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# Framework Database Connectivity Guide

Microsoft SQL Server Databases

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You must install software to access the version of Microsoft SQL Server you are using. Refer to Microsoft documentation for details. You can use any edition of Microsoft SQL Server, including Express.

## Using Microsoft Client Software

Genesys uses TCP/IP as a way to access Microsoft SQL Sever. When installing Microsoft SQL Server and/ or Microsoft client software, make sure that Server and Client are using TCP/IP. Dynamic ports are not supported; you must configure the server to listen on a fixed port (1433).

You can access default instances or named instance (including Express) of Microsoft SQL Server. To use a default instance, set the following parameters of the Database Access Point:

```
dbengine = mssql
dbserver = <sql server host>
dbname = <database name>
username = <user>
password = <password>
```

If a named (non-default) instance is used, the **dbserver** parameter must be specified in the format:  
dbserver = <sql server host>\<named instance>

Or for the Microsoft SQL Express edition:  
dbserver = <sql server host>\sql express

## Notes for Management Framework Components

- To use native client connectivity, you must install MS SQL 2005 Server Native Client software (the **sqlncli** package), available from [here](#). Without this software, the connection is made using ODBC, which can be slower.
- To work with MS SQL databases, Configuration Server and Message Server require Microsoft Data Access Components (MDAC) version 2.8 or later.
- For MS SQL databases, DB Server did not correctly read international characters that were written to the database if both of the following conditions existed:
  - The records were originally written using DB Server 7.2 or earlier.
  - On the host on which DB Server was running, the option **SQL Server Client Network Utility > DB-Library Options > Automatic ANSI to OEM** conversion was turned on.

## Using Microsoft SQL Server Databases with National Languages

### Single Language Deployment

No special configuration or other preparations are needed to use Genesys applications in single language mode with Microsoft SQL Server databases. The databases themselves must be created with target language and default encoding, as given in the following table:

**[+] Show table**

Sort Order ID	SQL Server Collation Name
30	SQL_Latin1_General_Cp437_BIN
31	SQL_Latin1_General_Cp437_CS_AS
32	SQL_Latin1_General_Cp437_CI_AS
33	SQL_Latin1_General_Pref_CP437_CI_AS
34	SQL_Latin1_General_Cp437_CI_AI
40	SQL_Latin1_General_Cp850_BIN
41	SQL_Latin1_General_Cp850_CS_AS
42	SQL_Latin1_General_Cp850_CI_AS
43	SQL_Latin1_General_Pref_CP850_CI_AS
44	SQL_Latin1_General_Cp850_CI_AI
49	SQL_1Xcompat_CP850_CI_AS
50	Latin1_General_BIN
51	SQL_Latin1_General_Cp1_CS_AS
52	SQL_Latin1_General_Cp1_CI_AS
53	SQL_Latin1_General_Pref_CP1_CI_AS
54	SQL_Latin1_General_Cp1_CI_AI
55	SQL_AltDiction_Cp850_CS_AS
56	SQL_AltDiction_Pref_CP850_CI_AS
57	SQL_AltDiction_Cp850_CI_AI
58	SQL_Scandinavian_Pref_Cp850_CI_AS
59	SQL_Scandinavian_Cp850_CS_AS
60	SQL_Scandinavian_Cp850_CI_AS
61	SQL_AltDiction_Cp850_CI_AS
71	Latin1_General_CS_AS
72	Latin1_General_CI_AS
73	Danish_Norwegian_CS_AS
74	Finnish_Swedish_CS_AS
75	Icelandic_CS_AS
80	Hungarian_BIN (or Albanian_BIN, Czech_BIN, and so on) See <a href="#">Note</a>
81	SQL_Latin1_General_Cp1250_CS_AS
82	SQL_Latin1_General_Cp1250_CI_AS
83	SQL_Czech_Cp1250_CS_AS
84	SQL_Czech_Cp1250_CI_AS
85	SQL_Hungarian_Cp1250_CS_AS

Sort Order ID	SQL Server Collation Name
86	SQL_Hungarian_Cp1250_CI_AS
87	SQL_Polish_Cp1250_CS_AS
88	SQL_Polish_Cp1250_CI_AS
89	SQL_Romanian_Cp1250_CS_AS
90	SQL_Romanian_Cp1250_CI_AS
91	SQL_Croatian_Cp1250_CS_AS
92	SQL_Croatian_Cp1250_CI_AS
93	SQL_Slovak_Cp1250_CS_AS
94	SQL_Slovak_Cp1250_CI_AS
95	SQL_Slovenian_Cp1250_CS_AS
96	SQL_Slovenian_Cp1250_CI_AS
104	Cyrillic_General_BIN (or Ukrainian_BIN, Macedonian_FYROM_90_BIN)
105	SQL_Latin1_General_Cp1251_CS_AS
106	SQL_Latin1_General_Cp1251_CI_AS
107	SQL_Ukrainian_Cp1251_CS_AS
108	SQL_Ukrainian_Cp1251_CI_AS
112	Greek_BIN
113	SQL_Latin1_General_Cp1253_CS_AS
114	SQL_Latin1_General_Cp1253_CI_AS
120	SQL_MixDiction_Cp1253_CS_AS
121	SQL_AltDiction_Cp1253_CS_AS
124	SQL_Latin1_General_Cp1253_CI_AI
128	Turkish_BIN
129	SQL_Latin1_General_Cp1254_CS_AS
130	SQL_Latin1_General_Cp1254_CI_AS
136	Hebrew_BIN
137	SQL_Latin1_General_Cp1255_CS_AS
138	SQL_Latin1_General_Cp1255_CI_AS
144	Arabic_BIN
145	SQL_Latin1_General_Cp1256_CS_AS
146	SQL_Latin1_General_Cp1256_CI_AS
153	SQL_Latin1_General_Cp1257_CS_AS
154	SQL_Latin1_General_Cp1257_CI_AS
155	SQL_Estonian_Cp1257_CS_AS
156	SQL_Estonian_Cp1257_CI_AS
157	SQL_Latvian_Cp1257_CS_AS
158	SQL_Latvian_Cp1257_CI_AS

Sort Order ID	SQL Server Collation Name
159	SQL_Lithuanian_Cp1257_CS_AS
160	SQL_Lithuanian_Cp1257_CI_AS
183	SQL_Danish_Pref_Cp1_CI_AS
184	SQL_SwedishPhone_Pref_Cp1_CI_AS
185	SQL_SwedishStd_Pref_Cp1_CI_AS
186	SQL_Icelandic_Pref_Cp1_CI_AS
192	Japanese_BIN
193	Japanese_CI_AS
194	Korean_Wansung_BIN
195	Korean_Wansung_CI_AS
196	Chinese_Taiwan_Stroke_BIN
197	Chinese_Taiwan_Stroke_CI_AS
198	Chinese_PRC_BIN
199	Chinese_PRC_CI_AS
200	Japanese_CS_AS
201	Korean_Wansung_CS_AS
202	Chinese_Taiwan_Stroke_CS_AS
203	Chinese_PRC_CS_AS
204	Thai_BIN
205	Thai_CI_AS
206	Thai_CS_AS
210	SQL_EBCDIC037_CP1_CS_AS
211	SQL_EBCDIC273_CP1_CS_AS
212	SQL_EBCDIC277_CP1_CS_AS
213	SQL_EBCDIC278_CP1_CS_AS
214	SQL_EBCDIC280_CP1_CS_AS
215	SQL_EBCDIC284_CP1_CS_AS
216	SQL_EBCDIC285_CP1_CS_AS
217	SQL_EBCDIC297_CP1_CS_AS

### Important

For Sort Order ID 80, use any of the Window collations with the code page of 1250, and binary order. For example: Albanian\_BIN, Croatian\_BIN, Czech\_BIN, Romanian\_BIN, Slovak\_BIN, Slovenian\_BIN.

For more information, refer to Microsoft SQL documentation [here](#).

## Multiple Languages Deployment

To use Microsoft SQL to store data in multiple languages, the database tables must be able to store UNICODE characters (UCS-2 encoding).

When configuring a Database Access Point to access a multi-language database, you must specify **utf8-ucs2=true** in the **[dbclient]** section of the annex of the DAP.

## Failure of an MSSQL 2012 Cluster Database

There is no automatic resubmission for MSSQL. If the database fails, you must manually resubmit all failed write operations.