Framework Database Connectivity Guide

PostgreSQL Databases

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You must make PostgreSQL client software accessible in the environment where the Genesys application is running. Genesys uses PostgreSQL 9.0 client software to access all supported versions of PostgreSQL.

Using PostgreSQL Client Software

The vendor client software must be in the folder specified in the environment variable **PATH** (for Windows), **LIBPATH** (for AIX), or **LD_LIBRARY_PATH** (for Linux and Solaris). Refer to PostgreSQL documentation for more information.

The following is an example of the configuration of Genesys Database Access Point parameters for PostgreSQL:

```
dbengine=postgre
dbserver=<postgresql server host>
dbname=<database name>
username=<user name>
password=<password>
```

Connectivity to PostgreSQL relies on TCP/IP between server and client. PostgreSQL client software uses Operating System settings for the TCP/IP stack to determine how long to wait for a response form the PostgreSQL server after submitting a request to it. For example, on Linux it may take up to 2 hours to detect a disconnection, unless the Operating System parameter **tcp_keepalive_time** is adjusted. Refer to documentation for your operating system for more information.

When using PostgreSQL 9.X server, make sure the following parameters are set in the **postgresql.conf** file, as follows:

```
bytea_output =’escape’
standard_conforming_strings=’off’
```

PostgreSQL Strings

Prior to PostgreSQL version 9.1, backslash characters in strings were treated as escape characters, and Configuration Server does the same, by default. In PostgreSQL 9.1 and later, backslashes are treated as ordinary characters. How PostgreSQL handles backslashes in strings is specified by the PostgreSQL configuration option **standard_conforming_strings** in the **postgresql.conf** file, in which a value of `off` indicates the backslashes are treated as escape characters, to provide backward-compatible behavior.

Normally, the PostgreSQL option is set to `false`, and no action is required. However, if the PostgreSQL option is set to `true`, meaning that backslashes in strings are treated as ordinary characters, enable the Configuration Server option **postgre-standard-conforming-strings** to force Configuration Server to do the same.

> **Important**
>
> The value of the Configuration Server option **postgre-standard-conforming-**

> **strings** must be always equal to the value of the PostgreSQL configuration option **standard_conforming_strings** in the **postgresql.conf** file.

For more information about the Configuration Server option **postgre-standard-conforming-strings**, refer to the *Framework 8.5 Configuration Options Reference Manual*.

Using PostgreSQL Databases with National Languages

Single Language Deployment

You must create all PostgreSQL databases using the same character set, for example `WIN1252`. You must select encoding that matches Microsoft Windows Operating System default encoding for the selected language so applications, like Interaction Routing Designer, display data correctly.

On every host that has Genesys applications accessing PostgreSQL databases, make sure that the language and encoding environment variable (or the settings for non-Unicode applications, if you are using Windows) is set to match character encoding of data in the PostgreSQL database. If there is a discrepancy between the encoding that the database and the local client are using, set the environment variable **PGCLIENTENCODING** on the host where the client software is running to match the database (for example, **PGCLIENTENCODING=**`Win1252`), based on the following table:

[+] Show table

Name	Description	Language	Server?	Bytes/Char	Aliases
GBK	Extended National Standard	Simplified Chinese	No	1-2	WIN936, Windows936
ISO_8859_5	ISO 8859-5, ECMA 113	Latin/Cyrillic	Yes	1	
ISO_8859_6	ISO 8859-6, ECMA 114	Latin/Arabic	Yes	1	
ISO_8859_7	ISO 8859-7, ECMA 118	Latin/Greek	Yes	1	
ISO_8859_8	ISO 8859-8, ECMA 121	Latin/Hebrew	Yes	1	
JOHAB	JOHAB	Korean (Hangul)	Yes	1-3	
LATIN1	ISO 8859-1, ECMA 94	Western European	Yes	1	ISO88591
LATIN2	ISO 8859-2, ECMA 94	Central European	Yes	1	ISO88592
LATIN3	ISO 8859-3, ECMA 94	South European	Yes	1	ISO88593
LATIN4	ISO 8859-4,	North	Yes	1	ISO88594

Name	Description	Language	Server?	Bytes/Char	Aliases
	ECMA 94	European			
LATIN5	ISO 8859-9, ECMA 128	Turkish	Yes	1	ISO88599
LATIN6	ISO 8859-10, ECMA 144	Nordic	Yes	1	ISO885910
LATIN7	ISO 8859-13	Baltic	Yes	1	ISO885913
LATIN8	ISO 8859-14	Celtic	Yes	1	ISO885914
LATIN9	ISO 8859-15	LATIN1 with Euro and accents	Yes	1	ISO885915
LATIN10	ISO 8859-16, ASRO SR 14111	Romanian	Yes	1	ISO885916
SJIS	Shift JIS	Japanese	No	1-2	Mskanji, ShiftJIS, WIN932, Windows932
SQL_ASCII	unspecified	any	Yes	1	
UHC	Unified Hangul Code	Korean	No	1-2	WIN949, Windows949
UTF8	Unicode, 8-bit	all	Yes	1-4	Unicode
WIN866	Windows CP866	Cyrillic	Yes	1	ALT
WIN874	Windows CP874	Thai	Yes	1	
WIN1250	Windows CP1250	Central European	Yes	1	
WIN1251	Windows CP1251	Cyrillic	Yes	1	WIN
WIN1252	Windows CP1252	Western European	Yes	1	
WIN1256	Windows CP1256	Arabic	Yes	1	
WIN1258	Windows CP1258	Vietnamese	Yes	1	ABC, TCVN, TCVN5712, VSCII

For more information, refer to PostgreSQL documentation here.

With the environment set up this way, you can use character data in a single language (such as French) for all information stored and transmitted between Genesys applications.

Multiple Languages Deployment

To enable storage and processing of data in multiple languages using a PostgreSQL database, you must create all your database instances using the UTF8 character set.