





## Infostore Guide

VoiceObjects 9.0

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## About the Infostore Guide

This *Infostore Guide* contains a detailed feature description of Infostore – the logging component of VoiceObjects Server. It includes an overview of the functionality provided, a detailed description of the data that is stored, and a documentation of the physical data model.

## Organization of this Guide

The *Infostore Guide* consists of the following chapters:

**Chapter 1 – *Welcome to Infostore*** – provides a general overview of the functionality of Infostore.

**Chapter 2 – *The Logical Data Model*** – describes the data that is provided by Infostore.

**Chapter 3 – *The Physical Data Model*** – contains a list of all tables in the Infostore Repository along with a detailed description of each column.

**Chapter 4 – *Example Reports*** – contains some example reports that can be built on top of the Infostore Repository.

## 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.
<b>Bold Font</b>	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 (\).

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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](mailto:support@voiceobjects.com).



# 1 Welcome to Infostore

This chapter describes how Infostore, the logging component of VoiceObjects Server, is used to store information on the behavior of your services and the behavior of the callers using them.

## Overview

Infostore provides a mechanism to store specific information about the usage of your services such as call timestamp, dialog duration, etc. into a relational database management system (RDBMS) for analytic purposes. Through this functionality you gain valuable insight into the usage and acceptance of your services.

Specifically, Infostore is designed to provide the different departments of your enterprise with answers to the following questions:

### Administrators and system operators:

- What is the (average/minimum/maximum) workload of your servers?
- What are the peak workloads and when do they occur?
- At what time will maintenance system downtime have minimum impact?
- Is the current number of ports sufficient? Are the servers properly sized?
- Is the load on your cluster evenly balanced?
- What is the percentage of aborted and rejected sessions?

### Dialog designers and developers:

- Are there daily/monthly trends in the use of your application?
- How many of your sessions result in an error?
- What are your most actively used services?
- Which prompts lead to an unusually high rate of No Input/No Match events?

### Business analysts and marketing specialists:


- How many unique callers do you have?
- How many callers call repeatedly? How often do they call?
- How much time (on average/minimum/maximum) do callers spend in your application?
- What are the callers' major navigation patterns?

The session statistics are held in server memory during the course of each dialog and are written to the log tables after the session has ended. This way the execution time of the dialog is not affected and the impact on the performance of the server is negligible.

The session data is collected and stored inside a denormalized Snowflake Schema and thus is immediately ready for analysis by means of a third party BI (Business Intelligence) or reporting solution vendor. You can even access the data by executing manual SQL statements against the database tables.



As there is no ETL (Extract-Transform-Load) process involved and all statistics data are written directly to the analytic data model, all analyses are based on the most current data level.

-  **Note:** Usage statistics can only be monitored if System DB logging for the specific service is enabled, which is indicated by a green light in the System DB logging column on the **Server Management** tab in the **Control Center** (in Desktop for Web on the **Server Manager** tab). For further information on enabling/disabling the System DB logging refer to Chapter 2 – *Configuring Servers and Services* in the *Deployment Guide*.

## Scope of Data

Infostore contains Custom DB logging and System DB logging.

Custom DB logging can be used to store application-specific data in custom tables. You can activate Custom DB logging by using the **Log** object and setting the **Destination** to *Custom DB* (see section on Log object below).


System DB logging automatically stores session statistics in the Infostore Repository.

The following section provides a detailed overview of the scope of data that is logged by System DB logging.

### *Dialog information*

Infostore stores information about the dialogs on different levels of granularity. On the uppermost level information about the dialog is logged. This includes information about date and time of the session, the caller's ANI, the number of events and so forth. If service chaining is used, this information also contains references to the master session so that the complete dialog chain can be tracked. For further information on service chaining, refer to *Exit* in the *Object Reference*.

In addition, all Layer objects and their selected states are stored in the Infostore Repository. If a layer state has been changed multiple times during the dialog, only the state that was active at the end of the dialog is stored.

-  **Tip:** You can exclude certain layers from being logged to Infostore by disabling the **Enable Layer State logging** option in the editor of the Layer object (see *Layer* in the *Object Reference*).


On a more detailed level, Infostore stores data about which objects were processed in the course of one dialog. This data includes information about the Module objects that the caller accessed during the dialog. This information is separated into module sets, module sequences and module subsequences.


A module set stores a list of all modules that were processed in one dialog. Within a module set the modules are sorted alphabetically by their reference IDs and thus do not contain information about order and frequency. Module sets may be important for your analysis if you want to know how often a specific combination of modules was accessed.

The module sequences on the other hand contain the same information as module sets but with additional information about order and frequency. You can use module sequences to find out how often one specific module was processed during one dialog or to identify sequence patterns.




The module subsequences contain information about sequences that are contained inside the module sequences. With the subsequences, you can analyze the paths that the caller took to reach a specific module.

 **Tip:** You can exclude certain modules from sets, sequences and subsequences by disabling the **Enable history tracking** option in the editor of the Module object. This might be applicable if you want to exclude the start module of your application from module sets and module sequences as all dialogs inevitably use the start object. It could also be helpful if you have an application with a large number of modules that do not all represent a complete sub-application.

 **Note:** Module related data is stored by referencing each module by its reference ID. Consequently, if a Module object has changing reference IDs throughout redeploys, it is not possible to treat it as the same object when creating reports. To assure a consistent reporting on module level, it is recommended to assign custom reference IDs for modules.

On the lowest level of granularity Infostore provides logging on input state level. One input state represents a point in the dialog where the server expects input from the caller. On this level, information about the recognition, such as utterance, input mode, and confidence is stored.

 **Note:** You can disable logging on input state level by disabling the **Enable Input State logging** option in the **Service** editor (see Chapter 2 – *Configure Servers and Services* in the *Deployment Guide*).

For a more detailed list of all information logged by Infostore refer to Chapter 2 – *The Logical Data Model*.

### Server statistics

Apart from statistics about the dialog itself, Infostore also logs information about workload of servers, server instances and services. This data includes:

- Number of active sessions
- Number of finished sessions
- Number of aborted sessions
- Number of rejected sessions

These server statistics are stored as snapshot data. At a configurable interval Infostore retrieves the current workload from the server and stores the current values of the above-mentioned counters in the database. In addition to the current values, also the difference between the values of the current snapshot and the values of the last snapshot are written to the database.

These difference counters are also logged for the following data:

- Number of requests and volume bytes
- Call and processing duration
- Number of script and connector executions
- Minimum, maximum and total connector and script execution times

In addition to the number of sessions, information about the concurrent session limits is stored. By license restrictions or by setting this value manually in the **Service** and **Server** editor you can specify the maximum number of concurrent



sessions that can be processed by VoiceObjects Server. If this limit is exceeded, the particular service or server does not accept any additional sessions.

This information helps you to find out if you need to adjust the assignments of the available sessions to your servers and services. You can also identify how many incoming calls, if any, were rejected because there were insufficient concurrent sessions left.

By default the logging interval is set to one minute, but you can change this interval by modifying the following tag in the *components.xml* file:

```
<statisticsUpdateInterval>60000</statisticsUpdateInterval>
```

The interval must be specified in milliseconds.

While a smaller interval increases accuracy of the snapshot data it also leads to a higher amount of data written and thus disk space needed. However, setting the interval to a higher value will also impact the size of the difference counters. Depending on your environment, the interval should be chosen carefully.

### **Recordings**

In addition to data about the dialog and each input state, Infostore stores information about all recordings that occurred in a session. This includes data about Recording objects as well as utterance recordings.

This data can be used to get an overview on the number of recordings and the disk space occupied for each service. In addition path and filename information for each individual recording is stored, which can then be used to retrieve the files.

### **Business tasks**

Business Task objects can structure applications in terms of specific business operations such as e.g. logging into an account or performing a transaction.

Infostore stores detailed information for each business task, such as start and end point, duration, completion status and recognition related information (e.g. No Match and No Input rates). Logging of business task related information is automatically enabled when activating System DB Logging for a service.

With this information you can follow up on completion and success rates of specific tasks, you can identify problems while executing a task or the impact of marketing announcements.

For further information about how to use business tasks, refer to Chapter 11 – *How to Define Business Tasks* in the *Design Guide* or to *Business Task* in the *Object Reference* for details on the Business Task object.

### **Service and deployment history**

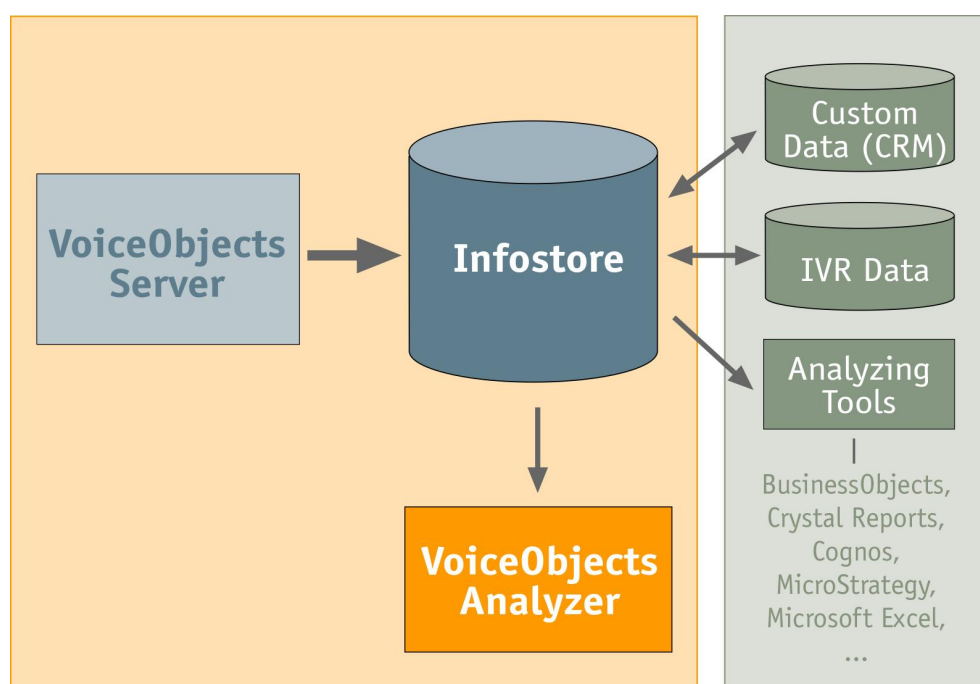
For each deployment command (*restore* and *redeploy*), Infostore stores name and description of the deployed start object and its project. Along with information about the service state, e.g. configuration and filter settings of Infostore, this information is automatically logged, when System DB Logging is activated for a service.

Using this information, you can find out how often new versions of your applications are deployed and how long they are active. By combining this data with information about caller behavior, you can analyze the impact of application changes on the caller.



## Extensible Data Model

One major benefit of the VoiceObjects logging architecture is the possibility to extend the system logging information with custom data. This custom data can be application-specific information that is not gathered by the System DB logging. It can also be data from CRM or legacy systems. This way you can use existing data about your callers or customers and combine it with the session statistics of Infostore. You can also map log information from the media platform to the system statistics. The following section provides a description of how to connect these different data sets.



### Log object

Using the Log object with Custom DB logging is useful if you want to store application-specific data that is not in the scope of System DB logging. You might for example want to store certain choices that the caller made during a session or the responses he got from an external system.

To do so, follow these steps:

- 1 Create a table containing the required columns to store your custom data inside the custom log repository. For configuration of the location of the custom log repository refer to Chapter 1 – *Advanced Configuration of VoiceObjects in the Administration Guide*.
- 2 In the **Log** editor, set the **Destination** to *Custom DB*.
- 3 In the **Log Statement** field, enter the SQL statement. This statement can include expressions or variables. To be able to map your custom data to the dialog, you need to include the VoiceObjects internal ID of the dialog (through the function **Session(DIALOGID)**) in your SQL statement.

To simplify the mapping to the tables of the Infostore Repository you can use the following wildcards inside the SQL statement that represent key values from tables:



Wildcard	Description
@MD_REP_SID@	Metadata Repository ID
@SRV_SID@	Server surrogate ID
@SRV_HOST_IP@	Server IP address
@SRV_INST_PORT@	Server instance port
@SRV_INST_NAME@	Server instance name
@VSC_SID@	Service surrogate ID
@SITE_SID@	Site surrogate ID
@SITE_GUID@	Site GUID
@DAY_ID@	Day ID for start of dialog – YYYYMMDD
@MINUTE_ID@	Minute ID for start of dialog – HHMM
@SECOND_ID@	Second ID for start of dialog – SS
@DLG_ID@	Unique dialog ID
@DLG_CRMID@	Value that was assigned to the CRM ID using Session(CRMID, [arg])
@DLG_GCID@	Value that was assigned to the global call ID using Session(GCID, [arg])
@TASK_SID@	Surrogate ID of the business task that is currently active
@TASK_COUNTER@	Counter of the business task instance that is currently active

These wildcards will be resolved at call time to their respective values. The wildcard names correspond to the column names in the Infostore Repository.

**i** ➤ **Note:** The wildcards @MD\_REP\_SID@, @SITE\_SID@, and @TASK\_SID@ will only be replaced when *Custom DB* is selected as destination.

### **Media platform session ID**

Another way of enhancing the system logging information is to extend the Infostore Repository with log information from the media platform. As the dialog fact table provides a column for the session ID of the media platform, this data can easily be merged. To set the session ID on VoiceObjects Server, you can either add the parameter MPSID=<value> to the initial connection URL from the media platform or you can set the ID manually by using the expression **Session(MPSID, [<arg>])**. The value that was assigned to the MPSID is automatically written to the Infostore Repository after the session has ended.

### **CRM ID**

The CRM ID can be used as an alternative to uniquely identify a caller. By default callers are identified by their phone number (ANI). If you have an application that uses an authentication mechanism to identify the caller, you can store this value. By



assigning the CRM ID a value that is also available in your corporate data warehouse, as e.g. a customer or account number, you can connect your session statistics with your customer data in your corporate CRM data warehouse.

The CRM ID can be set by using the Expression **Session(CRMID, [<arg>])** or by adding the parameter CRMID=<value> to the initial URL from the media platform. This value will be stored in a dedicated column in the Infostore Repository at the end of the dialog.

### **Global call ID**

The global call ID can be used to store a global session ID from your CTI or call control environment. By using the global call ID you are able to track a given call during its different stages within your environment. To set the global call ID on VoiceObjects Server you can either add the parameter GCID=<value> to the initial connection URL from the media platform or you can set the ID manually by using the expression **Session(GCID, [<arg>])**. If you don't set the GCID explicitly, a unique call ID is automatically created and assigned to this variable. By using the expression **Session(GCID)** you can retrieve this call ID and pass it along when the call is transferred to an operator or a different CTI system. If the dialog is returned to the server you need to pass this call ID back via the initial URL.

The value that was assigned to the global call ID is automatically written to the Infostore Repository after the session has ended.

## **Encryption Features**

To ensure data protection and privacy Infostore provides the possibility to store sensitive information of your sessions in an encrypted format. The following paragraph describes the different areas of encryption.

### **ANI encryption**

By default, Infostore stores the caller's ANI in clear text along with other call level information in the Infostore Repository. When ANI encryption is enabled, the ANI is encrypted with a one-way encryption algorithm before it is written to the Infostore Repository. Once encrypted and stored in the database it is not possible to revert to the original caller's telephone number from the encryption string. Since any given telephone number always generates the same unique encryption string, it can still be determined if two sessions were initiated from the same or different subscribers.

To enable ANI encryption, modify the following tag in the *components.xml* file:

```
<encryptANI>true</encryptANI>
```

You need to restart the server for the changes to take effect.

### **Utterance and slot values**

With detailed statistics about each input state Infostore also stores the original input of the caller and the associated slot names and values in the Infostore Repository. To suppress storing this information in a clear-text, human-readable format, each Input object contains a property *Mask Caller Input*. When this option is enabled, all utterances and the slot values for this input are encrypted when written to the Infostore Repository.

As the same algorithm is used as for the ANI encryption, the encrypted string is also unique and one utterance always generates the same encryption string.



## Sizing Estimates

Infostore retains a complete history of detailed statistics about each dialog. Especially in environments with high caller concurrency the data stored inside the Infostore Repository can grow rapidly. Therefore it is recommended to schedule a deletion process on the database that removes all data older than a specified timeframe. To estimate sizing for the Infostore Repository database and the deletion process timeframe, this section provides data storage estimates for these tables.

- i** ▶ **Note:** The following sizing estimates do not include size of indexes and statistics. They only provide a guideline of expected table sizes. As storage size is dependent on the RDBMS and configuration parameters used, the actual values in a specific environment might differ.
- i** ▶ **Note:** To simplify the calculation of sizing estimates for an Infostore database in your environment an Excel sheet *Infostore\_SizingEstimates\_[VersionNumber].xls* is provided. The sheet is located in the folder `<VOICEOBJECTS_HOME>\Platform\Docs`.

### Lookup tables

The Infostore Repository consists of twenty-five lookup tables, nine fact tables and four aggregate tables. Data in the lookup tables is either static (e.g. for the date and time lookup tables) or is refreshed at every server start or service redeploy. As these tables do not contain information on dialog level, the amount of data stored here is manageable. The total storage of the lookup tables consumes approximately 6 MB.

### Dialog and input states

In the dialog fact table VOLDDLGSTS, one row is written for each session on the voice system. One row approximately consumes 700 Bytes of disk space.

In the input states fact table VOLDDSSEQ, one row is written for each input state that occurred in a dialog. One row consumes approximately 500 Bytes of disk space.

#### Example 1:

Running an application with 1,000 sessions per day and an average of 15 input states per sessions:

Dialog fact table:  $700 \text{ Byte} * 1,000 = 700\text{KB}$  per day

Input state fact table:  $500 \text{ Byte} * 15 * 1,000 = 7.5\text{MB}$  per day

Running the site 24/7:  $(700 \text{ KB} + 7.5 \text{ MB}) * 365 \text{ days} = 2993 \text{ MB} + 6 \text{ MB}$  static lookup information = 2999 MB occupied disk space per year.

#### Example 2:

Running an application with 100,000 sessions per day:

Dialog fact table:  $700 \text{ Byte} * 100,000 = 70 \text{ MB}$  per day

Input state fact table:  $500 \text{ Byte} * 15 * 100,000 = 750 \text{ MB}$  per day

Running the site 24/7:  $(70 \text{ MB} + 750 \text{ MB}) * 365 \text{ days} = 299 \text{ GB} + 6 \text{ MB}$  static lookup information = 299 GB occupied disk space per year.



### **Module sets and sequences**

In the module sets and module sequences fact tables VOLDMODSEQ and VOLDMODSET, one row is written for each distinct module set or sequence. One row in each of these tables consumes approximately 5 KB of disk space. The additional table VOLDRELMSQ stores one row for each module of the module sequences. One row in this table consumes approximately 100 Bytes of disk space. The table VOLDSUBSEQ stores information about each subsequence. One row in this table consumes approximately 500 Bytes of disk space.

#### Example:

500 module sequences and 300 module sets with an average length of five modules per sequence:

VOLDMODSEQ: 500 module sequences \* 5 KB = 2.5 MB

VOLDMODSET: 300 module sets \* 5 KB = 1.5 MB

VOLDRELMSQ: 500 module sequences \* 5 modules \* 100 Bytes = 250 KB

VOLDSUBSEQ: 500 module sequences \* 5 modules \* 500 Bytes = 1.25 MB

2.5MB + 1.5 MB + 250 KB + 1.25 MB = 5.5 MB

### **Server statistics**

There are five tables, which hold information about server statistics:

In the table VOLDLOGSRV one row for each service and server instance is written per interval. One row in this table consumes approximately 300 Bytes of disk space.

In the table VOLDAGGRSS one row for each server instance is written per interval. One row in this table consumes approximately 300 Bytes of disk space.

In the table VOLDAGGRSV one row for each server and service is written per interval. One row in this table consumes approximately 150 Bytes of disk space.

In the table VOLDAGGRES one row for each server is written per interval. One row in this table consumes approximately 150 Bytes of disk space.

In the table VOLDAGGSIT one row for each site is written per interval. One row in this table consumes approximately 150 Bytes of disk space.

#### Example:

Having four server instances with five services, three sites and the interval configured to 1 minute:

60 min \* 24 hours \* 300 Byte \* 4 instances \* 5 services = 8640 KB per day

60 min \* 24 hours \* 300 Byte \* 4 instances = 1728 KB per day

60 min \* 24 hours \* 150 Byte \* 5 services = 1080 KB per day

60 min \* 24 hours \* 150 Bytes \* 1 server = 216 KB per day

60 min \* 24 hours \* 150 Bytes \* 3 sites = 648 KB per day

(8640 KB + 1728 KB + 1080 KB + 216 KB + 648 KB) \* 365 days = 4494 MB per year



### Recordings

For each recording one row is written to the table VOLDRECLOG. Each row in this table approximately consumes 600 Bytes of disk space.

Example:

Running an application with 1,000 sessions per day and an average of 10 recordings per sessions:

$600 \text{ Byte} * 1,000 * 10 = 6 \text{ MB per day}$

$6 \text{ MB} * 365 \text{ days} = 2190 \text{ MB per year}$

### Business tasks

For each Business Task object that was started one row is written to table VOLDTASKSTATS. One row in this table approximately consumes 500 Bytes of disk space.

For each parameter of each finished business task, one row is written to table VOLDTASKDATA. One row in this table approximately consumes 300 Bytes of disk space.

Example:

Running an application with 1,000 sessions per day and an average of 5 business tasks, with each business task having an average of 3 parameters:

$500 \text{ Bytes} * 5 * 1,000 = 2 \text{ MB per day}$

$300 \text{ Bytes} * 3 * 5 * 1,000 = 4.5 \text{ MB per day}$

$(2 \text{ MB} + 4.5 \text{ MB}) * 365 = 2372 \text{ MB per year}$

### Service and deployment history

For each deployment command (*redeploy* and *restore*) one row is written to table VOLDVSCOBJ. One row in this table approximately consumes 300 Bytes of disk space.

Example:

Running an environment with 5 services and an average of 4 redeploys per month:

$300 \text{ Bytes} * 4 * 5 = 6 \text{ KB per month}$

$6 \text{ KB} * 12 = 72 \text{ KB per year}$

## Maintaining the Infostore Repository



**Caution:** Infostore does not perform database administrative and maintenance activities. As these tasks are mandatory to maintain a good reporting environment, it is strongly recommended to involve the database administration team into the planning and maintenance of the Infostore database.

Depending on the number of sessions and thus the amount of data that is stored there are a number of tasks that should be taken. These tasks could include, but are not limited to the following:

- The table statistics should be updated regularly to ensure a most efficient execution plan of the SQL statements. This can be done by running the *LDStatistics.sql* scripts for your database system. Depending on your



requirements and the update frequency, a nightly or weekly schedule should be used.

- Old data that is no longer used for reporting purposes should be deleted from the Infostore Repository in a regular interval. This might be done e.g. on a monthly schedule, deleting all data older than 3 months. Find below a strategy to delete Infostore data that is older than a specific day.
- As with VoiceObjects 7, you can configure Infostore to only store statistics for a subset of your sessions. By using Infostore filtering on a per service level you can limit the overall amount of data that is stored in your Infostore Repository. However, you can still report on the session usage based on these sample data.
- Input State logging generates detailed log information for each session. Typically this information is only needed in specific situations, e.g. when deploying a new version of your application. It is therefore recommended to disable Input State logging for your services when detailed data is not needed.
- Depending on your reporting requirements and the reporting tool you are using additional database indices may be required. Consult your database administration team to identify slow running queries and to identify and set according indices.
- There are several database settings that can drastically improve performance, such as the block size of tables, the optimizer mode etc. As these settings are very specific to the database system used and your environment, you should consult your database administration team to tune these settings.

### **Infostore data deletion strategy**

This paragraph provides some best practices on how to remove data from the Infostore Repository. The described strategy shows how to delete server and session data that is older than a specific day. Additional steps are provided to optionally remove also related dimensional data.

Before adapting the script and executing delete commands on the Infostore Repository, ensure that your reporting and analysis requirements are defined and accordingly matched by the script. The requirements must at least define the period of time data is preserved in Infostore and the recurrence of the delete job. Furthermore you might backup, archive or aggregate the data for later use before finally deleting the data.



**Caution:** The following deletion strategy and the shown SQL examples will delete data from the Infostore Repository. Since this data deletion might be irrevocable make sure that future reporting requirements can be fulfilled by the remaining data and ensure that the SQL that is executed meets your intention. VoiceObjects doesn't warrant that the following scripts are error free, support your database system or meet your functional requirements. **VoiceObjects is not liable for any loss of data and not liable for any data recovery.**

Depending on the data volume to be deleted the execution of DELETE commands can take time, may slowdown the database performance or may lock tables. In order to prevent the data write operations of VoiceObjects Server from failures it is recommended to perform this task during maintenance windows, or at least not during peak-loads.

Redo logs are typically written during delete operations. Before executing delete scripts ensure that the redo logs are of sufficient size. You might consult the



database administration team to setup the according configuration.

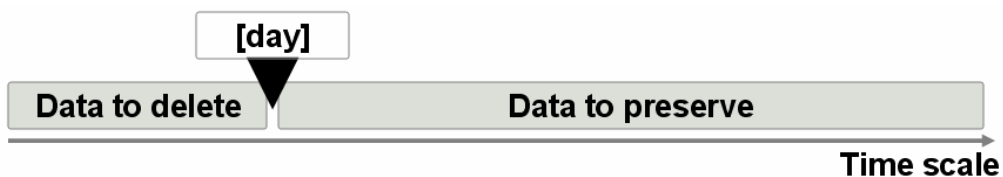
### Data deletion concept

All fact data stored contains a day key, the DAY\_ID. This DAY\_ID is of numerical value in format YYYYMMDD, like 20080408 or 20081231.

The deletion conditions stated below use a [day] placeholder that should be replaced by the DAY\_ID for the oldest day that will remain in the database. The format of the [day] parameter must be YYYYMMDD like 20080430.

#### Example:

If you want to delete all data before April 1<sup>st</sup>, 2008, replace the [day] with 20080401.



For Infostore configurations using partitioned fact tables data deletion can alternatively be done by month. Dropping the month partitions with an SQL statement like `ALTER TABLE DROP PARTITION` for the according fact tables in step 1 and 2 will be of better performance and will not fill the redo logs.

The following steps and the sequence of commands given ensure the consistency of the Infostore Repository across all fact and dimensional data. Therefore obey the sequence of commands given when deleting data. Other tables than those listed need not and should not be touched.

#### Step 1: Remove data from server log tables

The following commands remove all data from the server log tables that are older than the specified day.

```
delete from VOLDAGGSIT where DAY_ID < [day];
delete from VOLDAGGRSV where DAY_ID < [day];
delete from VOLDAGGRSS where DAY_ID < [day];
delete from VOLDAGGRES where DAY_ID < [day];
delete from VOLDLOGSRV where DAY_ID < [day];
```

#### Step 2: Remove the service specific session data

The next commands first remove all session related data of sessions that were logged before the specified day. After that all session entries are removed.

```
delete from VOLDTASKDATA where DLG_ID in (select DLG_ID from
VOLDDLGSTS where DAY_ID < [day]);
delete from VOLDTASKSTATS where DLG_ID in (select DLG_ID from
VOLDDLGSTS where DAY_ID < [day]);
delete from VOLDRECLOG where DLG_ID in (select DLG_ID from
VOLDDLGSTS where DAY_ID < [day]);
```



```
delete from VOLDDSSEQ where DLG_ID in (select DLG_ID from
VOLDDLGSTS where DAY_ID < [day]);
```

```
delete from VOLDDLGSTS where DAY_ID < [day];
```

### Step 3: Optionally delete corresponding module sequence and layer data

In some deployments the storage of module sequences can also result in large data volumes. The next commands show how to remove this data and the data of layers and layer states. If the service is still deployed, deleted data may get recreated by the server if needed.

```
delete from VOLDMODSEQ where MOD_SEQ_SID NOT IN (select
MOD_SEQ_SID from VOLDDLGSTS);
```

```
delete from VOLDMODSET where MOD_SET_SID NOT IN (select
MOD_SET_SID from VOLDDLGSTS);
```

```
delete from VOLDSUBSEQ where MOD_SEQ_SID NOT IN (select
MOD_SEQ_SID from VOLDDLGSTS);
```

```
delete from VOLDRELMSQ where MOD_SEQ_SID NOT IN (select
MOD_SEQ_SID from VOLDDLGSTS);
```

```
delete from VOLDLYRSET where LYR_SET_SID NOT IN (select
LYR_SET_SID from VOLDDLGSTS);
```

```
delete from VOLDLYRREL where LYR_SET_SID NOT IN (select
LYR_SET_SID from VOLDDLGSTS);
```

### Step 4: Optionally remove data of services not deployed anymore

This optional step shows how to remove all dimensional data of services that are not deployed anymore and that are not having any fact data stored in Infostore.



**Caution:** The execution of the following commands for services that are still deployed will result in data inconsistency and can result in failures during service operation by VoiceObjects Server.

The following commands require a parameter [list\_of\_notdeployed\_services] to identify all services that are not deployed anymore. The parameter can be a comma-separated list of service IDs like [3, 2, 6] or [14].

To determine the corresponding service IDs open the table VOLDVSCOBJ.

```
select * from VOLDVSCOBJ;
```

The table contains a row for each service deployment and provides detailed information about the service and the deployment. The column VSC\_SID uniquely identifies a service and can be used in the [list\_of\_notdeployed\_services] to identify the services for which the dimensional data should be deleted.

```
delete from VOLDMODULE where VSC_SID in
[list_of_notdeployed_services] and MOD_SID not in (select
MOD_SID from VOLDRELMSQ);
```

```
delete from VOLDLYRSTATE where VSC_SID in
[list_of_notdeployed_services] and LYRS_SID not in (select
LYRS_SID from VOLLYRREL);
```

```
delete from VOLDLAYER where VSC_SID in
[list_of_notdeployed_services] and LYR_SID not in (select
LYR_SID from VOLDLYRSTATE);
```



```
delete from VOLDTASK where VSC_SID in  
[list_of_notdeployed_services] and TASK_SID not in (select  
TASK_SID from VOLDTASKSTATS);
```

```
delete from VOLDVSCOB where VSC_SID in  
[list_of_notdeployed_services] and VSC_SID not in (select  
VSC_SID from VOLDDLGSSTS) and VSC_SID not in (select VSC_SID  
from VOLDAGGRSV);
```

Similar to the deletion of service entries not deployed server data can be deleted.  
To identify not deployed servers open the table VOLDSRVOBJ.

```
select * from VOLDSRVOBJ;
```

The SRV\_SID uniquely identifies a server.

```
delete from VOLDSRVOBJ where SRV_SID in  
[list_of_notdeployed_servers]  
and SRV_SID NOT IN (select SRV_SID from VOLDLOGSRV)  
and SRV_SID NOT IN (select SRV_SID from VOLDDLGSSTS);
```



## 2 The Logical Data Model

This chapter 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*.

### 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.

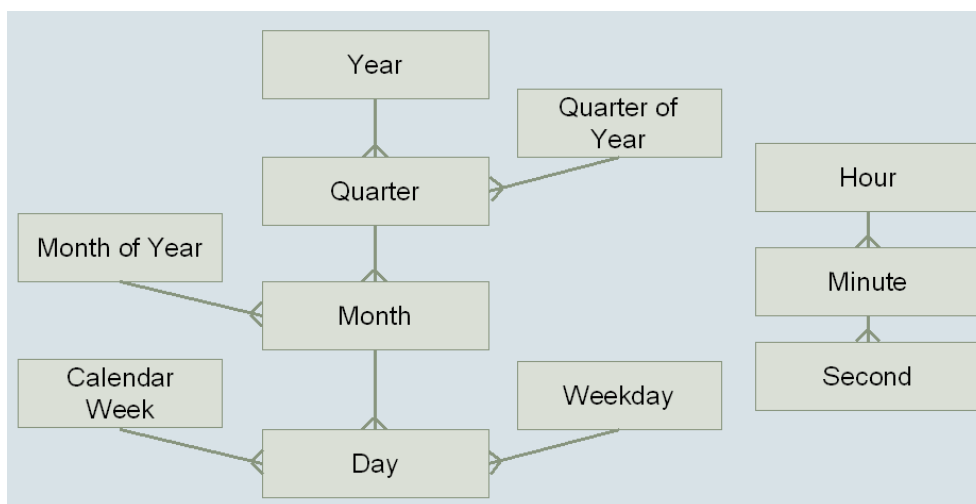
Additionally, a list of the dimensional attributes along with their business descriptions is provided. This reference gives an overview on the different perspectives that can be used for analytic purposes.

#### *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:



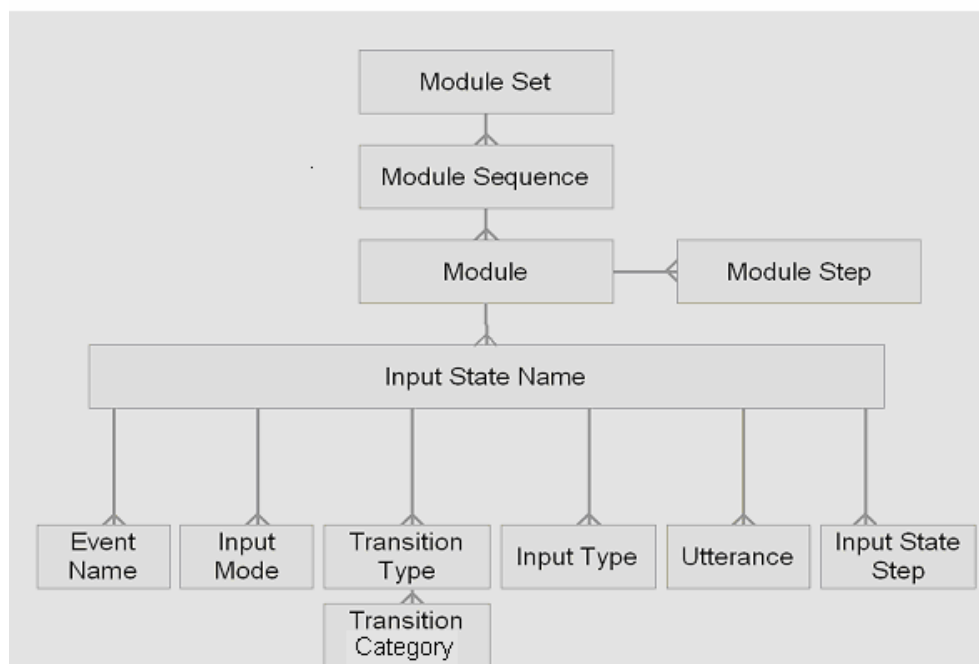
**Modules and Input States dimension**

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 <b>Mask Caller Input</b> 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 <b>Mask Caller Input</b> 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</i> , <i>nav.back</i> , <i>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)



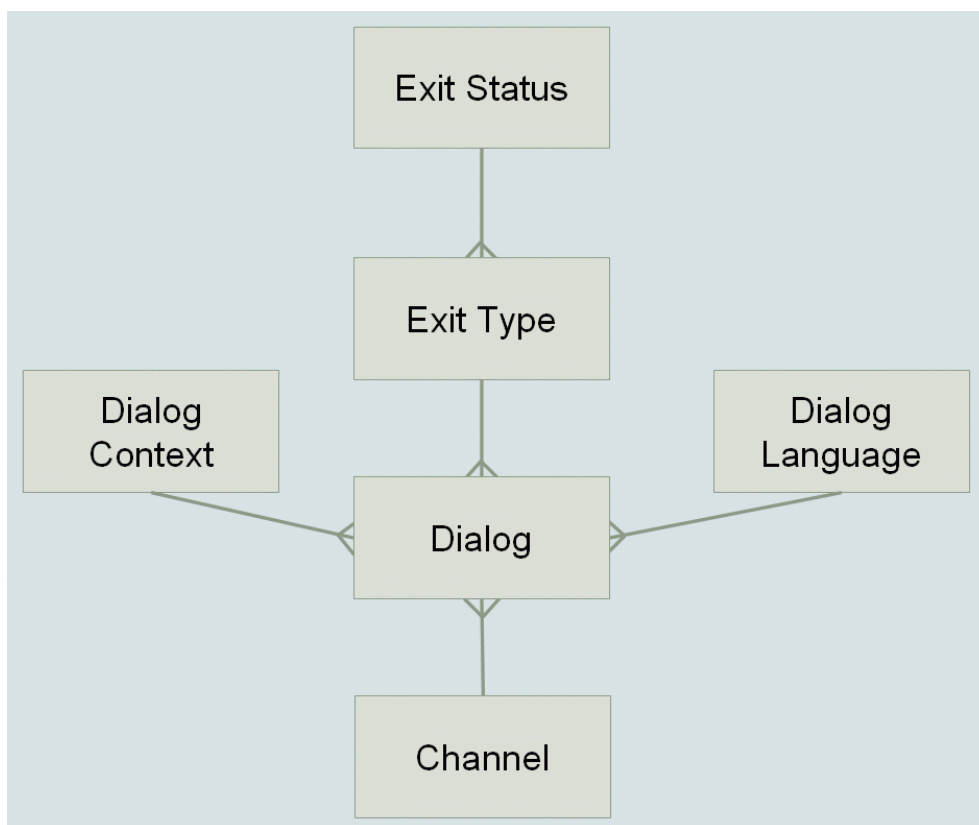
Dimensional Attribute Name	Dimensional Attribute Description
	10 = Transfer (caller was transferred) 11 = Maximum Processing Time (a timeout occurred) 12 = Grammar Control (Grammar control was activated)
Transition Category	The category of the transition type. Possible values are: 1 = Successful 2 = Not Successful
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.

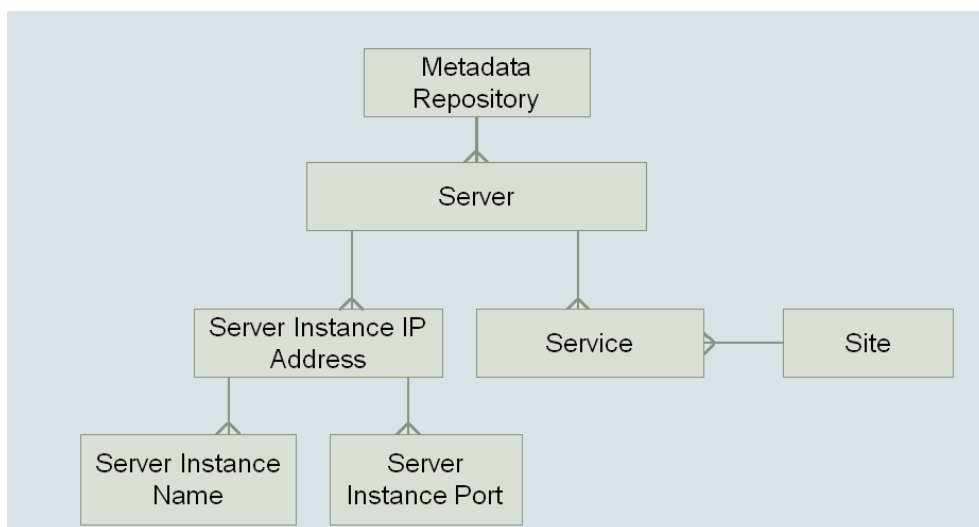
Dimensional Attribute Name	Dimensional Attribute Description
Dialog	Uniquely identifies one session.
Exit Type	Represents the cause for the caller exit. Currently supports the following values: 0 = Unknown (exit type could not be determined) 1 = Timeout (session timed out) 2 = Exception (exception occurred 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.



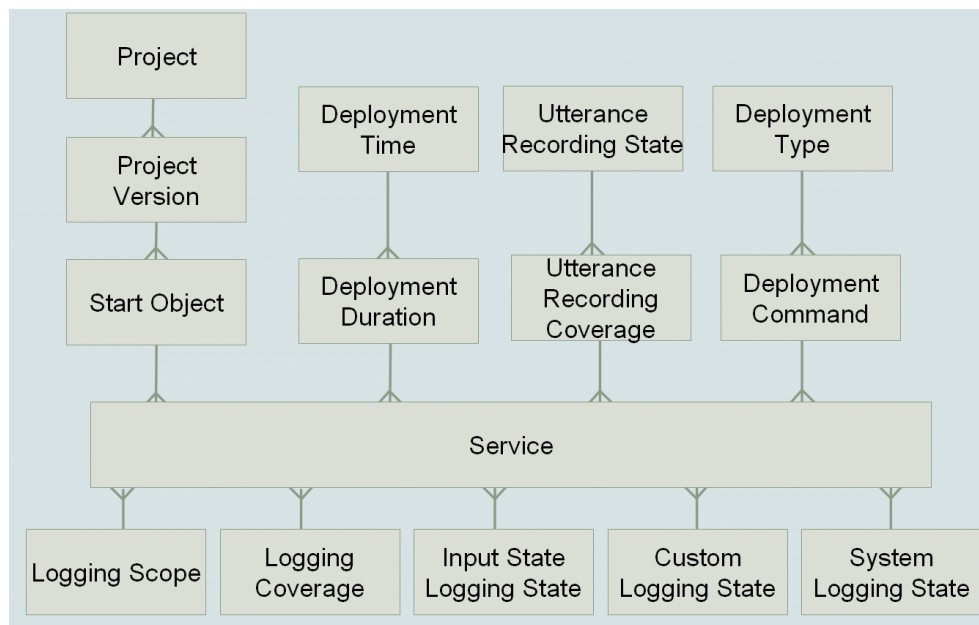
**Service dimension**

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.

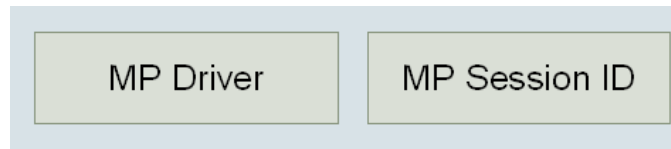
Name	Description
ANI	The telephone number of the caller, if transmitted. If the ANI was not transmitted by the media platform, 0 will be written into the database.
DNIS	The telephone number that was dialed by the caller.
RDNIS	The number from which a session diversion or transfer was invoked.
AAI	Information 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.

RDNIS	AAI	CRM ID	
IID	DNIS	ANI	Global Call ID

### **Media Platform dimension**

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

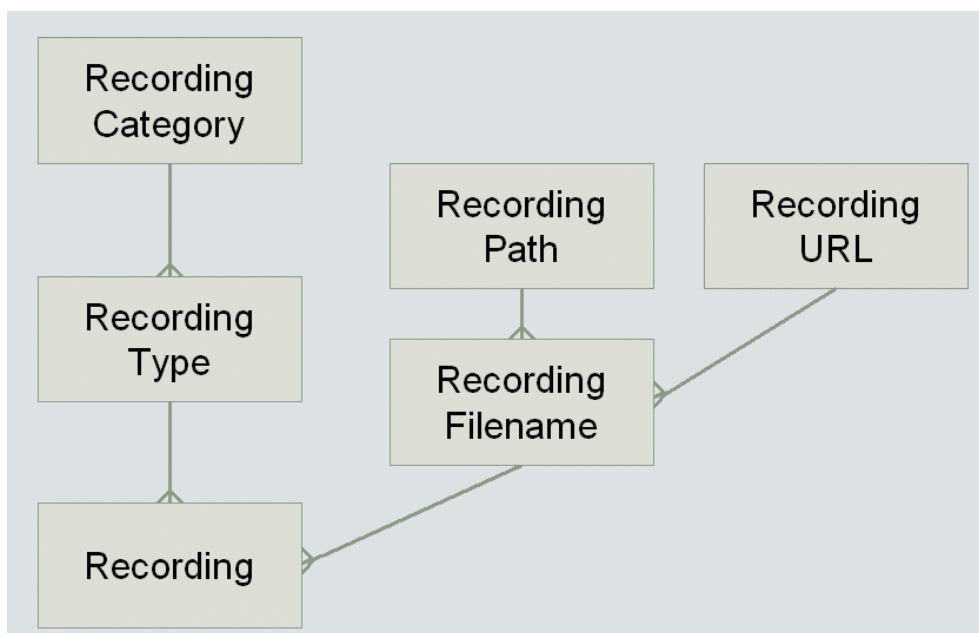
Name	Description
Media Platform Driver	The media platform driver that was used for this session.
Media Platform Session ID	Session ID of the media platform, if transmitted.



### **Recording dimension**

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

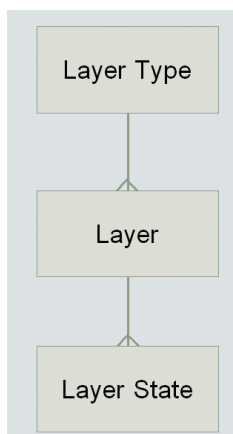
<b>Name</b>	<b>Description</b>
Recording Filename	The filename of the recording.
Recording Path	The physical path to the recording root directory.
Recording URL	The URL pointing to the recording root directory.
Recording Type	Specifies the type of the recording: -1 Unknown 0 = Recognition 1 = Hyperlink 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.

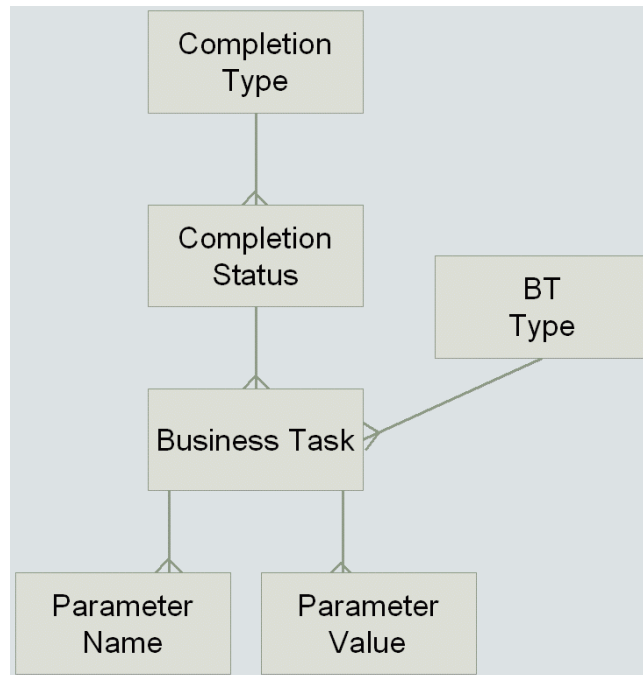
Name	Description
Layer	The name of the layer that was used during the session.
Layer State	The selected state of the layer.
Layer Type	The type of the layer: -1 = Unknown 1 = Automatic 2 = Manual



**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.



<b>Fact name</b>	<b>Fact description</b>
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).



## 3 The Physical Data Model

This chapter provides a list of all tables that are available for system logging capabilities. By default the installation process creates these tables automatically, but you can also create them manually later on. For more information refer to the *Installation Guide*.

### Table Overview

The physical data model is divided into six fact tables, which hold variable data and are updated on each session; four aggregate tables, which hold pre-aggregated data on a higher level; and thirty-one lookup tables as well as two relationship tables, which store detailed information for the respective dimensional attributes.

Twenty-three of the lookup tables are static and do not change over time; four of them are filled on application redeploys; four of them are dynamic and are filled incrementally as new entries are observed in dialog sessions.

Table Name	Table Description
<a href="#">VOLDAGGRES</a>	Aggregate table for server statistics on level Metadata Repository and server
<a href="#">VOLDAGGRSS</a>	Aggregate table for server statistics on level Metadata Repository, server and server instance
<a href="#">VOLDAGGRSV</a>	Aggregate table for server statistics on level Metadata Repository and service
<a href="#">VOLDAGGSIT</a>	Aggregate table for session partitioning information on site level
<a href="#">VOLDCHANNEL</a>	Lookup table for channels (static)
<a href="#">VOLDDEPLCOM</a>	Lookup table for deployment commands (static)
<a href="#">VOLDDLGSTS</a>	Fact table for dialog statistics
<a href="#">VOLDDRIVER</a>	Lookup table for media platform drivers (static)
<a href="#">VOLDDSSEQ</a>	Fact table for input state statistics
<a href="#">VOLDEXTSTS</a>	Lookup table for the caller's exit status (static)
<a href="#">VOLDEXTTYP</a>	Lookup table for the caller's exit type (static)
<a href="#">VOLDINPMODE</a>	Lookup table for input modes (static)
<a href="#">VOLDINPTYPE</a>	Lookup table for input types (static)
<a href="#">VOLDLAYER</a>	Lookup table for layers (redeploy)
<a href="#">VOLDLNGCOD</a>	Lookup table for the language of the dialog (static)



Table Name	Table Description
<a href="#">VOLDLOCK</a>	For internal use only
<a href="#">VOLDLOGSCOPE</a>	Lookup table for logging scopes (static)
<a href="#">VOLDLOGSRV</a>	Fact table for enhanced server statistics
<a href="#">VOLDLYRREL</a>	Relationship table for layer sets
<a href="#">VOLDLYRSET</a>	Lookup table for layer sets (dynamic)
<a href="#">VOLDLYRSETSID</a>	For internal use only
<a href="#">VOLDLYRSTATE</a>	Lookup table for layer states (redeploy)
<a href="#">VOLDLYRTYPE</a>	Lookup table for layer types (static)
<a href="#">VOLDMODSEQ</a>	Lookup table for module sequences (dynamic)
<a href="#">VOLDMODSEQSID</a>	For internal use only
<a href="#">VOLDMODSET</a>	Lookup table for module sets (dynamic)
<a href="#">VOLDMODSETSID</a>	For internal use only
<a href="#">VOLDMODULE</a>	Lookup table for modules (redeploy)
<a href="#">VOLDRECCAT</a>	Lookup table for recording categories (static)
<a href="#">VOLDRECLOG</a>	Fact table for recordings
<a href="#">VOLDRECTYPE</a>	Lookup table for recording types (static)
<a href="#">VOLDRELMSEQ</a>	Relationship table for module sequences
<a href="#">VOLDREPCFG</a>	For internal use only
<a href="#">VOLDREPSRC</a>	Lookup table for the Metadata Repositories (static)
<a href="#">VOLDSEQREPSRCSID</a>	For internal use only
<a href="#">VOLDSEQVSCUID</a>	For internal use only
<a href="#">VOLDSITEOBJ</a>	Lookup table for sites (static)
<a href="#">VOLDSRVOBJ</a>	Lookup table for servers (static)
<a href="#">VOLDSUBSEQ</a>	Lookup table for subsequences (dynamic)
<a href="#">VOLDSTYPE</a>	Lookup table for input subtypes (static)
<a href="#">VOLDTASK</a>	Lookup table for business tasks (redeploy)



Table Name	Table Description
<a href="#">VOLDTASKMPL</a>	Lookup table for business task completion types (static)
<a href="#">VOLDTASKDATA</a>	Fact table for business task data
<a href="#">VOLDTASKSTATS</a>	Fact table for business tasks
<a href="#">VOLDTASKSTATUS</a>	Lookup table for business task statuses (static)
<a href="#">VOLDTASKTYPE</a>	Lookup table for business task types (static)
<a href="#">VOLDTRCAT</a>	Lookup table for transition categories (static)
<a href="#">VOLDTRTYPE</a>	Lookup table for transition types (static)
<a href="#">VOLDVSCOBJ</a>	Lookup table for services (static)
<a href="#">VOLDVSCTYPE</a>	Lookup table for service types (static)

## Detailed Information on Tables

Detailed information includes, aside from the table name, the primary function of each table, its column names along with their data type and a short description of their purpose. An X in *Primary Key* indicates that the respective column is part of the table's primary key.

<b>VOLDAGGRES</b>			
<b>Fact table for enhanced server statistics / one record per interval, service and server instance</b>			
Column Name	Data Type	Primary Key	Description
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
MONTH_ID	NUMBER(6)		Month ID of snapshot taken – YYYYMM
DAY_ID	NUMBER(8)	X	Day ID of snapshot taken – YYYYMMDD
MINUTE_ID	NUMBER(4)	X	Minute ID of snapshot taken – HHMM
SECOND_ID	NUMBER(2)	X	Second ID of snapshot taken – SS
NO_CON_CALLS	NUMBER(8)		Number of active sessions
NO_FIN_CALLS	NUMBER(8)		Number of finished sessions
NO_ABO_CALLS	NUMBER(8)		Number of aborted sessions



<b>VOLDAGGRES</b>			
<b>Fact table for enhanced server statistics / one record per interval, service and server instance</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_REJ_CALLS	NUMBER(8)		Number of rejected sessions
ACT_SES_GAR	NUMBER(8)		Actual session guarantee
ACT_SES_FLO	NUMBER(8)		Actual floating sessions
ACT_SES_LMT	NUMBER(8)		Actual session limit
REQ_SES_GAR	NUMBER(8)		Requested session guarantee
REQ_SES_LMT	NUMBER(8)		Requested session limit
ROW_TS	DATE	X	Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDAGGRSS</b>			
<b>Fact table for enhanced server statistics / one record per interval, service and server instance</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_INST_IP	VARCHAR(140)	X	Server IP address
SRV_INST_PORT	VARCHAR(10)	X	Server instance port
SRV_INST_NAME	VARCHAR(128)	X	Server instance name
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
MONTH_ID	NUMBER(6)		Month ID of snapshot taken – YYYYMM
DAY_ID	NUMBER(8)	X	Day ID of snapshot taken – YYYYMMDD
MINUTE_ID	NUMBER(4)	X	Minute ID of snapshot taken – HHMM
SECOND_ID	NUMBER(2)	X	Second ID of snapshot taken – SS
NO_CON_CALLS	NUMBER(8)		Number of concurrent sessions
NO_FIN_CALLS	NUMBER(8)		Number of finished sessions
NO_ABO_CALLS	NUMBER(8)		Number of aborted sessions
NO_REJ_CALLS	NUMBER(8)		Number of rejected sessions



<b>VOLDAGGRSS</b>			
<b>Fact table for enhanced server statistics / one record per interval, service and server instance</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MEM_USED	NUMBER(10)		Used memory
MEM_FREE	NUMBER(10)		Free memory
ROW_TS	DATE	X	Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDAGGRSV</b>			
<b>Fact table for enhanced server statistics / one record per interval, service and server instance</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
VSC_UID	NUMBER(7)		Service unique ID – unique ID for each deployment or restore action
MONTH_ID	NUMBER(6)		Month ID of snapshot taken – YYYYMM
DAY_ID	NUMBER(8)	X	Day ID of snapshot taken – YYYYMMDD
MINUTE_ID	NUMBER(4)	X	Minute ID of snapshot taken – HHMM
SECOND_ID	NUMBER(2)	X	Second ID of snapshot taken – SS
NO_CON_CALLS	NUMBER(8)		Number of concurrent sessions
NO_FIN_CALLS	NUMBER(8)		Number of finished sessions
NO_ABO_CALLS	NUMBER(8)		Number of aborted sessions
NO_REJ_CALLS	NUMBER(8)		Number of rejected sessions
ACT_SES_GAR	NUMBER(8)		Actual session guarantee
ACT_SES_FLO	NUMBER(8)		Actual floating sessions
ACT_SES_LMT	NUMBER(8)		Actual session limit
REQ_SES_GAR	NUMBER(8)		Requested session guarantee



<b>VOLDAGGRSV</b>			
<b>Fact table for enhanced server statistics / one record per interval, service and server instance</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
REQ_SES_LMT	NUMBER(8)		Requested session limit
ROW_TS	DATE	X	Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDAGGSIT</b>			
<b>Fact table for session partitioning statistics / one record per interval and site</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SITE_SID	NUMBER(5)	X	Site surrogate ID – relates to lookup table VOLDSITOBJ
MONTH_ID	NUMBER(6)		Month ID of snapshot taken – YYYYMM
DAY_ID	NUMBER(8)	X	Day ID of snapshot taken – YYYYMMDD
MINUTE_ID	NUMBER(4)	X	Minute ID of snapshot taken – HHMM
SECOND_ID	NUMBER(2)	X	Second ID of snapshot taken – SS
ACT_SES_GAR	NUMBER(8)		Actual session guarantee
ACT_SES_FLO	NUMBER(8)		Actual floating sessions
ACT_SES_LMT	NUMBER(8)		Actual session limit
REQ_SES_GAR	NUMBER(8)		Requested session guarantee
REQ_SES_LMT	NUMBER(8)		Requested session limit
ROW_TS	DATE	X	Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDCHANNEL</b>			
<b>Lookup table for channel / one record per channel</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
CHANNEL_ID	NUMBER(3)	X	Channel ID
CHANNEL_NAME	VARCHAR(255)		Channel name



<b>VOLDCHANNEL</b>	<b>Lookup table for channel / one record per channel</b>		
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
CHANNEL_DESC	VARCHAR(255)		Channel description
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB



<b>VOLDDEPLCOM</b>			
<b>Lookup table for deployment commands / one record per deployment command and language</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
DEPLCOM_ID	NUMBER(3)	X	Deployment command ID
DEPLCOM_NAME	VARCHAR(255)		Deployment command name
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDDLGSTS</b>			
<b>Fact table for dialog statistics / one record per session</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)		Metadata Repository ID
SITE_SID	NUMBER(4)		Site surrogate ID – relates to table VOLDSITOBJ
SITE_GUID	CHAR(40)		GUID of the root site administrator
SRV_SID	NUMBER(5)		Server surrogate ID – relates to lookup table VOLDSRVOBJ
SRV_HOST_IP	VARCHAR(140)		Server IP address
SRV_INST_PORT	VARCHAR(10)		Server instance port
SRV_INST_NAME	VARCHAR(128)		Server instance name
VSC_SID	NUMBER(6)		Service surrogate ID – relates to lookup table VOLDVSCOBJ
VSC_UID	NUMBER(7)		Service unique ID – unique ID for each deployment or restore action
MONTH_ID	NUMBER(6)		Month ID for start of dialog – YYYYMM
DAY_ID	NUMBER(8)		Day ID for start of dialog – YYYYMMDD
MINUTE_ID	NUMBER(4)		Minute ID for start of dialog – HHMM
SECOND_ID	NUMBER(2)		Second ID for start of dialog – SS



<b>VOLDDLGSTS</b>		<b>Fact table for dialog statistics / one record per session</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
DRIVER_ID	NUMBER(3)		Media platform driver ID – relates to lookup table VOLDDRIVER
LANGUAGE_ID	NUMBER(3)		Language code ID – relates to lookup table VOLDLNGCOD
DLG_ID	CHAR(44)	X	Unique dialog ID
MASTER_DLG_ID	CHAR(44)		Dialog ID of the master session of this session. If no service chaining is used, will be the same as DLG_ID.
DLG_AAI	VARCHAR(255)		Session variable – AAI = Application 2 Application Information
DLG_ANI	VARCHAR(20)		Session variable – ANI = Automatic Number Identification
DLG_DNIS	VARCHAR(20)		Session variable – DNIS = Dialed Number Identification Service
DLG_IID	VARCHAR(50)		Session variable – IID = Information Indicator Digits (IIDigits)
DLG_RDNIS	VARCHAR(50)		Session variable – RDNIS = Redirecting Number Identification Service
DLG_SPSID	VARCHAR(50)		Session variable – MPSID = Media Platform Session ID
DLG_CRMID	VARCHAR(128)		Value that was assigned to the CRM ID using Session(CRMID, [arg])
DLG_GCID	VARCHAR(100)		Value that was assigned to the Global Call ID using Session(GCID, [arg])
DLG_CALL_DUR_MS	NUMBER(10)		Dialog call duration in milliseconds
DLG_PROC_DUR_MS	NUMBER(10)		Dialog processing duration in milliseconds (incl. dialog end processing)
DLG_EXIT_TYPE_ID	NUMBER(3)		Dialog exit type ID – relates to lookup table VOLDEXTTYP
DLG_END_PROC_ID	NUMBER(1)		Deprecated
DLG_LOG	VARCHAR(4000)		Dialog Context – custom log information up to 4000 chars



<b>VOLDDLGSTS</b>		<b>Fact table for dialog statistics / one record per session</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_NI	NUMBER(3)		Number of No Input events
NO_NM	NUMBER(3)		Number of No Match events
NO_NM_VOICE	NUMBER(3)		Number of No Match events with input mode voice
NO_NM_DTMF	NUMBER(3)		Number of No Match events with input mode DTMF
NO_HLP	NUMBER(3)		Number of help commands
NO_RPTS	NUMBER(3)		Number of repeat commands
NO_EXIT	NUMBER(3)		Number of exit commands
NO_PAUSE	NUMBER(3)		Number of pause commands
NO_ERRS	NUMBER(3)		Number of errors
NO_BRGD_TRANS	NUMBER(3)		Number of bridged transfers
MOD_SEQ_SID	NUMBER(9)		Module sequence ID – relates to table VOLDMODSEQ
MOD_SET_SID	NUMBER(9)		Module set ID – relates to table VOLDMODSET
IS_SEQ_SID	NUMBER(9)		Deprecated column
NO_REC	NUMBER(3)		Number of recordings for this session
REC_SIZE	NUMBER(10)		Complete size of all recordings during this session in kilobyte
REC_DUR_MS	NUMBER(10)		Complete duration of all recordings during this session in milliseconds
TRANS_DUR_MS	NUMBER(10)		Complete duration of all transfers during this session in milliseconds
CHANNEL_ID	NUMBER(3)		ID of the channel used for this session – relates to lookup table VOLDCHANNEL
LYR_SET_SID	NUMBER(9)		Layer set ID – relates to lookup table VOLDLYRSET
INP_MODE_ID	NUMBER(2)		Input mode ID – relates to lookup table VOLDINPMODE
NO_DS_STEPS	NUMBER(3)		Number of input states per dialog. Will be filled, even if Input State logging is disabled



<b>VOLDDLGSTS</b>		<b>Fact table for dialog statistics / one record per session</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_DS_STEPS_VOICE	NUMBER(3)		Number of input states with a successful recognition of voice input
NO_DS_STEPS_DTMF	NUMBER(3)		Number of input states with a successful recognition of DTMF input
NO_DS_STEPS_TEXT	NUMBER(3)		Number of input states with a successful recognition of text input
LAST_DS_STEP	NUMBER(3)		ID of the last input state for this dialog – relates to table VOLDDSSEQ
LAST_DS_NAME	VARCHAR(128)		Name of the last input state for this dialog
LAST_DS_TYPE	NUMBER(3)		ID of the type of the last input state for this dialog – elates to lookup table VOLDINPTYPE
HAS_DS_STEPS	NUMBER(3)		0 if no input states were written for this dialog, 1 if at least one input state exists
NO_CONNECTOR_EXECS	NUMBER(3)		Number of connector executions
CONN_EXEC_TIME_TOT	NUMBER(8)		The cumulated execution time of all connector executions per dialog in milliseconds
CONN_EXEC_TIME_MIN	NUMBER(8)		The shortest connector execution time per dialog in milliseconds
CONN_EXEC_TIME_MAX	NUMBER(8)		The longest connector execution time per dialog in milliseconds
NO_SCRIPT_EXECS	NUMBER(3)		Number of script executions
SCRT_EXEC_TIME_TOT	NUMBER(8)		The cumulated execution time of all script executions per dialog in milliseconds
SCRT_EXEC_TIME_MIN	NUMBER(8)		The shortest script execution time per dialog in milliseconds
SCRT_EXEC_TIME_MAX	NUMBER(8)		The longest script execution time per dialog in milliseconds
NO_NOTIFICATIONS	NUMBER(3)		Number of notifications sent (SNMP or e-mail)
NO_HYPERLINKS	NUMBER(3)		Number of hyperlinks triggered per dialog



<b>VOLDDLGSTS</b>		<b>Fact table for dialog statistics / one record per session</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_BACK	NUMBER(3)		Number of back commands
NO_FORWARD	NUMBER(3)		Number of forward commands
NO_SKIP	NUMBER(3)		Number of skip commands
PAUSE_DURATION_MS	NUMBER(8)		Duration in milliseconds that the dialog was in pause mode
NO_DS_IMMEDREC	NUMBER(3)		Number of input states with an immediate recognition (i.e. a recognition event without one of the following events: No Match, No Input, error, disconnect, help, repeat)
NO_DS_NONIMMEDREC	NUMBER(3)		Number of input states with a non-immediate recognition (i.e. a recognition event with one of the following events: No Match, No Input, error, disconnect, help, repeat)
NO_DS_SUCCESS	NUMBER(3)		Number of successful input states (i.e. input states that finished with a recognition event)
NO_DS_NONSUCCESS	NUMBER(3)		Number of unsuccessful input states (i.e. input states that finished without a recognition event)
NO_DS_NOMATCH	NUMBER(3)		Number of input states with at least one No Match event
NO_DS_NM_VOICE	NUMBER(3)		Number of input states with at least one No Match voice event
NO_DS_NM_DTMF	NUMBER(3)		Number of input states with at least one No Match DTMF event
NO_DS_NOINPUT	NUMBER(3)		Number of input states with at least one No Input event
NO_NI_1	NUMBER(3)		Number of input states with at least one No Input event
NO_NI_2	NUMBER(3)		Number of input states with at least two No Input events
NO_NI_3	NUMBER(3)		Number of input states with at least three No Input events
NO_NI_4	NUMBER(3)		Number of input states with at least four No Input events



<b>VOLDDLGSTS</b>		<b>Fact table for dialog statistics / one record per session</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_NM_1	NUMBER(3)		Number of input states with at least one No Match event
NO_NM_2	NUMBER(3)		Number of input states with at least two No Match events
NO_NM_3	NUMBER(3)		Number of input states with at least three No Match events
NO_NM_4	NUMBER(3)		Number of input states with at least four No Match events
NO_MODULES	NUMBER(3)		Number of modules used in this session – corresponds to NO_MODULES in table VOLDMODSEQ
NO_DIST_MODULES	NUMBER(3)		Number of distinct modules used in this session
FIRST_MODULE_SID	NUMBER(6)		SID of the first module used in this session – relates to lookup table VOLDMODULE
LAST_MODULE_SID	NUMBER(6)		SID of the last module used in this session – relates to lookup table VOLDMODULE
FLAG_DLG_END_PROC	NUMBER(3)		Indicates if dialog end processing was used in this session: 0 = no dialog end processing 1 = dialog end processing
NO_ERRS_MP	NUMBER(3)		Number of media platform errors
NO_ERRS_INTERNAL	NUMBER(3)		Number of internal errors
NO_ERRS_SCRIPT	NUMBER(3)		Number of script errors
NO_ERRS_CONNECTOR	NUMBER(3)		Number of connector errors
NO_REQUESTS	NUMBER(3)		Number of requests executed by VoiceObjects Server
VOL_BYTES	NUMBER(8)		Data volume sent by VoiceObjects Server in bytes
PRD_VO_MAX_MS	NUMBER(8)		Not used. Always –1
PRD_VO_MIN_MS	NUMBER(8)		Not used. Always –1
PRD_VO_TOT_MS	NUMBER(8)		Not used. Always –1
PRD_TOT_MIN_MS	NUMBER(8)		Not used. Always –1



<b>VOLDDLGSTS</b>		<b>Fact table for dialog statistics / one record per session</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
PRD_TOT_MAX_MS	NUMBER(8)		Not used. Always -1
NO_BRGD_TRANS_FAIL	NUMBER(3)		Number of failed bridged transfers
NO_CONSULT_TRANS	NUMBER(3)		Number of successful consultation transfers
NO_CNSL_TRANS_FAIL	NUMBER(3)		Number of failed consultation transfers
NO_BLIND_TRANS	NUMBER(3)		Number of successful blind transfers
NO_SESSIONS	NUMBER(3)		Always 1
AVG_CONF_VOICE	NUMBER(3,2)		Average confidence level for all input states in this session
DLG_CHAIN_POS	NUMBER(3)		Indicates the position of this dialog in a service chain
DLG_CHAIN_IS_LAST	NUMBER(1)		Indicates if this is the last session in a service chain: 1 if it is the last session, 0 otherwise
NO_MASTER_SES	NUMBER(1)		Indicates if this session is the master session in a service chain: 1 if it is the master session, 0 otherwise
DLG_EXIT_DEST	VARCHAR(255)		The value of the exit destination. Can be a URL in case of exit type <i>submit</i> , a VSN in case of exit type <i>service chaining</i> , or the name of the Plug-In object in case of exit type <i>Plug-In</i> .
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDDSSEQ</b>		<b>Fact table for input state statistics / one record per input state</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)		Metadata Repository ID
DLG_ID	CHAR(44)	X	Unique dialog ID



<b>VOLDDSSSEQ</b>		<b>Fact table for input state statistics / one record per input state</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MASTER_DLG_ID	CHAR(44)		Dialog ID of the master session of this session. If no service chaining is used, will be the same as DLG_ID.
SRV_SID	NUMBER(5)		Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)		Service surrogate ID – relates to lookup table VOLDVSCOBJ
VSC_UID	NUMBER(7)		Service unique ID – unique ID for each deployment or restore action
SITE_SID	NUMBER(4)		Site surrogate ID
SITE_GUID	CHAR(40)		Site GUID – relates to lookup table VOLDSITOBJ
DS_STEP	NUMBER(3)	X	Consecutive number of each individual input state, starting at 0
MOD_SID	NUMBER(6)		Module surrogate ID – relates to lookup table VOLDMODULE
DS_NAME	VARCHAR(128)		Name of the object that triggered this input state
DS_INP_TYPE	NUMBER(3)		Input type ID – relates to lookup table VOLDINPTYPE
DS_INP_STYPE	NUMBER(3)		Input subtype ID – relates to lookup table VOLDSTYPE
DS_TR_TYPE	NUMBER(3)		Transition type ID – relates to lookup table VOLDTRTYPE
DS_EVENT_NAME	VARCHAR(255)		Name of the event that lead to a transition
DS_TR_INP_MODE	VARCHAR(20)		Indicates the input mode
DS_TR_UTT	VARCHAR(255)		Utterance of the caller
DS_TR_CONF	NUMBER(3, 2)		Confidence of the recognition event
DS_TR_SLT	VARCHAR(255)		Comma-separated list of slot names and values that were filled in the input state
NO_NI	NUMBER(3)		Number of No Input events
NO_NM	NUMBER(3)		Number of No Match events
NO_NM_VOICE	NUMBER(3)		Number of No Match events for input state voice



<b>VOLDDSSEQ</b>		<b>Fact table for input state statistics / one record per input state</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_NM_DTMF	NUMBER(3)		Number of No Match events for input state DTMF
NO_HLP	NUMBER(3)		Number of help events
NO_TURNS	NUMBER(3)		Number of turns
DS_EVENT_LIST	VARCHAR(1000 )		Comma-separated list of all events that occurred in an input state
INT_DUR_MS	NUMBER(10)		Internal processing duration of the current input state in milliseconds
EXT_DUR_MS	NUMBER(10)		Duration from sending the VoiceXML to the media platform until receiving the submit
MONTH_ID	NUMBER(6)		Month ID for this input state - YYYYMM
DAY_ID	NUMBER(8)		Day ID for this input state – YYYYMMDD
MINUTE_ID	NUMBER(4)		Minute ID for this input state – HHMM
SECOND_ID	NUMBER(2)		Second ID for start of dialog – SS
DS_EXT_PROC_DUR_MS	NUMBER(10)		External processing duration in milliseconds
DS_REC_SIZE	NUMBER(10)		Size of recordings in kilobyte
CHANNEL_ID	NUMBER(3)		ID of the channel used for this session – relates to lookup table VOLDCHANNEL
TASK_SID	NUMBER(6)		SID of the task that was active for this input state. Defaults to –1 if no task was active. Relates to lookup table VOLDTASK.
TASK_COUNTER	NUMBER(3)		Consecutive number of multiple executions of the same task
NO_NI_1	NUMBER(3)		1 if at least one No Input event occurred, 0 otherwise
NO_NI_2	NUMBER(3)		1 if at least two No Input events occurred, 0 otherwise
NO_NI_3	NUMBER(3)		1 if at least three No Input events occurred, 0 otherwise
NO_NI_4	NUMBER(3)		1 if at least four No Input events occurred, 0 otherwise



<b>VOLDDSSSEQ</b>		<b>Fact table for input state statistics / one record per input state</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_NM_1	NUMBER(3)		1 if at least one No Match event occurred, 0 otherwise
NO_NM_2	NUMBER(3)		1 if at least two No Match events occurred, 0 otherwise
NO_NM_3	NUMBER(3)		1 if at least three No Match events occurred, 0 otherwise
NO_NM_4	NUMBER(3)		1 if at least four No Match events occurred, 0 otherwise
UTT_COUNT	NUMBER(3)		Number of words in the recognized utterance
UTT_COUNT_1	NUMBER(3)		1 if the utterance consists of one word, 0 otherwise
UTT_COUNT_2	NUMBER(3)		1 if the utterance consists of two words, 0 otherwise
UTT_COUNT_3	NUMBER(3)		1 if the utterance consists of three words, 0 otherwise
UTT_COUNT_4	NUMBER(3)		1 if the utterance consists of four words, 0 otherwise
UTT_COUNT_5	NUMBER(3)		1 if the utterance consists of five words, 0 otherwise
UTT_COUNT_6	NUMBER(3)		1 if the utterance consists of six or more words, 0 otherwise
UTT_COUNT_1_CONF	NUMBER(3,2)		Contains the confidence if the utterance consists of one word, -1 otherwise
UTT_COUNT_2_CONF	NUMBER(3,2)		Contains the confidence if the utterance consists of two words, -1 otherwise
UTT_COUNT_3_CONF	NUMBER(3,2)		Contains the confidence if the utterance consists of three words, -1 otherwise
UTT_COUNT_4_CONF	NUMBER(3,2)		Contains the confidence if the utterance consists of four words, -1 otherwise
UTT_COUNT_5_CONF	NUMBER(3,2)		Contains the confidence if the utterance consists of five words, -1 otherwise
UTT_COUNT_6_CONF	NUMBER(3,2)		Contains the confidence if the utterance consists of six or more words, -1 otherwise



<b>VOLDDSSEQ</b>		<b>Fact table for input state statistics / one record per input state</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
UTT_LEN	NUMBER(3)		Number of characters of the recognized utterance
UTT_LEN_TRIM	NUMBER(3)		Number of characters of the recognized utterance without spaces
IS_LAST_STEP	NUMBER(1)		1 if the current input state is the last one for the session, 0 otherwise
DS_BARGEIN_ENABLED	NUMBER(1)		1 if barge-in is enabled, 0 otherwise
STD_NAV_ENABLED	NUMBER(1)		1 if at least one standard navigation command was active, 0 otherwise
NO_DS_STEPS	NUMBER(1)		Always 1
NO_DS_STEPS_VOICE	NUMBER(1)		1 if a successful recognition with input mode <i>voice</i> occurred, 0 otherwise
NO_DS_STEPS_DTMF	NUMBER(1)		1 if a successful recognition with input mode <i>DTMF</i> occurred, 0 otherwise
NO_DS_STEPS_TEXT	NUMBER(1)		1 if input mode = text, 0 otherwise
MOD_SEQ_POS	NUMBER(3)		Position of the module that the current input state belongs to in the module sequence
MOD_SEQ_MOD_SID	NUMBER(6)		SID of the module that the current input state belongs to
DS_CONF_THRS	NUMBER(3,2)		Confidence threshold that was active during the current input state –1 if no confidence threshold was set
NO_NOTIFICATIONS	NUMBER(3)		Number of notifications sent
NO_HYPERLINKS	NUMBER(3)		Number of hyperlinks triggered
NO_BACK	NUMBER(3)		Number of back commands
NO_FORWARD	NUMBER(3)		Number of forward commands
NO_SKIP	NUMBER(3)		Number of skip commands
NO_RPTS	NUMBER(3)		Number of repeat commands
PAUSE_DURATION_MS	NUMBER(8)		Duration in milliseconds the system was in pause mode



<b>VOLDDSSEQ</b>		<b>Fact table for input state statistics / one record per input state</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_DS_IMMEDREC	NUMBER(1)		1 if an immediate recognition took place (i.e. a recognition event without one of the following events: No Match, No Input, error, disconnect, help, repeat), 0 otherwise
NO_DS_NONIMMEDREC	NUMBER(1)		1 if a non-immediate recognition took place (i.e. a recognition event with one of the following events: No Match, No Input, error, disconnect, help, repeat), 0 otherwise
NO_DS_SUCCESS	NUMBER(1)		1 if the input state was finished with a recognition event, 0 otherwise
NO_DS_NONSUCCESS	NUMBER(1)		1 if the input state was not finished with a recognition event, 0 otherwise
NO_DS_NOMATCH	NUMBER(1)		1 if at least one No Match event occurred, 0 otherwise
NO_DS_NM_VOICE	NUMBER(1)		1 if at least one No Match event with input mode <i>voice</i> occurred, 0 otherwise
NO_DS_NM_DTMF	NUMBER(1)		1 if at least one No Match event with input mode <i>DTMF</i> occurred, 0 otherwise
NO_DS_NOINPUT	NUMBER(1)		1 if at least one No Input event occurred, 0 otherwise
NO_ERRS_MP	NUMBER(3)		Number of media platform errors
NO_ERRS_INTERNAL	NUMBER(3)		Number of internal errors
NO_ERRS_SCRIPT	NUMBER(3)		Number of script errors
NO_ERRS_CONNECTOR	NUMBER(3)		Number of connector errors
NO_REQUESTS	NUMBER(3)		Always 1
VOL_BYTES	NUMBER(8)		Data volume sent by VoiceObjects Server in bytes
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDDRIVER</b>	<b>Lookup table for media platform drivers / one record per driver</b>
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Column Name	Data Type	Primary Key	Description
DRIVER_ID	NUMBER(3)	X	Media platform driver ID
DRIVER_NAME	VARCHAR(50)		Media platform driver description
CHANNEL_ID	NUMBER(3)		ID of the channel configured for this driver – relates to lookup table VOLDCHANNEL
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDEXTSTS</b>			
Lookup table for the exit status / one record per exit status and locale			
Column Name	Data Type	Primary Key	Description
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
DLG_EXIT_STS_ID	NUMBER(2)	X	Dialog exit status ID
DLG_EXIT_STS_DSC	VARCHAR(15)		Dialog exit status description (LOCALIZED)
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDEXTTYP</b>			
Lookup table for the exit types / one record per exit type and locale			
Column Name	Data Type	Primary Key	Description
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
DLG_EXIT_TYPE_ID	NUMBER(3)	X	Dialog exit type ID
DLG_EXIT_TYPE_CODE	VARCHAR(15)		Dialog exit type code (short description of dialog type)
DLG_EXIT_TYPE_DSC	VARCHAR(30)		Dialog exit type description (LOCALIZED)
DLG_EXIT_STS_ID	NUMBER(2)		Dialog exit status ID – relates to table VOLDEXTSTS
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB





<b>VOLDINPMODE</b>			
<b>Lookup table for input modes / one record per input mode and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
INP_MODE_ID	NUMBER(2)	X	Input mode ID
INP_MODE_CID	VARCHAR(20)		Input mode alphanumeric ID.
INP_MODE_DESC	VARCHAR(20)		Input mode description (LOCALIZED)
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDINPTYPE</b>			
<b>Lookup table for input types / one record per type and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
DS_INP_TYPE	NUMBER(3)	X	Input type ID
DS_INP_DESC	VARCHAR(255)		Name of the input type (e.g. Input, Menu, etc.) LOCALIZED
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDLAYER</b>			
<b>Lookup table for layers / one record per layer</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
SITE_SID	NUMBER(4)	X	Site surrogate ID – relates to lookup table VOLDSITOBJ
LYR_SID	NUMBER(6)	X	Layer surrogate ID



<b>VOLDLAYER</b>		<b>Lookup table for layers / one record per layer</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LYR_REFID	VARCHAR(255)		Layer reference ID
LYR_GUID	CHAR(40)		Layer GUID
LYR_NAME	VARCHAR(255)		Layer name
LYR_CRT_TS	NUMBER(14)		Layer creation timestamp
LYR_CRT_DAY_ID	NUMBER(8)		Layer creation day ID – YYYYMMDD
LYR_CRT_MINUTE_ID	NUMBER(4)		Layer creation minute ID – HHMM
LYR_MOD_TS	NUMBER(14)		Layer modification timestamp
LYR_MOD_DAY_ID	NUMBER(8)		Layer modification day ID – YYYYMMDD
LYR_MOD_MINUTE_ID	NUMBER(4)		Layer modification minute ID – HHMM
LYR_OWN_ACC_GUID	CHAR(40)		Layer owner account ID
LYR_MOD_ACC_GUID	CHAR(40)		Layer modification account ID
LYR_TYPE_ID	NUMBER(2)		Layer type ID – relates to lookup table VOLDLYRTYPE.
LYR_LOG_STATUS	NUMBER(1)		1 if logging for this layer is enabled, 0 otherwise
NO_LAYERS	NUMBER(1)		Always 1
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDLNGCOD</b>		<b>Lookup table for supported languages / one record per language and locale</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
LANGUAGE_ID	NUMBER(3)	X	Language ID
LANGUAGE_CODE	VARCHAR(8)		Language code (e.g. en-US, de, etc.) LOCALIZED
LANGUAGE_DSC	VARCHAR(50)		Name of the language (e.g. Hungarian, French, etc.) LOCALIZED



<b>VOLDLNGCOD</b>			
<b>Lookup table for supported languages / one record per language and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDLOCK</b>			
<b>For internal use only</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCK_VALUE	VARCHAR(255)	X	For internal use only
LOCK_KEY	VARCHAR(40)		For internal use only
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDLOGSCOPE</b>			
<b>Lookup table for logging scopes / one record per logging scope and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
LOG_FILTERSCP_ID	NUMBER(3)	X	Logging Scope ID
LOG_FILTERSCP_NAME	VARCHAR(255)		Logging Scope name
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDLOGSRV</b>			
<b>Fact table for enhanced server statistics / one record per interval, service, and server instance</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_INST_IP	VARCHAR(140)	X	Server IP address
SRV_INST_PORT	VARCHAR(10)	X	Server instance port
SRV_INST_NAME	VARCHAR(128)	X	Server instance name



<b>VOLDLOGSRV</b>			
<b>Fact table for enhanced server statistics / one record per interval, service, and server instance</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
VSC_UID	NUMBER(7)		Service unique ID – unique ID for each deployment or restore action
MONTH_ID	NUMBER(6)		Month ID of snapshot taken – YYYYMM
DAY_ID	NUMBER(8)	X	Day ID of snapshot taken – YYYYMMDD
MINUTE_ID	NUMBER(4)	X	Minute ID of snapshot taken – HHMM
SECOND_ID	NUMBER(2)	X	Second ID of snapshot taken – SS
NO_CON_CALLS	NUMBER(8)		Number of concurrent active sessions
NO_FIN_CALLS	NUMBER(8)		Total number of finished sessions
NO_ABO_CALLS	NUMBER(8)		Total number of aborted sessions
NO_REJ_CALLS	NUMBER(8)		Total number of rejected sessions
NO_REQUESTS	NUMBER(8)		Number of requests executed by VoiceObjects Server
VOL_BYTES	NUMBER(10)		Data volume sent by VoiceObjects Server in bytes
NO_SESSIONS	NUMBER(8)		Number of finished or aborted sessions since last record
DELTA_ABO_CALLS	NUMBER(8)		Number of aborted sessions since last record
DELTA_REJ_CALLS	NUMBER(8)		Number of rejected sessions since last record
DLG_CALL_DUR_MS	NUMBER(10)		Cumulated dialog call duration in milliseconds
DLG_PROC_DUR_MS	NUMBER(10)		Cumulated dialog processing duration in milliseconds (incl. dialog end processing)
NO_CONNECTOR_EXECS	NUMBER(8)		Number of connector executions



<b>VOLDLOGSRV</b>			
<b>Fact table for enhanced server statistics / one record per interval, service, and server instance</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
CONN_EXEC_TIME_TOT	NUMBER(10)		The cumulated execution time of all connector executions per service in milliseconds
CONN_EXEC_TIME_MIN	NUMBER(10)		The shortest connector execution time per service in milliseconds
CONN_EXEC_TIME_MAX	NUMBER(10)		The longest connector execution time per service in milliseconds
NO_SCRIPT_EXECS	NUMBER(8)		Number of script executions
SCRT_EXEC_TIME_TOT	NUMBER(10)		The cumulated execution time of all script executions per service in milliseconds
SCRT_EXEC_TIME_MIN	NUMBER(10)		The shortest script execution time per service in milliseconds
SCRT_EXEC_TIME_MAX	NUMBER(10)		The longest script execution time per service in milliseconds
ROW_TS	DATE	X	Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDLYRREL</b>			
<b>Relationship table for layer sets / one record per layer and layer set</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
SITE_SID	NUMBER(4)	X	Site surrogate ID – relates to lookup table VOLDSITOBJ
LYR_SET_SID	NUMBER(9)	X	Layer set surrogate ID
LYR_SID	NUMBER(6)	X	Layer surrogate ID – relates to table VOLDLAYER
LYRS_SID	NUMBER(6)	X	Layer state surrogate ID – relates to table VOLDLYRSTATE
LYR_NAME	VARCHAR(255)		Layer name
LYRS_NAME	VARCHAR(255)		Layer state name



<b>VOLDLYRREL</b>			
<b>Relationship table for layer sets / one record per layer and layer set</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
ROW_TS	DATE		For internal use only

<b>VOLDLYRSET</b>			
<b>Lookup table for layer sets / one record per distinct layer set</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
SITE_SID	NUMBER(4)	X	Site surrogate ID – relates to lookup table VOLDSITOBJ
LYR_SET_SID	NUMBER(9)	X	Layer set surrogate ID
LYR_SET_NAME	VARCHAR(2000)		Comma-separated list of layer names
NO_LYR_SETS	NUMBER(1)		Always 1
LYR_SET_HASHID	CHAR(32)		MD5 Hash value of the layer set name
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDLYRSETSID</b>			
<b>For internal use only</b>			
<b>Column name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NEXTVAL	NUMBER(9)		For internal use only

<b>VOLDLYRSTATE</b>			
<b>Lookup table for layer states / one record per layer state</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID



<b>VOLDLYRSTATE</b>			
<b>Lookup table for layer states / one record per layer state</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
SITE_SID	NUMBER(4)	X	Site surrogate ID – relates to lookup table VOLDSITOBJ
LYR_SID	NUMBER(6)		Layer surrogate ID
LYRS_SID	NUMBER(6)	X	Layer state surrogate ID
LYRS_REFID	VARCHAR(255)		Layer state reference ID
LYRS_GUID	CHAR(40)		Layer state GUID
LYRS_NAME	VARCHAR(255)		Layer state name
NO_LYRS	NUMBER(1)		Always 1
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDLYRTYPE</b>			
<b>Lookup table for layer types / one record per layer type and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
LYR_TYPE_ID	NUMBER(2)	X	Layer type ID
LYR_TYPE_DESC	VARCHAR(20)		Layer type description (LOCALIZED)
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDMODSEQ</b>			
<b>Lookup table for module sequences / one record per distinct sequence</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MOD_SEQ_SID	NUMBER(9)	X	Module sequence surrogate ID



<b>VOLDMODSEQ</b>			
<b>Lookup table for module sequences / one record per distinct sequence</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
SITE_SID	NUMBER(4)		Site surrogate ID – relates to lookup table VOLDSITOBJ
SITE_GUID	CHAR(40)		Site GUID
MOD_SEQ_REFID	VARCHAR(4000)		Comma-separated list of module reference IDs (size depends on DB)
MOD_SEQ_NAME	VARCHAR(4000)		Comma-separated list of module names (size depends on DB)
MOD_SEQ_GUID	VARCHAR(4000)		Comma-separated list of module GUIDs (size depends on DB)
MOD_SET_SID	NUMBER(9)		Module set surrogate ID
MOD_SEQ_HASHID	CHAR(32)		MD5 Hash value of the module sequence reference ID
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDMODSEQSID</b>			
<b>For internal use only</b>			
<b>Column name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NEXTVAL	NUMBER(3)		For internal use only

<b>VOLDMODSET</b>			
<b>Lookup table for module sets / one record per distinct set</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MOD_SET_SID	NUMBER(9)	X	Module set surrogate ID
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ



<b>VOLDMODSET</b>			
<b>Lookup table for module sets / one record per distinct set</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
SITE_SID	NUMBER(4)		Site surrogate ID – relates to lookup table VOLDSITOBJ
SITE_GUID	CHAR(40)		Site GUID
MOD_SET_REFID	VARCHAR(4000)		Comma-separated list of module reference IDs (size depends on DB)
MOD_SET_NAME	VARCHAR(4000)		Comma-separated list of module names (size depends on DB)
MOD_SET_GUID	VARCHAR(4000)		Comma-separated list of module GUIDs (size depends on DB)
MOD_SET_HASHID	CHAR(32)		MD5 Hash value of the module set reference ID
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDMODSETSID</b>			
<b>For internal use only</b>			
<b>Column name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NEXTVAL	NUMBER(3)		For internal use only

<b>VOLDMODULE</b>			
<b>Lookup table for modules / one record per module</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
MOD_SID	NUMBER(6)	X	Module surrogate ID
MOD_REFID	VARCHAR(255)		Module reference ID
MOD_GUID	CHAR(40)		Module GUID
MOD_NAME	VARCHAR(255)		Module name



<b>VOLDMODULE</b>		<b>Lookup table for modules / one record per module</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MOD_CRT_TS	NUMBER(14)		Module creation timestamp
MOD_CRT_DAY_ID	NUMBER(8)		Module creation day ID – YYYYMMDD
MOD_CRT_MINUTE_ID	NUMBER(4)		Module creation minute ID – HHMM
MOD_MOD_TS	NUMBER(14)		Module modification timestamp
MOD_MOD_DAY_ID	NUMBER(8)		Module modification day ID – YYYYMMDD
MOD_MOD_MINUTE_ID	NUMBER(4)		Module modification minute ID – HHMM
MOD_OWN_ACC_GUID	CHAR(40)		Module owner account ID
MOD_MOD_ACC_GUID	CHAR(40)		Module modification account ID
MOD_LOG_STATUS	NUMBER(1)		Specifies if the option “Enable history tracking” is enabled on the module: 1 if this setting is enabled, 0 otherwise
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDRECCAT</b>		<b>Lookup table for recording categories / one record per category and locale</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(3)	X	Specifies the language of the description
REC_CAT_ID	NUMBER(3)	X	Recording category ID
REC_CAT_DESC	VARCHAR(255)		Recording category description
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDRECLOG</b>		<b>Fact table for recordings / one record per recording</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)		Metadata Repository ID



<b>VOLDRECLOG</b>		<b>Fact table for recordings / one record per recording</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
SRV_SID	NUMBER(5)		Server surrogate ID
VSC_SID	NUMBER(6)		Service surrogate ID
VSC_UID	NUMBER(7)		Service unique ID – unique ID for each deployment or restore action
SITE_SID	NUMBER(4)		Site surrogate ID
SITE_GUID	CHAR(40)		Site GUID
SRV_INST_IP	VARCHAR(140)		Server IP address
SRV_INST_PORT	VARCHAR(10)		Server instance port
SRV_INST_NAME	VARCHAR(128)		Server instance name
MONTH_ID	NUMBER(6)		Month ID for start of dialog
DAY_ID	NUMBER(8)		Day ID for start of dialog
MINUTE_ID	NUMBER(4)		Minute ID for start of dialog
SECOND_ID	NUMBER(2)		Second ID for start of dialog
MOD_SID	NUMBER(6)		Module surrogate ID
CHANNEL_ID	NUMBER(3)		Channel ID
DLG_ID	CHAR(44)	X	Unique dialog ID
MASTER_DLG_ID	CHAR(44)		Dialog ID of the master session of this session. If no service chaining is used, will be the same as DLG_ID.
DS_STEP	NUMBER(10)	X	Consecutive number of each individual input state
DS_NAME	VARCHAR(128)		Name of the object that initiated the input state
DS_INP_TYPE	NUMBER(3)		Input type ID – relates to table VOLDINPTYPE
DS_CONF_THRS	NUMBER(3,2)		Confidence threshold that was active during the current input state –1 if no confidence threshold was set
REC_UTT	VARCHAR(255)		Utterance for the recording. Maps to LASTRESULT(utterance), i.e. it is the termchar in case of a Recording object and the utterance in case of utterance and fallback recording. For call recordings this column is empty.



<b>VOLDRECLOG</b>		<b>Fact table for recordings / one record per recording</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
REC_CONF	NUMBER(3,2)		Confidence value for the recording (application.lastresult\$.confidence ). 0 in case of a Recording object or call recording. For call recordings this column is empty.
REC_COUNT	NUMBER(10)	X	Consecutive numbering of each recording, globally per dialog session
REC_PATH	VARCHAR(255)		Base path to the recording
REC_URL	VARCHAR(255)		Base URL to the recording
REC_NAME	VARCHAR(255)		File name of the recording, including folder structure for month, day, etc.
REC_TYPE_ID	NUMBER(3)		Type of the recording -relates to lookup table VOLDRECTYPE
REC_DUR_MS	NUMBER(10)		Duration of the recording in milliseconds
REC_SIZE	NUMBER(10)		Size of the recording in bytes
REC_OBJ_OCCUR_CNT	NUMBER(3)		Occurrence count of the Recording object
NO_RECORDINGS	NUMBER(1)		Constant used for counting records, should always be 1
TASK_SID	NUMBER(6)		Business task surrogate ID
TASK_COUNTER	NUMBER(3)		Consecutive number of multiple executions of the same task
TRANSCRIPTION	VARCHAR(255)		Column reserved for transcription of the recording; filled with the empty string by Infostore
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDRECTYPE</b>		<b>Lookup table for recording types / one record per type and locale</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(3)	X	Specifies the language of the description
REC_TYPE_ID	NUMBER(3)	X	Recording type ID



<b>VOLDRECTYPE</b>			
<b>Lookup table for recording types / one record per type and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
REC_CAT_ID	NUMBER(3)		Recording category ID – relates to lookup table VOLDRECCAT
REC_TYPE_DESC	VARCHAR(255)		Recording type description
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDREMSQ</b>			
<b>Relationship table for module sequences / one record per module sequence and entry in sequence</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MOD_SEQ_SID	NUMBER(9)	X	Module sequence surrogate ID
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
MOD_STEP	NUMBER(3)	X	Consecutive number of module in sequence
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
SITE_SID	NUMBER(4)		Site surrogate ID – relates to lookup table VOLDSITOBJ
SITE_GUID	CHAR(40)		Site GUID
MOD_SID	NUMBER(6)		Module surrogate ID
ROW_TS	DATE		For internal use only

<b>VOLDREPCFG</b>			
<b>For internal use only</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
CFG_CATG	VARCHAR(255)	X	For internal use only
CFG_PROP	VARCHAR(255)	X	For internal use only
CFG_PROP_ID	NUMBER(14)	X	For internal use only
CFG_VAL	VARCHAR(255)		For internal use only
ROW_TS	DATE		For internal use only





<b>VOLDREPSRC</b>			
<b>Lookup table for repository / one record per repository</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
MD_REP_NAME	VARCHAR(255)		Metadata Repository name
MD_REP_DISP_NAME	VARCHAR(255)		Metadata Repository display name
REP_SES_LMT	NUMBER(6)		The maximum number of concurrent sessions for this installation
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDSITOBJ</b>			
<b>Lookup table for sites / one record per site</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SITE_SID	NUMBER(4)		Site surrogate ID
SITE_REFID	VARCHAR(255)		Site reference ID
SITE_GUID	CHAR(40)	X	Site GUID
SITE_NAME	VARCHAR(255)		Site name
SITE_CRT_TS	NUMBER(14)		Site creation timestamp
SITE_CRT_DAY_ID	NUMBER(8)		Site creation day ID – YYYYMMDD
SITE_CRT_MINUTE_ID	NUMBER(4)		Site creation minute ID – HHMM
SITE_MOD_TS	NUMBER(14)		Site modification timestamp
SITE_MOD_DAY_ID	NUMBER(8)		Site modification day ID – YYYYMMDD
SITE_MOD_MINUTE_ID	NUMBER(4)		Site modification minute ID – HHMM
SITE_OWN_ACC_GUID	CHAR(40)		Site owner account ID
SITE_MOD_ACC_GUID	CHAR(40)		Site modification account ID
ROW_TS	DATE		Row timestamp - exact timestamp when the record was written into the DB



<b>VOLDSRVOBJ</b>			
<b>Lookup table for Server object / one record per object</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SITE_SID	NUMBER(4)		Site surrogate ID
SITE_GUID	CHAR(40)		Site GUID
SRV_SID	NUMBER(5)	X	Server surrogate ID
SRV_GUID	CHAR(40)		Server GUID
SRV_REFID	VARCHAR(255)		Server reference ID
SRV_NAME	VARCHAR(255)		Server name
SRV_NAME_ALIAS	VARCHAR(255)		Server name alias
SRV_CRT_TS	NUMBER(14)		Server creation timestamp
SRV_CRT_DAY_ID	NUMBER(8)		Server creation day ID – YYYYMMDD
SRV_CRT_MINUTE_ID	NUMBER(4)		Server creation minute ID – HHMM
SRV_MOD_TS	NUMBER(14)		Server modification timestamp
SRV_MOD_DAY_ID	NUMBER(8)		Server modification day ID – YYYYMMDD
SRV_MOD_MINUTE_ID	NUMBER(4)		Server modification minute ID – HHMM
SRV_OWN_ACC_GUID	CHAR(40)		Server owner account ID
SRV_MOD_ACC_GUID	CHAR(40)		Server modification account ID
SRV_SDSC	VARCHAR(4000)		Server short description
SRV_LDSC	VARCHAR(4000)		Server comment
SRV_IDSC	VARCHAR(4000)		Server error description
SRV_VDSC	VARCHAR(4000)		Server version description
SRV_KYWRDS	VARCHAR(4000)		Server keywords
SRV_SES_LMT	NUMBER(6)		Maximum number of concurrent sessions for this server
GRP_SES_LMT	NUMBER(6)		Maximum number of concurrent sessions for the cluster group
REQ_SES_GAR	NUMBER(8)		Requested guaranteed sessions



<b>VOLDSRVOBJ</b>			
<b>Lookup table for Server object / one record per object</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOG_CC_LOGINTERVAL	NUMBER(9)		Specified Control Center snapshot interval
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDSTYPE</b>			
<b>Lookup table for input subtypes / one record per subtype and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
DS_INP_STYPE	NUMBER(3)	X	Input subtype ID
INP_STYPE_DESC	VARCHAR(255)		Name of the subtype (e.g. Confirmation. Collection, etc.) LOCALIZED
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDSUBSEQ</b>			
<b>Lookup table for module subsequences / one record per subsequence</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MOD_SEQ_SID	NUMBER(9)	X	Module sequence surrogate ID
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_SID	NUMBER(5)	X	Server surrogate ID
VSC_SID	NUMBER(6)	X	Service surrogate ID
SITE_SID	NUMBER(4)	X	Site surrogate ID
MOD_START_SID	NUMBER(6)	X	Surrogate ID of the first module in this subsequence
MOD_START_NAME	VARCHAR(255)		Name of the first module in this subsequence
MOD_END_SID	NUMBER(6)	X	Surrogate ID of the last module in this subsequence



<b>VOLDSUBSEQ</b>			
<b>Lookup table for module subsequences / one record per subsequence</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MOD_END_NAME	VARCHAR(255)		Name of the last module in this subsequence
POS_IN_SEQ	NUMBER(3)	X	Position of the start module in the sequence
MOD_SUBSEQ_COUNT	NUMBER(3)	X	Number of modules between the start and end module of this subsequence
MOD_SEQ_COUNT	NUMBER(3)		Number of modules in the subsequence including start and end module
MOD_SET_COUNT	NUMBER(3)		Number of modules in the set derived from the subsequence
MOD_SUBSEQ_MODNAME	VARCHAR(2000)		Comma-separated list of the names of the modules between the start and end module of this subsequence
MOD_SEQ_REFID	VARCHAR(4000)		Comma-separated list of module reference IDs of the module subsequence
MOD_POS2_SID	NUMBER(6)		Surrogate ID of the second module in the subsequence
MOD_POS3_SID	NUMBER(6)		Surrogate ID of the third module in the subsequence
MOD_POS4_SID	NUMBER(6)		Surrogate ID of the fourth module in the subsequence
MOD_POS5_SID	NUMBER(6)		Surrogate ID of the fifth module in the subsequence
MOD_POS6_SID	NUMBER(6)		Surrogate ID of the sixth module in the subsequence
MOD_SUBSEQ_OCCUR	NUMBER(3)		Occurrence ordinal of this subsequence in the module sequence
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDTASK</b>			
<b>Lookup table for business tasks / one record per business task</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>



<b>VOLDTASK</b>		<b>Lookup table for business tasks / one record per business task</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
TASK_SID	NUMBER(6)	X	Business task surrogate ID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
SITE_SID	NUMBER(6)	X	Site surrogate ID – relates to lookup table VOLDSITOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
TASK_NAME	VARCHAR(255)		Business task name
TASK_GUID	CHAR(40)		Business task GUID
TASK_REFID	VARCHAR(255)		Business task reference ID
TASK_CRT_TS	NUMBER(14)		Business task creation timestamp
TASK_CRT_DAY_ID	NUMBER(8)		Business task creation day ID – YYYYMMDD
TASK_CRT_MINUTE_ID	NUMBER(4)		Business task creation minute ID – HHMM
TASK_MOD_TS	NUMBER(14)		Business task modification timestamp
TASK_MOD_DAY_ID	NUMBER(8)		Business task modification day ID – YYYYMMDD
TASK_MOD_MINUTE_ID	NUMBER(4)		Business task modification minute ID – HHMM
TASK_OWN_ACC_GUID	CHAR(40)		Business task owner account ID
TASK_MOD_ACC_GUID	CHAR(40)		Business task modification account ID
TASK_TYPE_ID	NUMBER(2)		Business task type ID – relates to lookup table VOLDTASKTYPE
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDTASKCmpl</b>		<b>Lookup table for business task completion types / one record per completion type and locale</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>



<b>VOLDTASKMPL</b>			
<b>Lookup table for business task completion types / one record per completion type and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
TASK_CMPL_ID	NUMBER(6)	X	Completion type ID
TASK_CMPL_DSC	VARCHAR(30)		Completion type description (LOCALIZED)
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDTASKDATA</b>			
<b>Fact table for business task parameter data / one record per session per business task and parameter</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)		Metadata Repository ID
SRV_SID	NUMBER(5)		Server surrogate ID – relates to lookup table VOLDSRVOBJ
SITE_SID	NUMBER(6)		Site surrogate ID – relates to lookup table VOLDSITOBJ
VSC_SID	NUMBER(6)		Service surrogate ID – relates to lookup table VOLDVSCOBJ
DLG_ID	CHAR(44)	X	Unique dialog ID
MASTER_DLG_ID	CHAR(44)		Dialog ID of the master session of this session. If no service chaining is used, will be the same as DLG_ID.
TASK_SID	NUMBER(6)	X	Business task surrogate ID
TASK_COUNTER	NUMBER(3)	X	Consecutive number of multiple executions of the same task
TASK_STATUS_ID	NUMBER(6)		Business task status ID – relates to lookup table VOLDTASKSTATUS
TASK_TYPE_ID	NUMBER(6)		Business task type ID – relates to lookup table VOLDTASKTYPE
DATA_KEY	VARCHAR(255)	X	Parameter name
DATA_VAL_ALPHA	VARCHAR(2000)		Parameter value as alphanumeric string



<b>VOLDTASKDATA</b>			
<b>Fact table for business task parameter data / one record per session per business task and parameter</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
DATA_VAL_NUM	DOUBLE		Parameter value if the value is numeric, 0 otherwise.
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDTASKSTATS</b>			
<b>Fact table for business task statistics / one record per session and business task</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
SITE_SID	NUMBER(4)	X	Site surrogate ID
VSC_SID	NUMBER(6)	X	Service surrogate ID – relates to lookup table VOLDVSCOBJ
VSC_UID	NUMBER(7)		Service unique ID – unique ID for each deployment or restore action
DLG_ID	CHAR(44)	X	Unique dialog ID
MASTER_DLG_ID	CHAR(44)		Dialog ID of the master session of this session. If no service chaining is used, will be the same as DLG_ID.
TASK_SID	NUMBER(6)	X	Business task surrogate ID
TASK_COUNTER	NUMBER(3)	X	Consecutive number of multiple executions of the same task
TASK_START_TS	NUMBER(14)		Business task start time
MONTH_ID	NUMBER(6)		Month ID for this business task – YYYYMM
DAY_ID	NUMBER(8)		Day ID for this business task – YYYYMMDD
MINUTE_ID	NUMBER(4)		Minute ID for this business task – HHMM
SECOND_ID	NUMBER(2)		Second ID for this business task – SS
TASK_END_TS	NUMBER(14)		Business task end time



<b>VOLDTASKSTATS</b>		<b>Fact table for business task statistics / one record per session and business task</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
TASK_DUR_ACTIVE	NUMBER(10)		Duration this task was active in milliseconds
TASK_DUR_INACTIVE	NUMBER(10)		Duration this task was inactive in milliseconds
NO_PHASES_ACTIVE	NUMBER(3)		Number of times this task was active
NO_PHASES_INACTIVE	NUMBER(3)		Number of times this task was inactive
TASK_STATUS_ID	NUMBER(6)		Task status ID – relates to lookup table VOLDTASKSTATUS.
IMPLICIT_FINISH	NUMBER(1)		0 if the task was explicitly terminated, 1 otherwise
START_MODULE_SID	NUMBER(6)		SID of the module where this task was started
END_MODULE_SID	NUMBER(6)		SID of the module where this task was finished
START_DS_STEP	NUMBER(3)		Counter of the input state where this task was started
END_DS_STEP	NUMBER(3)		Counter of the input state where this task was finished
DLG_EXIT_TYPE_ID	NUMBER(3)		Dialog exit type ID – relates to lookup table VOLDEXTTYP
NO_DS_STEPS	NUMBER(3)		Number of input states – will be filled, even if Input State logging is disabled
NO_DS_STEPS_VOICE	NUMBER(3)		Number of input states with a successful recognition of voice input
NO_DS_STEPS_DTMF	NUMBER(3)		Number of input states with a successful recognition of DTMF input
NO_DS_STEPS_TEXT	NUMBER(3)		Number of input states with a successful recognition of text input
NO_MODULES	NUMBER(3)		Number of modules used for this business task – corresponds to NO_MODULES in table VOLDMODSEQ
NO_DIST_MODULES	NUMBER(3)		Number of distinct modules used for this business task



<b>VOLDTASKSTATS</b>		<b>Fact table for business task statistics / one record per session and business task</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_TASKS	NUMBER(3)		Always 1
NO_NI	NUMBER(3)		Number of No Input events
NO_NM	NUMBER(3)		Number of No Match events
NO_NM_VOICE	NUMBER(3)		Number of No Match events with input mode <i>voice</i>
NO_NM_DTMF	NUMBER(3)		Number of No Match events with input mode <i>DTMF</i>
NO_NI_1	NUMBER(3)		Number of input states with at least one No Input event
NO_NI_2	NUMBER(3)		Number of input states with at least two No Input events
NO_NI_3	NUMBER(3)		Number of input states with at least three No Input events
NO_NI_4	NUMBER(3)		Number of input states with at least four No Input events
NO_NM_1	NUMBER(3)		Number of input states with at least one No Match event
NO_NM_2	NUMBER(3)		Number of input states with at least two No Match events
NO_NM_3	NUMBER(3)		Number of input states with at least three No Match events
NO_NM_4	NUMBER(3)		Number of input states with at least four No Match events
NO_HLP	NUMBER(3)		Number of help events
NO_RPTS	NUMBER(3)		Number of repeat commands
NO_NOTIFICATIONS	NUMBER(3)		Number of notifications sent (SNMP or e-mail)
NO_HYPERLINKS	NUMBER(3)		Number of hyperlinks triggered per dialog
NO_BACK	NUMBER(3)		Number of back commands
NO_FORWARD	NUMBER(3)		Number of forward commands
NO_SKIP	NUMBER(3)		Number of skip commands
PAUSE_DURATION_MS	NUMBER(8)		Duration in milliseconds that the dialog was in pause mode



<b>VOLDTASKSTATS</b>		<b>Fact table for business task statistics / one record per session and business task</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_DS_IMMEDREC	NUMBER(3)		Number of input states with an immediate recognition (i.e. a recognition event without one of the following events: No Match, No Input, error, disconnect, help, repeat)
NO_DS_NONIMMEDREC	NUMBER(3)		Number of input states with a non- immediate recognition (i.e. a recognition event with one of the following events: No Match, No Input, error, disconnect, help, repeat)
NO_DS_SUCCESS	NUMBER(3)		Number of successful input states (i.e. input states that finished with a recognition event)
NO_DS_NONSUCCESS	NUMBER(3)		Number of unsuccessful input states (i.e. input states that finished without a recognition event)
NO_DS_NOMATCH	NUMBER(3)		Number of input states with at least one No Match event
NO_DS_NM_VOICE	NUMBER(3)		Number of input states with at least one No Match voice event
NO_DS_NM_DTMF	NUMBER(3)		Number of input states with at least one No Match DTMF event
NO_DS_NOINPUT	NUMBER(3)		Number of input states with at least one No Input event
NO_EXIT	NUMBER(3)		Number of exit commands
NO_PAUSE	NUMBER(3)		Number of pause commands
NO_REC	NUMBER(3)		Number of recordings for this business task
REC_SIZE	NUMBER(10)		Complete size of all recordings during this business task in kilobyte
REC_DUR_MS	NUMBER(10)		Complete duration of all recordings during this business task in milliseconds
NO_ERRS	NUMBER(3)		Number of errors
NO_ERRS_MP	NUMBER(3)		Number of media platform errors
NO_ERRS_INTERNAL	NUMBER(3)		Number of internal errors
NO_ERRS_SCRIPT	NUMBER(3)		Number of script errors



<b>VOLDTASKSTATS</b>		<b>Fact table for business task statistics / one record per session and business task</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NO_ERRS_CONNECTOR	NUMBER(3)		Number of connector errors
NO_CONNECTOR_EXECS	NUMBER(3)		Number of connector executions
CONN_EXEC_TIME_TOT	NUMBER(8)		Cumulated execution time of all connector executions per dialog in milliseconds
CONN_EXEC_TIME_MIN	NUMBER(8)		Shortest connector execution time per dialog in milliseconds
CONN_EXEC_TIME_MAX	NUMBER(8)		Longest connector execution time per dialog in milliseconds
NO_SCRIPT_EXECS	NUMBER(3)		Number of script executions
SCRT_EXEC_TIME_TOT	NUMBER(8)		Cumulated execution time of all script executions per dialog in milliseconds
SCRT_EXEC_TIME_MIN	NUMBER(8)		Shortest script execution time per dialog in milliseconds
SCRT_EXEC_TIME_MAX	NUMBER(8)		Longest script execution time per dialog in milliseconds
NO_BRGD_TRANS	NUMBER(3)		Number of successful bridged transfers
NO_BRGD_TRANS_FAIL	NUMBER(3)		Number of failed bridged transfers
NO_CONSULT_TRANS	NUMBER(3)		Number of successful consultation transfers
NO_CNSL_TRANS_FAIL	NUMBER(3)		Number of failed consultation transfers
NO_BLIND_TRANS	NUMBER(3)		Number of successful blind transfers
TRANS_DUR_MS	NUMBER(10)		Complete duration of all transfers during this business task in milliseconds
HAS_TASKDATA	NUMBER(1)		1 if parameter data was available for this business task, 0 otherwise
NO_REQUESTS	NUMBER(3)		Number of requests executed by VoiceObjects Server
VOL_BYTES	NUMBER(8)		Data volume sent by VoiceObjects Server in bytes



<b>VOLDTASKSTATS</b>			
<b>Fact table for business task statistics / one record per session and business task</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
CHANNEL_ID	NUMBER(3)		ID of the channel that is configured for this service – relates to lookup table VOLDCHANNEL
AVG_CONF_VOICE	NUMBER(3,2)		Average confidence level for all input states in this session
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDTASKSTATUS</b>			
<b>Lookup table for business task statuses / one record per status and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
TASK_STATUS_ID	NUMBER(6)	X	Business task status ID
TASK_STATUS_DSC	VARCHAR(30)		Business task status description (LOCALIZED)
TASK_CMPL_ID	NUMBER(6)		Completion type ID – relates to lookup table VOLDTASKCMPL
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDTASKTYPE</b>			
<b>Lookup table for business task types / one record per type and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
TASK_TYPE_ID	NUMBER(6)	X	Business task type ID
TASK_TYPE_DSC	VARCHAR(30)		Business task type description (LOCALIZED)
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB



<b>VOLDTRCAT</b>		<b>Lookup table for transition categories / one record per transition category and locale</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
DS_TR_CAT_ID	NUMBER(3)	X	Transition category ID
DS_TR_CAT_DESC	VARCHAR(255)		Name of the transition category (LOCALIZED)
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDTRTYPE</b>		<b>Lookup table for transition types / one record per transition type and locale</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
DS_TR_TYPE	NUMBER(3)	X	Transition type ID
DS_TR_DESC	VARCHAR(255)		Name of the transition type (e.g. Recognition, Event, etc.) LOCALIZED
DS_TR_CAT_ID	NUMBER(3)		Transition category ID. Relates to lookup table VOLDTRCAT
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDVSCOBJ</b>		<b>Lookup table for Service object / one record per object</b>	
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
MD_REP_SID	NUMBER(3)	X	Metadata Repository ID
SITE_SID	NUMBER(4)		Site surrogate ID
SITE_GUID	CHAR(40)		Site GUID
SRV_SID	NUMBER(5)	X	Server surrogate ID – relates to lookup table VOLDSRVOBJ
VSC_SID	NUMBER(6)	X	Service surrogate ID



<b>VOLDVSCOBJ</b>			
<b>Lookup table for Service object / one record per object</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
VSC_UID	NUMBER(7)	X	Service unique ID – unique ID for each deployment or restore action
VSC_UID_KEY	CHAR(40)		Unique key for each deployment or restore action
VSC_GUID	CHAR(40)		Service GUID
VSC_REFID	VARCHAR(255)		Service reference ID
VSC_NAME	VARCHAR(255)		Service name
VSC_NAME_ALIAS	VARCHAR(255)		Service name alias
VSC_CRT_TS	NUMBER(14)		Service creation timestamp
VSC_CRT_DAY_ID	NUMBER(8)		Service creation day ID – YYYYMMDD
VSC_CRT_MINUTE_ID	NUMBER(4)		Service creation minute ID – HHMM
VSC_MOD_TS	NUMBER(14)		Service modification timestamp
VSC_MOD_DAY_ID	NUMBER(8)		Service modification day ID – YYYYMMDD
VSC_MOD_MINUTE_ID	NUMBER(4)		Service modification minute ID – HHMM
VSC_OWN_ACC_GUID	CHAR(40)		Service owner account ID
VSC_MOD_ACC_GUID	CHAR(40)		Service modification account ID
VSC_SDSC	VARCHAR(4000)		Service short description
VSC_LDSC	VARCHAR(4000)		Service comment
VCS_IDSC	VARCHAR(4000)		Service error description
VSC_VDSC	VARCHAR(4000)		Service version description
VSC_KYWRDS	VARCHAR(4000)		Service keywords
SVC_SES_LMT	NUMBER(6)		Maximum number of concurrent sessions for the service (-1 if no limit is defined)
REQ_SES_GAR	NUMBER(8)		Requested session guarantee (-1 if no guarantee is requested)
CHANNEL_ID	NUMBER(3)		ID of the channel that is configured for this service – relates to lookup table VOLDCHANNEL



<b>VOLDVSCOBJ</b>			
<b>Lookup table for Service object / one record per object</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
DRIVER_ID	NUMBER(3)		Media platform driver ID as specified in the Service object – relates to lookup table VOLDDRIVER
LOG_COVERAGE	NUMBER(3)		The specified log coverage in percent, e.g. 70 (corresponds to a log coverage of 70%)
LOG_UTTR_ENABLED	NUMBER(1)		Specifies if utterance recording is enabled: 1 if utterance recording enabled, 0 otherwise
LOG_UTTR_COVERAGE	NUMBER(3)		The specified utterance recording coverage in percent, e.g. 70 (corresponds to a log coverage of 70%)
LOG_SYS_IS_ENABLED	NUMBER(1)		Specifies if system DB logging is enabled: 1 if system DB logging is enabled, 0 otherwise
LOG_CUS_IS_ENABLED	NUMBER(1)		Specifies if custom DB logging is enabled: 1 if custom DB logging is enabled, 0 otherwise
LOG_DS_IS_ENABLED	NUMBER(1)		Specifies if Input State logging is enabled: 1 if input state logging is enabled, 0 otherwise
LOG_FILTERSCP_ID	NUMBER(1)		Specifies the logging filter scope – relates to lookup table VOLDLOGSCOPE
IS_CURRENT	NUMBER(1)		Identifies if this record is the current one: 1 if this record is the current one, 0 otherwise
VSC_DEPL_DUR	NUMBER(12)		The duration in seconds, that this deployment was active. This column is not filled for a current deployment.
VSC_HAS_SLA	NUMBER(1)		Specifies if the service has active Service Level Agreements: 1 if it has Service Level Agreements, 0 otherwise
DAY_ID	NUMBER(8)		Day ID for the time of the deployment – YYYYMMDD
MINUTE_ID	NUMBER(4)		Minute ID for the time of the deployment – HHMM



<b>VOLDVSCOBJ</b>			
<b>Lookup table for Service object / one record per object</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
SECOND_ID	NUMBER(2)		Second ID for the time of the deployment – SS
VSC_TYPE_ID	NUMBER(2)		Type of the deployment – relates to lookup table VOLDVSCTYPE
VSC_DEPLCOM_ID	NUMBER(2)		Command that was used for deployment – relates to lookup table VOLDDEPLCOM
SO_PRO_GUID	CHAR(40)		GUID of the deployed project
SO_PRO_NAME	VARCHAR(255)		Name of the deployed project
SO_PRO_SDSC	VARCHAR(4000)*		Short description of the deployed project
SO_PROV_GUID	VARCHAR(255)		GUID of the deployed project version
SO_PROV_NAME	VARCHAR(255)		Name of the deployed project version
SO_PROV_SDSC	VARCHAR(4000)*		Short description of the deployed project version
SO_OBJ_GUID	CHAR(40)		GUID of the deployed start object
SO_OBJ_REFID	VARCHAR(255)		Reference ID of the deployed start object
SO_OBJ_NAME	VARCHAR(255)		Name of the deployed start object
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

<b>VOLDVSCTYPE</b>			
<b>Lookup table for service types / one record per service type and locale</b>			
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
LOCALE_ID	NUMBER(2)	X	Specifies the language of the description
VSC_TYPE_ID	NUMBER(3)	X	Service Type ID
VSC_TYPE_NAME	VARCHAR(255)		Service Type Name



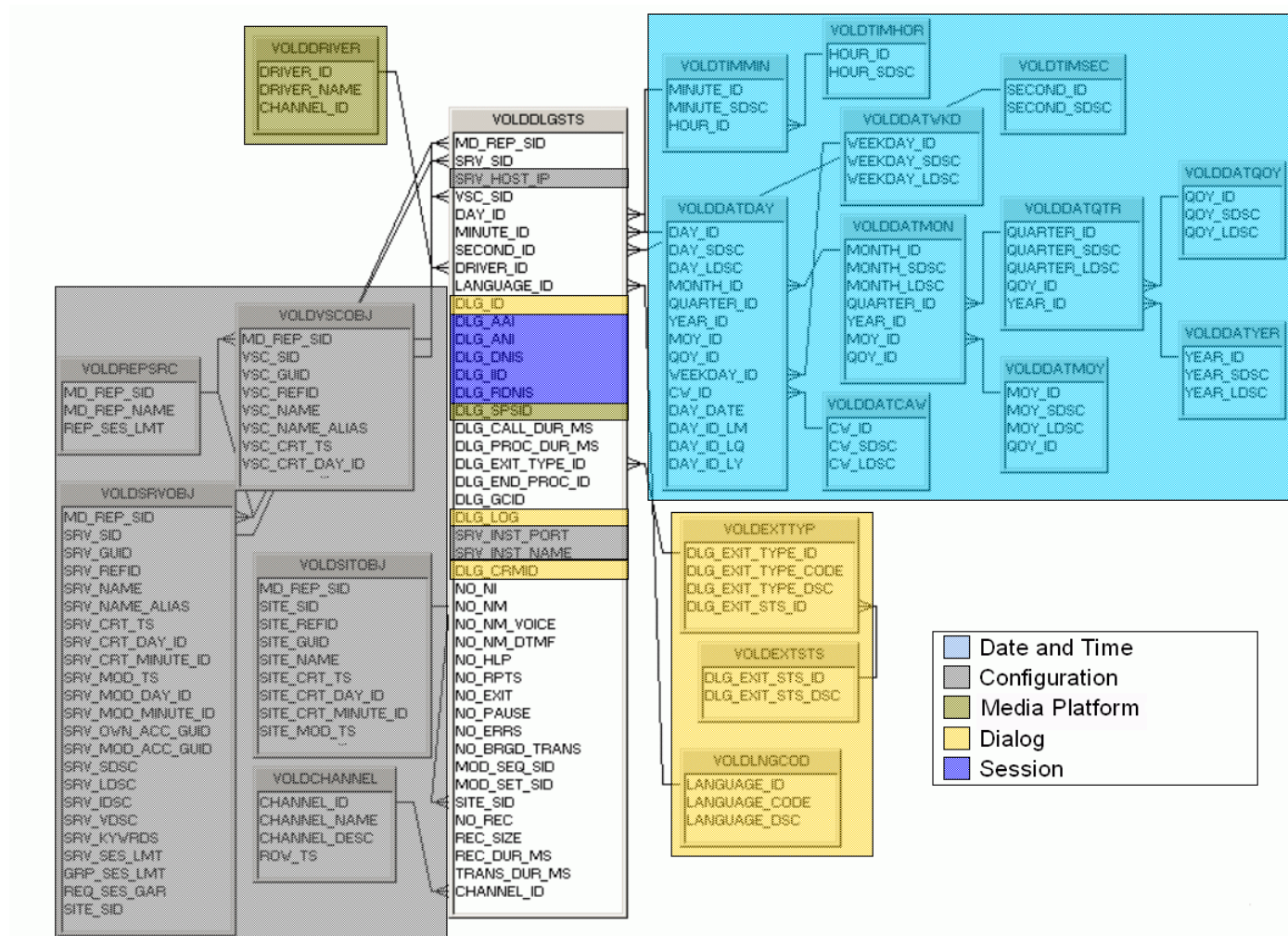
<b>VOLDVSCTYPE</b>	<b>Lookup table for service types / one record per service type and locale</b>		
<b>Column Name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
ROW_TS	DATE		Row timestamp – exact timestamp when the record was written into the DB

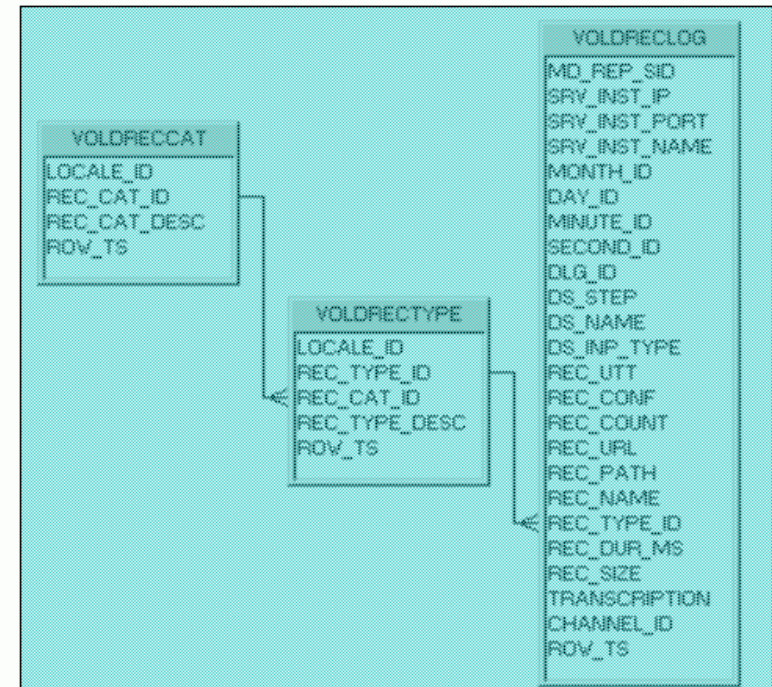
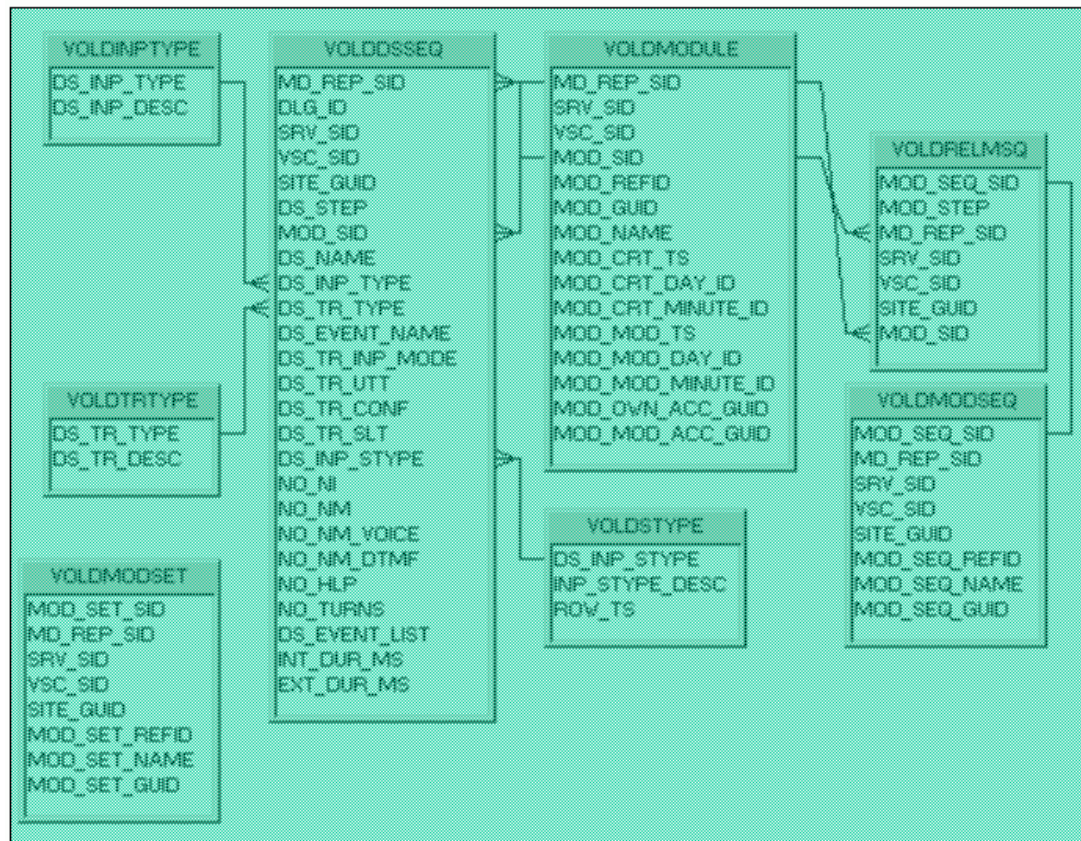
<b>VOLDSEQVSCUID</b>	<b>For internal use only</b>		
<b>Column name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NEXTVAL	NUMBER(9)		For internal use only

<b>VOLDSEQREPSRC SID</b>	<b>For internal use only</b>		
<b>Column name</b>	<b>Data Type</b>	<b>Primary Key</b>	<b>Description</b>
NEXTVAL	NUMBER(3)		For internal use only



The following figures show a graphical representation of the physical data model and a mapping of each table to the logical dimensions.





- Modules and Input States
- Recording

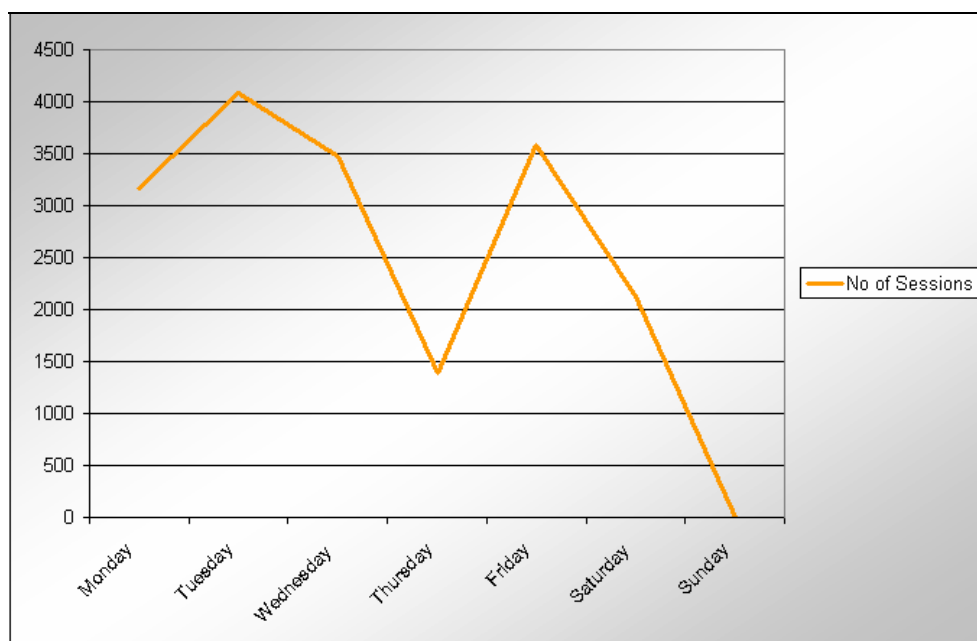


## 4 Example Reports

The following chapter shows some example reports that can be created on top of the statistics data model with the help of any reporting tool. With VoiceObjects Analyzer even more sophisticated analyses are provided (see the *Analyzer Guide* for details).

The following diagrams were created using Microsoft Excel and some manual SQL statements with the External Data Wizard.

### ***Weekday Trend Analysis***



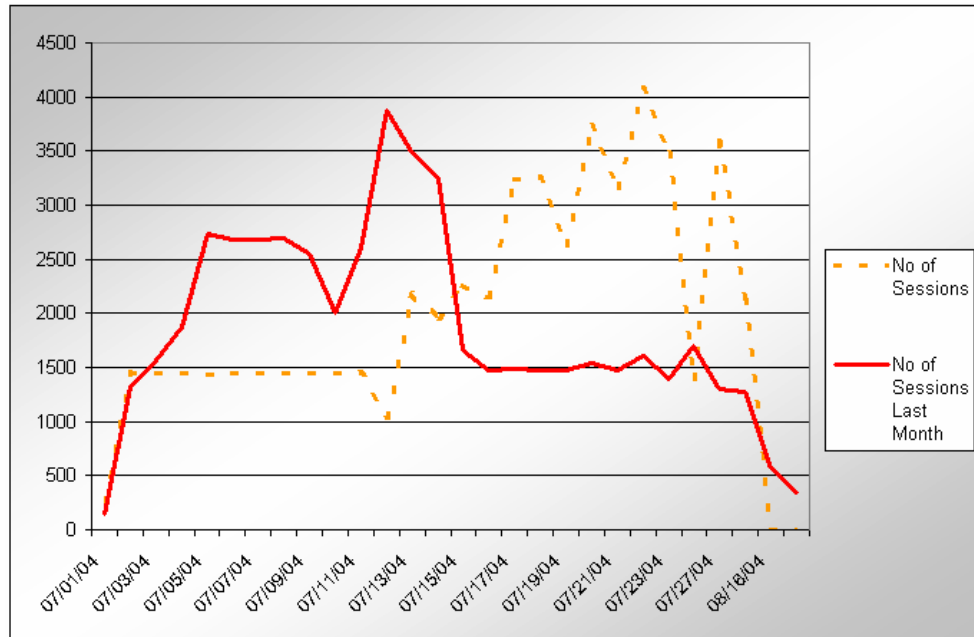
The *Weekday Trend Analysis* shows the total number of sessions by day of the week. With this chart the least active days of the week can be identified and consequently the days when system downtime due to maintenance tasks would have the least impact.

According to this example chart, weekly maintenance operations should be scheduled on Sundays whereas system uptime would be most important on Tuesdays and Fridays.

To enhance data accuracy, a filter on the *Date and Time* dimension, in this case the last thirty days, should be applied.



### This Month vs. Last Month

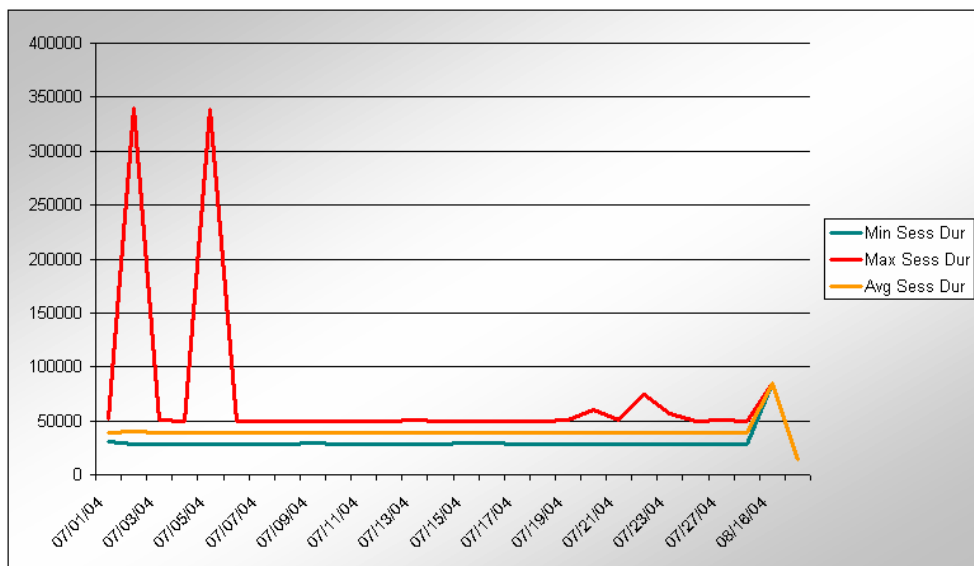


The *This Month vs. Last Month* chart shows the present number of sessions compared to a previous time period. The dotted data series represents the total number of sessions by day for this month. The solid series provides the number of sessions for the corresponding day of the previous month.

In this example the recurring trend is the low usage pattern at the beginning and at the end of the month, as both compared series show this trend. A recurring peak period cannot be unambiguously determined as both months differ in the moment of occurrence.

In comparison both series show similar peak values, but no definite monthly trend can be identified without data from additional months.

### Session Duration Benchmark

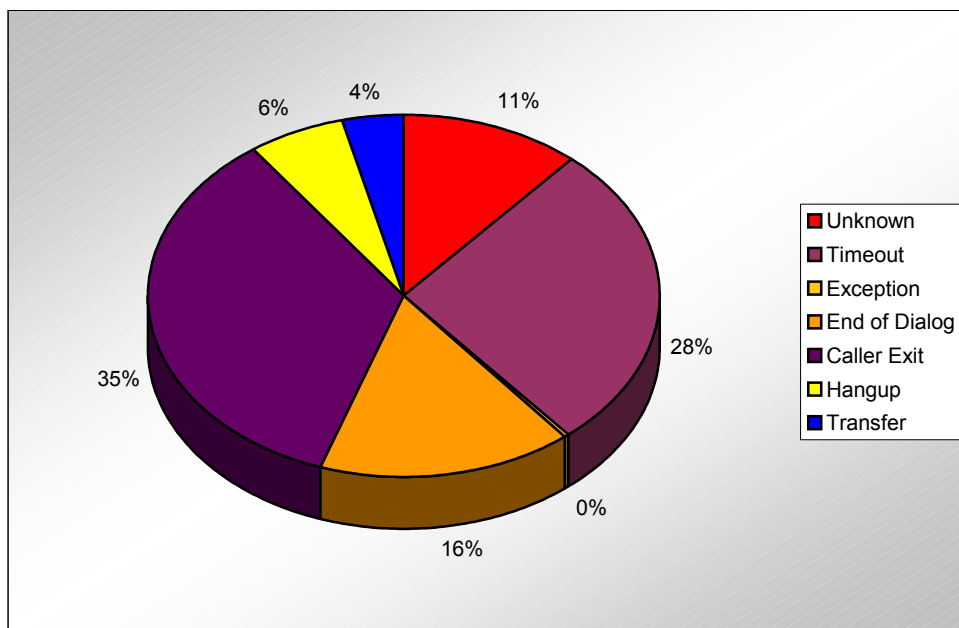




The *Session Duration Benchmark* chart gives an overview on the daily session duration. The three series that are displayed represent the daily high and low values as well as the average for the day.

This example shows that there were outliers in the maximum session duration on 07/02 and 07/05 that did not affect the average session duration. In contrast the peak on 08/16 affects all three series and hence indicates a problem with overall system response times.

### Exit Type Distribution



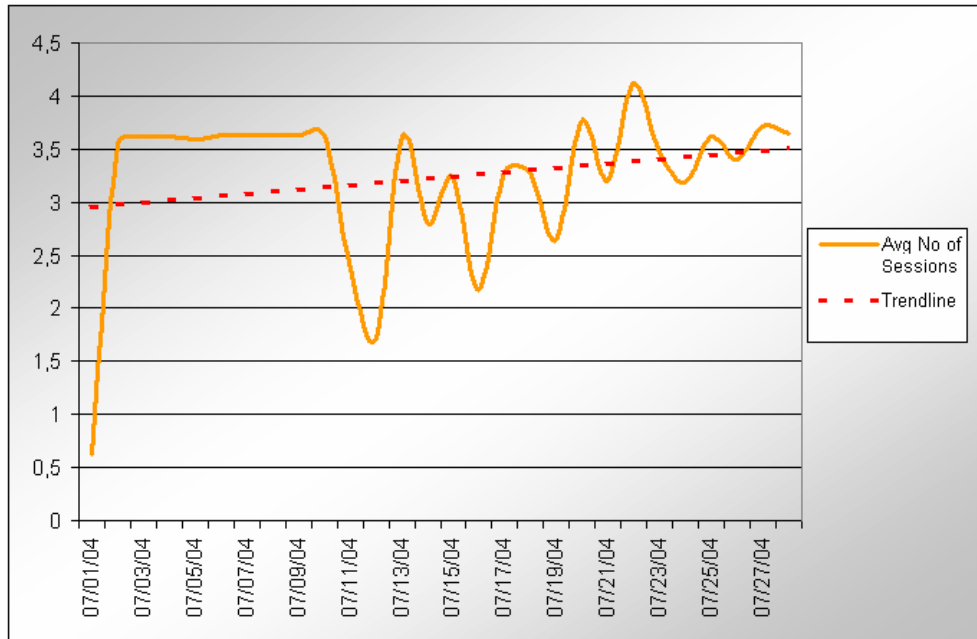
The *Exit Type Distribution* chart lists the different types of caller exits that occurred on the phone system. Each slice of the pie represents the percentage of callers that exited the application through the respective exit type.

The chart shows that the most frequent exit type was *Caller Exit* followed by *Timeout*. Whereas *Caller Exit* is a desirable exit type, the high occurrence of timeouts strongly suggests flaws in the design of the dialog flow or the prompt structure of the application. A comparatively high percentage of premature *Hang Ups*, at a rate of six percent, supports the hypothesis that there are problems with the dialog design.

Only four percent of the incoming calls needed to be directed to an agent, which is below the target of five percent for this application. Finally an exception rate below one percent indicates a very reliable phone application environment.



### Average Number of Sessions per Caller



The *Average Number of Sessions per Caller* chart outlines the loyalty trend of the application. The orange series represents the average number of sessions per caller by day and the dashed line shows its trend line. The example chart shows the first month of a freshly launched application. In the first days the callers called frequently to investigate the applications content. The callers' attention decreased after approximately seven days (from 07/03 until 07/10) and it began to rise again as the content was renewed on 07/12. Afterward, the user's loyalty varied in parallel with the content renewal cycles.

Given that the trend line shows a positive progression, the overall loyalty of the application is growing, which might be a success indicator.

### Top Ten Visitors

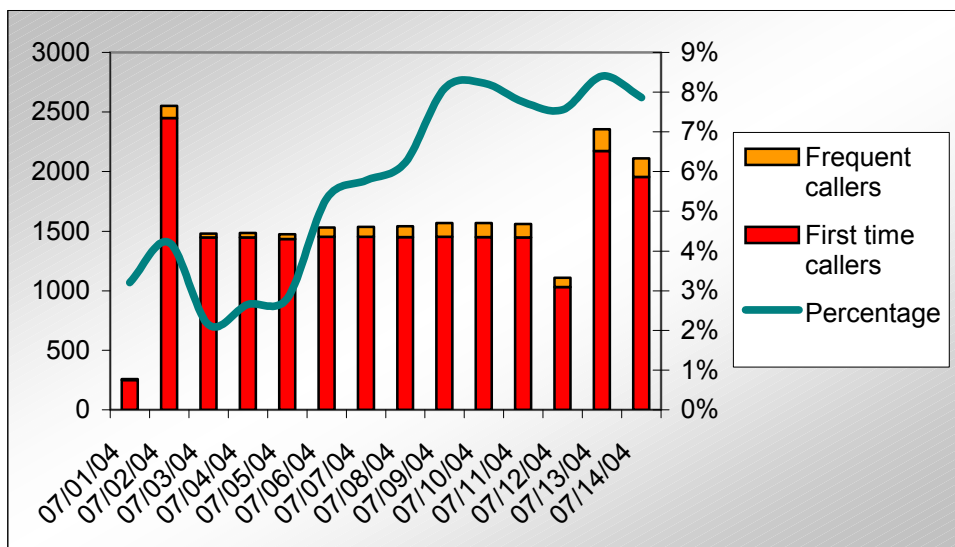
Caller ANI	No. Sessions	No. Sessions %	Min Session Duration (mm:ss)	Max Session Duration (mm:ss)	Avg Session Duration (mm:ss)
Caller025 1	43	0,17%	01:27	08:30	04:18
Caller008 2	37	0,15%	00:18	04:40	02:28
Caller011 3	37	0,15%	00:25	12:25	06:25
Caller021 4	36	0,14%	00:58	02:47	01:45
Caller019 5	34	0,14%	00:13	08:31	04:22
Caller041 6	31	0,12%	00:48	07:39	04:13
Caller022 7	30	0,12%	00:44	06:20	03:32
Caller002 8	30	0,12%	00:54	09:57	05:25
Caller004 9	29	0,12%	00:07	11:02	05:34
Caller018 10	23	0,09%	00:38	04:23	02:31



The *Top Ten Visitors* report shows the top ten most active callers by their ANI. The number of sessions is displayed along with the percentage of total sessions made in the specified timeframe. Additionally the benchmark figures regarding session duration are displayed.

With this report the top ten callers can be identified to include them in specialized marketing campaigns, eventually granting them incentives or adding certain personalization features to the application.

### Frequent Callers Trend



The *Frequent Callers Trend* chart displays one bar for the total number of callers per day for the last two weeks. The red part of the bar shows the number of sessions from first time callers, whereas the orange part represents the number of sessions from frequent callers. The blue series shows the percentage of callers that called repeatedly.

In this particular report we can see that the caller structure mainly consists of one-time callers while repeat callers are still a minority. Though caller loyalty has steadily been growing for the last two weeks, it does not show a direct correlation with the trend for the number of sessions.