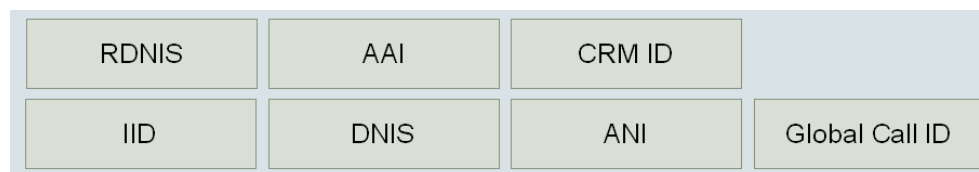


Session dimension

The *Session* dimension contains all dimensional attributes that provide additional information about the caller session. Availability of this data depends on the media platform.



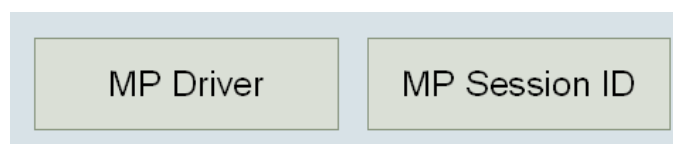
| Name | Description |
|----------------|--|
| ANI | The telephone number of the caller, if transmitted. If the ANI was not transmitted by the media platform, 0 will be written into the database. |
| DNIS | The telephone number that was dialed by the caller. |
| RDNIS | The number from which a session diversion or transfer was invoked. |
| AAI | Information about the current dialog that can be transmitted to another application or agent. |
| IID | Additional information about the caller's location and the type of line. |
| CRM ID | A unique identification of the caller. Can be used to connect to CRM or legacy data warehouses. |
| Global Call ID | An overall session ID from Call Control or CTI systems. |



Media Platform dimension

All dimensional attributes that provide detailed information about the underlying media platform are grouped in the *Media Platform* dimension.

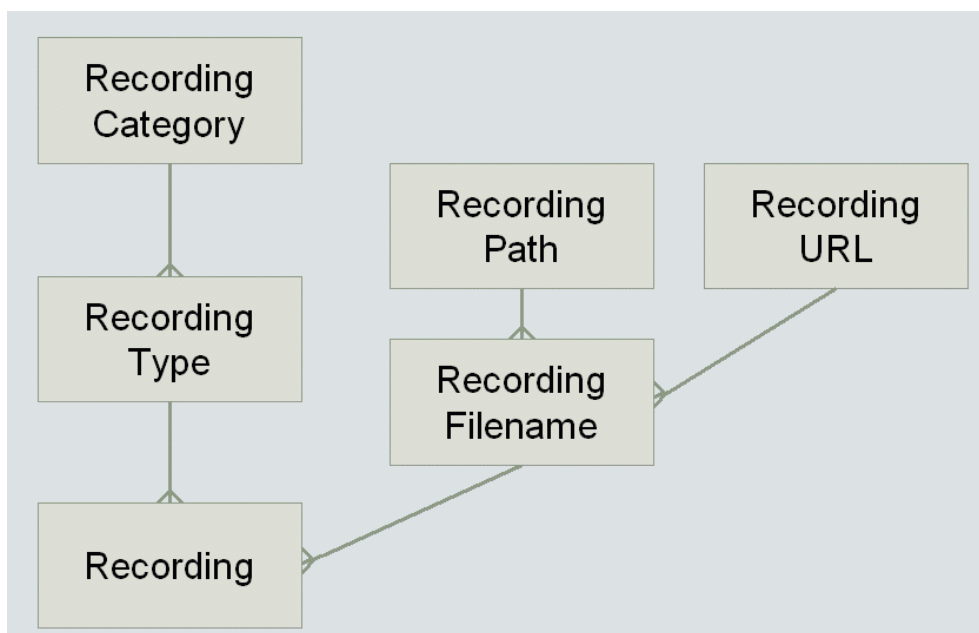
| Name | Description |
|---------------------------|---|
| Media Platform Driver | The media platform driver that was used for this session. |
| Media Platform Session ID | Session ID of the media platform, if transmitted. |



**Recording dimension**

The *Recording* dimension contains the dimensional attributes that provide information about stored recordings.

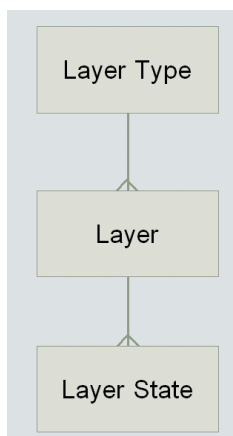
| Name | Description |
|--------------------|---|
| Recording Filename | The filename of the recording. |
| Recording Path | The physical path to the recording root directory. |
| Recording URL | The URL pointing to the recording root directory. |
| Recording Type | Specifies the type of the recording: -1 Unknown 0 = Recognition 1 = Hyperlink 2 = NoMatch 1 3 = NoMatch 2 4 = NoMatch 3 5 = NoMatch 4+ 6 = Fallback Recording 7 = Audio Recording 8 = Video Recording 9 = Call Recording |
| Recording Category | Specifies the recording category: -1 = Unknown 0 = Utterance Recording 1 = Fallback Recording 2 = Recording Object 3 = Call Recording |
| Recording | A consecutive number for each recording per session. |



Layer dimension

The *Layer* dimension contains the dimensional attributes that provide information about stored layers.

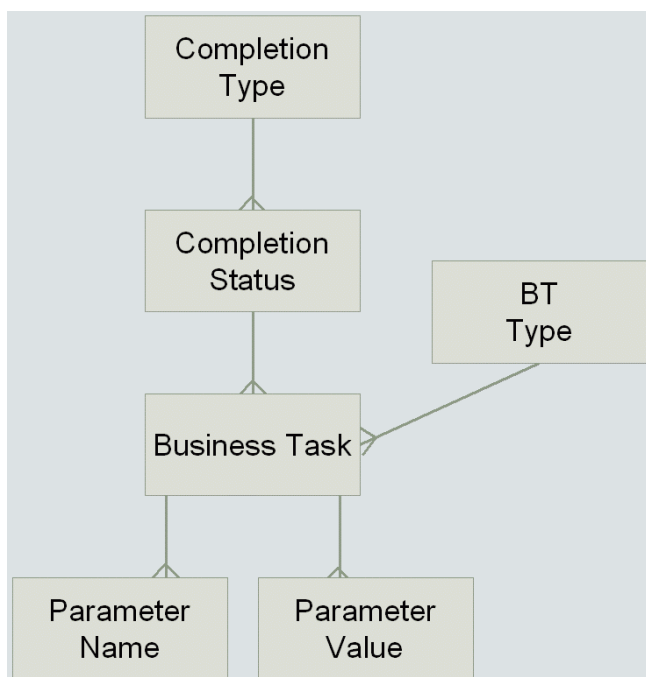
| Name | Description |
|-------------|---|
| Layer | The name of the layer that was used during the session. |
| Layer State | The selected state of the layer. |
| Layer Type | The type of the layer: -1 = Unknown 1 = Automatic 2 = Manual |



**Business Task dimension**

The *Business Task* dimension contains the dimensional attributes that provide information about stored business tasks.

| Name | Description |
|---------------------------------|--|
| Business Task | The name of the business task. |
| Business Task Type | Specifies the type of the business task: -1 = Unknown 0 = Authentication 1 = Routing 2 = Information 3 = Notification 4 = Transaction 5 = Other |
| Business Task Completion Type | Specifies the completion type of the business task: -1 = Unknown 0 = Complete 1 = Incomplete |
| Business Task Completion Status | Specifies the completion status of the business task: -1 = Unknown 0 = Complete 1 = Back-end error 2 = Business logic 3 = Caller abort 4 = Recognition failure 5 = Task restart 6 = Session termination 7 = Technical error |
| Business Task Parameter Name | The name of the business task parameter. |
| Business Task Parameter Value | The value of the business task parameter. |



Facts

In combination with the dimensions of the logical data model there are key facts that can be used with aggregation functions (Sum, Avg, Min, Max, etc.) to gather statistics about the dialog or the entire phone application server platform.

| Fact name | Fact description |
|------------------------------|--|
| Dialog Duration | The duration of the dialog from picking up to hanging up in milliseconds. |
| Processing Duration | Dialog duration plus duration of the dialog end processing in milliseconds. |
| Internal Processing Duration | The time the server needed to process the current input state. |
| External Processing Duration | The duration between sending out the markup code and receiving the submit from the media platform. |
| Confidence | The probability that the recognition result was correct. A number between 0 and 1. |
| Number of No Matches | The number of No Matches that occurred. |
| Number of No Inputs | The number of No Inputs that occurred. |
| Number of Helps | The number of times that the caller called for help. |



| Fact name | Fact description |
|-----------------------------|--|
| Number of Repeats | The number of times the caller uttered the repeat command. |
| Number of Errors | The number of errors. |
| Number of Pauses | The number of times that the dialog was paused. |
| Number of Bridged Transfers | The number of bridged transfers conducted in this session. |

Additional measures can also be created by using the count aggregate function in conjunction with a dimensional attribute (e.g. Dialog, Caller ANI).