Speedbase Gateway & NLM Registry & Parameter Settings

1. Introduction

This document describes the various registry settings recognized by the Speedbase Pervasive SQL Gateway (SPEEDBAS.EXE) and the Speedbase Microsoft SQL Gateway (SPEEDSQL.EXE). This document also describes the various parameters recognized by the Speedbase Pervasive SQL Novell NLM (SPEEDBAS.NLM). Note that the Speedbase Pervasive SQL Gateway was formerly referred to as the "Speedbase Btrieve Gateway".

The Speedbase Gateway registry settings are described in Section 2 of this document. The Speedbase Novell NLM parameters are described in Sections 3 & 4 of this document.

There are three separate series of the Speedbase Gateways/NLM:

V2.*xx*	the original pre-DBX Gateway/NLM;
V3.01 – V3.86	the DBX Gateway which also supports pre-DBX databases (compiled with the same C-compiler as used for the V2.xx Gateways);
V3.86 – V3.99	the DBX Gateway which also supports pre-DBX databases (compiled with the same C-compiler as used for the V4.xx Gateways);
V4.*xx*	the DBX Gateway with Intelligent Conversion option and compiled with a new C-compiler. Includes support for Internal Cursor logic for Microsoft SQL from v4.03. The V4.*xx* Gateways also support pre-DBX databases.

1.1 Global Registry Settings

All the registry settings recognized by the Speedbase Gateways are under the following key:

HKEY_LOCAL_MACHINE\Software\Global\Speedbase\

The individual Speedbase Gateway settings are fully described in section 2.

Note that multiple Speedbase Gateways can be configured on the same Windows server computer. In a "Multiple Gateway Instance" (MGI) configuration the Primary Gateway registry settings are as for a single Gateway configuration:

HKEY_LOCAL_MACHINE\Software\Global\Speedbase\

The registry settings for the Secondary Gateway(s) are under the following keys:

HKEY_LOCAL_MACHINE\Software\Global\Speedbase10\

to:

HKEY_LOCAL_MACHINE\Software\Global\Speedbase99\

It should also be noted that the various registry settings under the following keys:

HKEY_LOCAL_MACHINE\Software\Global\Client\Gateways*NN*

and

HKEY_LOCAL_MACHINE\Software\Global\Client\Speedbase*server_name*\

are only recognized by the functionality within the Global Client (GLOBAL.EXE) that communicates to the Speedbase Gateway. No registry settings under the ..\Global\Client\ key are recognized by the Speedbase Gateways.

Note also, as introduced with GLOBAL.EXE V2.9E, and described in global22to32b.doc, the ..\Global\Client\Gateways\ registry format is strongly recommended rather than the obsolete ..\Global\Client\Speedbase\ registry format. Several new, and important, options under the ..\Global\Client\Gateways\ key are **not** available under the ..\Global\Client\Speedbase\ key.

1.2 Pervasive SQL Settings.

When using Pervasive V8, or later, the "Create File Version" parameter in the Pervasive Control Centre (PCC) **MUST** be set to 7.x. This setting is available under the Configuration/Compatibility sections of the PCC. If you ignore this advice you will suffer a Btrieve Error 280 when trying to create the Database.

This restriction has been removed in the V3.59, and later, Speedbase Gateways **provided the Pervasive database(s) has been created with the "PervasiveIncludeIdentity" option (see section 2.19) enabled.** Note that PervasiveIncludeIdentity=On is the default for the DBX Gateways.

1.3 Microsoft SQL 2000/2005 Settings.

When installing Microsoft SQL Express or SQL 2005 on a new machine the library ntwdblib.dll, which is needed by the Speedbase Gateway, will not be installed. This library can be obtained from the Microsoft website, or any machine that has had SQL 2000 installed. It is located in x:\winnt\system32, where x is C or D etc. on a Windows NT or Windows 2000 server; or x:\windows\system32 on a Windows XP or Windows 2003 server.

Note that this DLL is also available from: http://globaldev.tissoft.co.uk/pub/gsm/ntwdblib.dll

If installing SQL Express see the comments in section 2.31 on setting SpeedbaseSQLInstance.

In addition to the various "Global" registry settings that are recognized by the Speedbase Gateway the following "non Global" setting:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSSQLServer\Client\DB-Lib\AutoAnsiToOEM
```

if present, MUST BE SET TO OFF when using the Speedbase Microsoft SQL Gateway (SPEEDSQL.EXE). Although this option is enabled by a standard installation of Microsoft SQL 2000 Server, disabling this option is **ABSOLUTELY ESSENTIAL** to prevent SQL Server translating Speedbase character fields that contain 8-bit data. This option is not installed by a standard installation of either SQL Express or SQL 2005. If this SQL Server setting, when present, is not disabled the results will be unpredictable but will typically result in data corruption. The

random translation of text strings containing foreign (8-bit) characters is the least severe problem that can occur if the “AutoAnsiToOEM” option is enabled. Computation fields redefined within character strings will also be corrupted.

In the situation where the Speedbase Microsoft SQL Gateway is running on a computer that is a client of the Microsoft SQL server, “AutoAnsiToOEM” only needs to be set to "Off" on the SQL client computer that is running the Speedbase Gateway. The registry setting on Microsoft SQL server, in this case, is "don't care" as far as the Speedbase Gateway is concerned.

The Speedbase Microsoft SQL Gateway checks that “AutoAnsiToOEM” is set to "Off" and displays a warning message in a pop-up window on the first access to the Gateway if the option is not disabled. If users still want to run with this parameter set to "On" the warning message can be disabled by setting “CheckForISOCharSet” to "Off" in the Speedbase Gateway section of the registry. See section 2.36 for further details.

For V3.84, and later, the Speedbase Microsoft SQL Gateway will not issue a warning Pop Up Message Window if the parameter is absent. Prior to V3.84 the Pop Up Message Window can be ignored, or disabled, if the “AutoAnsiToOEM” Registry setting is absent. If the "AutoAnsiToOEM" parameter is absent then there is never any data corruption regardless of the Gateway Version, SQL Version or any other registry parameter. This is because internal code in the "dblibrary" interface sets “AutoAnsiToOEM” to “Off” when the setting is absent. The change at v3.84 was to avoid issuing the now false warning message in this situation particularly when running on SQL2005 or SQLExpress. This situation never arose with SQL2000 because SQL2000 installations always set "AutoAnsiToOEM" to “On”. However SQL 2005 and SQLExpress installations don't include any registry entries for dblibrary. The situation where the registry entry is still present due to an earlier installation of SQL that has left the parameter present but is now running on SQL 2005 or Express will still (correctly) get the pop-up as corruption could still occur.

Important Note: These comments only apply to the Client SQL Software running on the same computer as the Speedbase Gateway. The "AutoAnsiToOEM" parameter has nothing to do with the version of SQL Server wherever it is running, it only affects the "dblibrary" interface on the machine that the Gateway is running on.

The Speedbase Microsoft SQL Gateway was developed for SQL 2000 and has been tested on SQL Express and SQL 2005. It is also expected to operate correctly with all compatible versions of Microsoft SQL (e.g. SQL Server 2012, SQL Server 2014, SQL Server 2016, SQL Server 2017). The Speedbase Microsoft SQL Gateway is not supported on “cloud” versions of SQL such as Microsoft Azure SQL. Furthermore, the Speedbase Microsoft SQL Gateway is not supported on non-Microsoft alternatives to SQL such as MySQL.

2. Registry Settings

The following registry settings are described in this section:

DiagnosticDisplays		2.4
DiagnosticLogfile		2.5
SpeedbaseSQLUser		2.6
SpeedbaseSQLPassword		2.7
DefaultDatabaseSize		2.8
FastConversion		2.9
IdentityFillin		2.10
FieldDDFCompress		2.11
LogFileFolder		2.12
MDFFileFolder		2.13
SpeedbaseLogFileFolder		2.14
LongNames		2.15
LongNameType		2.16
UpperCase		2.17
PervasiveTrueNullDate		2.18
PervasiveIncludeIdentity		2.19
PervasiveUseMKDExtn		2.20
MicrosoftTrueNullDate		2.21
BatchTransactionSize	2.22	
LogFilePercentSize		2.23
UseMicrosoftSQLCursors		2.24
EnableLockSnapshot		2.25
Statistics		2.26
EnableGSMSHM		2.27
NumberOfGSMSHMConnections		2.28
DelayClosingTimeout	2.29	
DiagnosticLogfileLimit		2.30
SpeedbaseSQLInstance		2.31
RecordErrors		2.32
SharedMemoryID		2.33
ErrorfileLimit		2.34
IntelligentConversion	2.35	
CheckForISOCharSet	2.36	
ExclusiveDatabaseOpen		2.37
LogSQLCommands		2.38
SQLCommandBiteSize		2.39
UseServerRegisterIfEx		2.40
MinimumMalloc		2.41
UseFastCursors		2.42
MaxFastCursorsPerRT		2.43
InternalCursorSize		2.44
SQLTransactionIsolation		2.45
CreateSQLShortNames		2.46
SequenceIncrementValue		2.47
UseBtrieveTransactions		2.48
CascadeTrace		2.49

ReportMissingMasters	2.50
MaxSQLLoginRetries	2.51

2.1 ProtocolSequence (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting is fully explained in section 9.6.1.2.2.1 of the Global System Manager (Windows) manual. Only the "ncacn_ip_tcp" (TCP/IP) and "ncalrpc" (local RPC) protocols are supported by the Speedbase Gateways. This setting **MUST** agree with the equivalent **ProtocolSequence** setting in the Global Client section of the registry to allow the Global Client(s) to successfully connect to the Speedbase Gateway.

This option is only recognized when the Gateway is initiated. Changing the option while the Gateway is running will have no effect. The Gateway must be unloaded and re-loaded in order for the change to have any effect.

The default setting is "ncacn_ip_tcp".

Note that the "EnableGSMSHM" setting (see section 2.27) enables an additional shared memory interface to the Gateway, which can be used concurrently with either “ncacn_ip_tcp” or “ncalrpc”.

2.2 Endpoint (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting is fully explained in section 9.6.1.2.2.2 of the Global System Manager (Windows) manual. This setting **MUST** agree with the equivalent **Endpoint** setting in the Global Client section of the registry to allow the Global Client(s) to successfully connect to the Speedbase Gateway.

This option is only recognized when the Gateway is initiated. Changing the option while the Gateway is running will have no effect. The Gateway must be unloaded and re-loaded in order for the change to have any effect.

The default setting is "3100".

2.3 MaxCalls (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting specifies the maximum number of simultaneous connections that the Speedbase Gateway is capable of handling via the RPC interface specified by the ProtocolSequence setting (see section 2.1). The default value is set to 99. THIS VALUE MUST BE INCREASED IF MORE THAN 99 GLOBAL CLIENTS ARE LIKELY TO ACCESS THE GATEWAY (otherwise it can be omitted as the default value will be adequate).

This option is only recognized when the Gateway is initiated. Changing the option while the Gateway is running will have no effect. The Gateway must be unloaded and re-loaded in order for the change to have any effect.

The default setting is 99.

2.4 DiagnosticDisplays (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting enables diagnostic messages to be displayed on the window displayed by the Gateway. Normally these messages scroll up the screen too quickly to be useful but their presence does provide an immediate indication that the Gateway is processing database requests. Although the diagnostic messages are a useful indication of Gateway activity, a Gateway log-file (see section 2.5) is normally required when investigating problems.

This setting should only be enabled during the investigation of a problem. It should be disabled during normal operation, as it will slightly impair the performance of the Gateway.

For versions of the DBX Speedbase Gateway prior to V3.15, changes to this option are recognized immediately when the Gateway is running. For versions of the DBX Speedbase Gateway V3.15, or later, the Gateway must be unloaded and re-loaded in order for the change to have any effect. For versions of the non-DBX Speedbase Gateway prior to V2.23, changes to this option are recognized immediately when the Gateway is running. For versions of the non-DBX Speedbase Gateway V2.23, or later, the Gateway must be unloaded and re-loaded in order for the change to have any effect.

Alternatively, the GSM SP-12 version of the $BADIAG utility can be used to force the V2.23 (or later) and V3.15 (or later) Speedbase Gateways to re-read this registry setting.

The default setting is "Off".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.5 DiagnosticLogfile (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting enables diagnostic messages to be written to a Gateway log-file. The name of the log-file is always SPEEDBAS.LOG (for the single or Primary Speedbase Gateway) or SPEEDB*nn*.LOG (for all Secondary Gateways). By default, this file is created in the same directory (folder) as the Gateway .EXE. Note that this default folder can be overridden by the SpeedbaseLogFileFolder option (see section 2.14).

This setting should only be enabled during the investigation of a problem. It should be disabled during normal operation, as it will **seriously** impair the performance of the Speedbase Gateway.

For versions of the DBX Speedbase Gateway prior to V3.15, changes to this option are recognized immediately when the Gateway is running. For versions of the DBX Speedbase Gateway V3.15, or later, the Gateway must be unloaded and re-loaded in order for the change to have any effect. For versions of the non-DBX Speedbase Gateway prior to V2.23, changes to this option are recognized immediately when the Gateway is running. For versions of the non-DBX Speedbase Gateway V2.23, or later, the Gateway must be unloaded and re-loaded in order for the change to have any effect.

Alternatively, the GSM SP-12 version of the $BADIAG utility can be used to force the V2.23, and later; and V3.15, and later, Speedbase Gateways to re-read this registry setting.

The default setting is "Off".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.6 SpeedbaseSQLUser (SPEEDSQL.EXE only)

This setting is mandatory for the Speedbase Microsoft SQL Gateway (SPEEDSQL.EXE). This setting should be set to the User Name required for the Gateway in order to login to SQL Server.

This User Name can be the "sa" User Name that is established when Microsoft SQL is installed or it can be a new User Account created after that. The User Account **MUST** have permissions to create databases and access the master database.

This parameter is only used when the Gateway first connects to Microsoft SQL. Any changes to the registry are ignored until the Gateway is restarted (and reconnects to SQL).

The default setting is "sa".

2.7 SpeedbaseSQLPassword (SPEEDSQL.EXE only)

This setting is mandatory for the Speedbase Microsoft SQL Gateway (SPEEDSQL.EXE). This setting should be set to the Password associated with the User Name required for the Gateway in order to login to SQL Server.

This Password can be the password for the "sa" account that is established when Microsoft SQL is installed or it can be the password for a new User Account created after that.

This parameter is only used when the Gateway first connects to Microsoft SQL. Any changes to the registry are ignored until the Gateway is restarted (and reconnects to SQL).

The default setting is "" but you are strongly recommended to use a password.

2.8 DefaultDatabaseSize (SPEEDSQL.EXE only)

This setting should be set to the size, in megabytes, that is to be allocated for a new Microsoft SQL database if the size hasn't been specified in the $BADS, $BS32 or $DXU dialogue.

The default setting is 100.

Changes to this option are recognized immediately when the Gateway is running.

Important Note: With the release of SQL 2005 (or SQL Express), the minimum value for the "DefaultDatabaseSize" setting is 2, previously it was 1.

2.9 FastConversion (SPEEDBAS.EXE & SPEEDSQL.EXE)

Enable this setting to increase the performance of $BADN, $BADS, $BN32, $BS32 and $DXU option 2 (Rebuild database) and option 4 (Convert database). When this setting is enabled the

Speedbase Gateway will process 20 records (instead of the default of 1) in a Rebuild or Conversion before sending a message back to the originating Global Client (unless an error occurs). This option reduces the traffic on the network but MAY cause the Speedbase Gateway to swamp other tasks running on the same server.

Changes to this option are recognized immediately when the Gateway is running.

This option does not affect the internal structure of the database so it is not necessary to preserve this option during a database transfer.

The default setting is "On".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.10 IdentityFillin (SPEEDSQL.EXE only)

By default, write operations handled by the Speedbase Microsoft SQL Gateway will create a monotonically increasing Identity Field. This field has an absolute limit of 8,388,607 (i.e. 0x7fffff) for pre-DBX; and a limit of 2,147,483,647 (i.e. 0x7fffffff) for DBX. Identity fields for deleted records won't be re-used automatically unless this option is enabled or the maximum record number is reached. Note that a database rebuild or conversion will have the effect of squeezing out the Identity Field holes. See document IN253 for further details.

Important note: The use of this option will slow down write operations dramatically. This option should only be enabled for emergency use until a database rebuild can be performed.

Changes to this setting are recognized immediately when the Gateway is running (i.e. the setting is examined during every write operation).

This option does not affect the internal structure of the database so it is not necessary to preserve this option during a database transfer.

The default setting is "Off".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.11 FieldDDFCompress (SPEEDBAS.EXE only)

After the creation of several Speedbase Pervasive SQL databases in the same windows directory it is possible for the field that holds the allocated field number in the FIELD.DDF file to overflow. If this overflow condition occurs an error 272 will be returned by the Gateway.

To avoid this problem the Speedbase Pervasive SQL Gateway now includes an option to compress the gaps in the allocated field numbers during delete operations. The "FieldDDFCompress" registry setting controls this option. The problem is only likely to affect users with several different

Speedbase Pervasive SQL databases in the same directory (i.e. where the FIELD.DDF file contains the accumulation of **all** the fields in **all** the databases).

Changes to this setting are recognized immediately when the Gateway is running but the setting is only relevant when a database is being deleted (i.e. when the entries in the DDF file for the deleted database are being removed). Note that this option is not used during database creation. Note also that a database deletion can occur during a database re-creation process.

This option does not affect the internal structure of the database so it is not necessary to preserve this option during a database transfer.

The default setting is "Off". The default setting for this option is "Off" because enabling this option can **significantly** degrade the performance of database deletes.

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.12 LogFileFolder (SPEEDSQL.EXE only)

This setting is available to specify the directory of the Microsoft SQL Server .LDF file. This option allows the creation of the .LDF file on a filing system that is different (normally larger) than the filing system onto which the Speedbase Microsoft SQL Gateway has been installed.

No default setting is available.

Important Note: The V3.70A, and later, SPEEDSQL.EXE Gateway has been extended to run on a different server (the "Gateway server") from the server running Microsoft SQL (the "remote SQL server"). When this "distributed Gateway" option is enabled (see section 2.31) the LogFileFolder setting, although specified in the registry of "Gateway server", refers to a folder on the "remote SQL server".

2.13 MDFFileFolder (SPEEDSQL.EXE only)

This setting is available to specify the directory of the .MDF file. This option allows the creation of the Microsoft SQL Server .MDF files on a filing system that is different (normally larger) than the filing system onto which the Speedbase Microsoft SQL Gateway has been installed.

No default setting is available.

Important Note: The V3.70A, and later, SPEEDSQL.EXE Gateway has been extended to run on a different server (the "Gateway server") from the server running Microsoft SQL (the "remote SQL server"). When this "distributed Gateway" option is enabled (see section 2.31) the MDFFileFolder setting, although specified in the registry of "Gateway server", refers to a folder on the "remote SQL server".

2.14 SpeedbaseLogFileFolder (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting is available to specify the folder of the Speedbase log file (SPEEDBAS.LOG) when the DiagnosticLogfile option is enabled (see section 2.5). This option allows the creation of the log-file

on a filing system that is different (normally larger) than the filing system onto which the Speedbase Gateway has been installed.

Changes to this option are recognized immediately when the Gateway is running but are not apparent until a new log-file is created.

No default setting is available. If the setting is not present the log file will be written to the same directory that the Gateway has been loaded from.

2.15 LongNames (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting is available to export descriptive and meaningful field and record names for use by Pervasive SQL database access and reporting tools. If you do not wish to provide external access to Speedbase Pervasive SQL databases for SQL type tools the "LongNames" option can be left to "Off".

Important Note: This option only applies to pre-DBX databases. The LongName option is ignored for DBX databases. DBX data dictionaries include an external name parameter that allows the external name to be specified explicitly by the database designer.

The Speedbase Gateways have always provided the ability for external access to the data in the SQL databases by the SQL tools provided by Pervasive, Microsoft and other 3rd party products (e.g. Seagate Crystal Reports). However, by default, the names used to identify Columns/Fields and Rows/Records are the internal Speedbase generated names. These names, although providing uniqueness tend to be rather terse and don't adequately describe the true purpose of the row/column in SQL terms. To overcome this restriction, the "LongName" option has been implemented. This option makes use of the existing Speedbase names together with the Speedbase descriptions in the Speedbase Dictionary.

When the LongNames setting is enabled all new databases or fresh databases created as a result of a database conversion will include the necessary information to produce columns/rows with Long Names.

Restrictions in the Pervasive SQL (Btrieve) DDF files limit these names to 20 characters and for compatibility this same limit is applied to all variants of the Gateway/NLM including the Microsoft SQL ones.

The use of Long Names is controlled by 3 registry settings. Databases are created in the format specified by these values at Database Creation time (or Conversion time). THESE OPTIONS HAVE NO EFFECT DURNG NORMAL DATABASE RUN-TIME PROCESSING. The 3 registry settings are "LongNames", "UpperCase" (see section 2.16) and "LongNameType" (see section 2.17). The "UpperCase" and "LongNameType" settings are only recognized if the "LongNames" setting is "On".

Changes to this setting are recognized immediately when the Gateway is running but the setting is only relevant when a database is being created.

Important Note: This option affects the BDCF file and affects the DDF files for Pervasive SQL access so it is **vital** to preserve this option during a database transfer. See IN236 for further details.

The default "LongNames" setting is "Off".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.16 LongNameType (SPEEDBAS.EXE & SPEEDSQL.EXE)

As explained in section 2.15 the LongNameType option is only recognized if the "LongNames" option (see section 2.15) is enabled.

Important Note: This option only applies to pre-DBX databases. The LongNameType option is ignored for DBX databases. DBX data dictionaries include an external name parameter that allows the external name to be specified explicitly by the database designer.

There are five variations of the Long Names processing controlled by the value of the LongNameType setting:

LongNameType value	Description
0 (default)	This is the original implementation and is fairly robust in that it won't fail with duplicates or reserved words. However the names are somewhat artificial being made up of a combination of the Speedbase Short Name and description.
1	This option uses just the description fields from the Speedbase Dictionary to produce the Long Names. The only editing is to leave System Field Names as Short Names and replace spaces between words with the "_" (underscore) character. THE DEVELOPER MUST BE VERY CAREFUL TO AVOID DUPLICATES OR RESERVED WORDS WHEN MAINTAINING THE DESCRIPTIVE FIELDS IN THE SPEEDBASE DICTIONARY. **WARNING: THIS OPTION CANNOT BE USED WITH THE FOLLOWING G-3000 V5.0 DATABASES: CL, CS, EDI, GL, PARAS, PO, STOCK, WWW (AN ERROR 5 WILL BE REPORTED WHEN CREATING THE SQL DATABASE).**
2	This is similar to type 1 but allows for duplicates for column/field names by appending _n to duplicate names. It also replaces a leading numeric with an _ to avoid problems with Microsoft SQL. **THIS OPTION IS STRONGLY RECOMMENDED.**
3	This is the same as type 2 for column/field names. Table/Record names are prefixed by the BDCF Filename_. This option allows multiple databases with the same title fields for records from different Speedbase Databases in the same directory.

4	This is the same as type 2 for column/field names and the same as type 3 for table/record names except duplicates within a Speedbase Database (typically caused by shortening the title) are now handled by replacing the last 2 or 3 characters of the name by *_n* or *_nn*. **THIS OPTION IS STRONGLY RECOMMENDED IF YOU PLAN TO HAVE MULTIPLE SPEEDBASE DATABASES IN THE ONE SQL DATABASE.** However, this option is only supported by the V3.50, and later, Gateway.

The following table describes the **precise** external names generated for records and fields. The following parameters in the Speedbase Data Dictionary are involved when creating the external names:

Database Name	*sssss*
Record type	*rr*
Long Record Description	*lrdesc*
Field name	*ffffff*
Long Field Description	*lfdesc*

LongName	LongNameType	Record name	Field name
Off	Don't care	*sssss_rr* (if there are less than 5 characters in *sssss* then trailing underscores are inserted)	*ffffff* Except that: $rrST1 becomes S_rrST1; $rrLNKnn becomes S_rrLNKnn; $rrSGC becomes S_rrSGC; $rrST2 becomes S_rrST2 These exceptions are required because leading $ signs aren't allowed in Microsoft SQL names.
On	0	*sssss_rrlrdesc* (if there are less than 5 characters in *sssss* then trailing underscores are inserted). *lrdesc* can be up to 12 characters with any SPACE characters replaced by underscores.	*ffffflfdesc* where *ffff* is the last 4 characters of *ffffff*. *lfdesc* can be up to 16 characters with any SPACE characters replaced by underscores. Fields starting with a $ character are named as described above.
On	1	*lrdesc* where *lrdesc* can be up to 20 characters with any SPACE characters replaced by underscores.	*lfdesc* where *lfdesc* can be up to 20 characters with any SPACE characters replaced by underscores. Fields starting with a $ character are named as described above.

On	2	*lrdesc* where *lrdesc* can be up to 20 characters with any SPACE characters replaced by underscores.	*lfdesc* where *lfdesc* can be up to 20 characters with any SPACE characters replaced by underscores. Any duplicate field names have *_n* appended to the name. The name may be truncated to 18 characters if the extra _n would cause the external name to exceed 20 characters. Any leading numeric characters in lfdesc are replaced by underscores. Fields starting with a $ character are named as described above.
On	3	*bbbbb_lrdesc* where *lrdesc* can be up to 18 characters with any SPACE characters replaced by underscores. *bbbbb* is the MSQL name given to the Speedbase Database during the $BADS/$BS32 dialogue. *bbbbb* can can be 1 to 5 characters long. Note that bbbbb is **not** the Internal Name in the Data Dictionary. This format allows different Speedbase Databases stored in the same SQL database to have the same record names.	*lfdesc* where *lfdesc* can be up to 20 characters with any SPACE characters replaced by underscores. Any duplicate field names have *_n* appended to the name. The name may be truncated to 18 characters if the extra _n would cause the external name to exceed 20 characters. Any leading numeric characters in lfdesc are replaced by underscores. Fields starting with a $ character are named as described above.

On	4	Same as type 3 above except duplicate Table/Record names are made unique by replacing the last 2 or 3 characters with *_n* or *_nn*.	*lfdesc* where *lfdesc* can be up to 20 characters with any SPACE characters replaced by underscores. Any duplicate field names have *_n* appended to the name. The name may be truncated to 18 characters if the extra _n would cause the external name to exceed 20 characters. Any leading numeric characters in lfdesc are replaced by underscores. Fields starting with a $ character are named as described above.

2.17 UpperCase (SPEEDBAS.EXE & SPEEDSQL.EXE)

As explained in section 2.15 the Uppercase option is only recognized if the "LongNames" option (see section 2.15) is enabled.

If the "UpperCase" setting is enabled the characters in the description are converted to upper-case.

The default setting is "Off".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.18 PervasiveTrueNullDate (SPEEDBAS.EXE only)

With the release of Pervasive SQL-2000 the concept of "True NULL date fields" has been added to the Speedbase Pervasive SQL Gateway.

Prior to Pervasive Btrieve 7 if a date was "Null" in Speedbase (represented by binary-zero in the PIC 9(6) COMP field) the Btrieve date was also stored as 0 in the 4 bytes allowed for a Btrieve format date. With Btrieve 7, and all versions of Pervasive SQL 2000, a value of binary-zero is treated as an invalid date despite earlier versions of Btrieve treating this value as a defacto standard.

Support has been added to the Speedbase Pervasive SQL Gateway to store NULL dates in the new 5-byte format required by Btrieve 7, and later; and to make appropriate adjustments to the values in the DDF files. Because of the subtle way the DDF file changes have been implemented by Pervasive, files with the new date formats will still operate correctly with versions of Pervasive Btrieve prior to Btrieve version 7).

Speedbase Pervasive SQL databases created by the V1.78, or later, SPEEDBAS.EXE and SPEEDBAS.NLM will be in the new format. This includes databases created as the result of a database conversion run. Existing databases will be maintained in the old format.

Changes to this setting are recognized immediately when the Gateway is running but the setting is only relevant when a database is being created.

Important Note: This option does affect the internal structure of the database, the DDF files and the BDCF file so it is **vital** to preserve this option during a database transfer. See IN236 for further details.

Important Note: A database rebuild operation will NOT change the Date Format.

In exceptional cases, where it is required to created a database with "old format" dates, setting the "PervasiveTrueNullDate" option to "Off" will create Speedbase Pervasive SQL databases in the old format. **This option should be used when following the recommended technique for moving databases between directories (i.e. where you must ensure the date format of the new, empty database is the same date format as the old database before copying the old data files over the new database).** See IN236 for further details.

The default setting is "On".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.19 PervasiveIncludeIdentity (SPEEDBAS.EXE only)

This setting informs the Speedbase Pervasive SQL Gateway to create Pervasive database files in a similar layout to the Microsoft SQL files by including an Identity Field at the start of each record. This enables Pervasive Databases to have up to 8,388,607 records per record type (including deleted records).

If this setting is disabled, the maximum number of records in a Pervasive SQL database is considerably less then this. However, the precise limit is hard to predict given the way that Pervasive data files contain both indexes and data.

Changes to this setting are recognized immediately when the Gateway is running but the setting is only relevant when a database is being created.

Important Note: This option does affect the internal structure of the database and the BDCF file so it is **vital** to preserve this option during a database transfer. See IN236 for further details.

The default setting is "Off" for pre-DBX Gateways (i.e. V2.*xx*); and "On" for DBX-capable Gateways (i.e. V3.*xx)*.

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.20 PervasiveUseMKDExtn (SPEEDBAS.EXE only)

By default the Speedbase Pervasive SQL Gateway creates .DAT files. If this setting is enabled the Gateway will create .MKD files providing the version of Pervasive SQL is SQL 2000, or later.

With the introduction of SQL-2000, Pervasive introduced a new way of handling True Null Dates. With SQL-2000, and later, the format of date fields remains identical to the 5 byte format that was introduced with Btrieve 7. However, the handling of dates within indexes has change for SQL 2000. This change required a new way of setting up the DDF files and the default extension used on the Pervasive SQL (Btrieve) files changed from .DAT to .MKD.

Changes to this setting are recognized immediately when the Gateway is running but the setting is only relevant when a database is being created.

Important Note: This option does affect the internal structure of the database and the DDF files so it is **vital** to preserve this option during a database transfer. See IN236 for further details.

The default setting is "Off".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.21 MicrosoftTrueNullDate (SPEEDSQL.EXE only)

By default, the Speedbase Microsoft SQL Gateway will convert NULL dates in Global format databases to SQL NULL dates. If this setting is disabled, NULL dates in Global format databases will be converted to the minimum possible valid SQL date 1/1/1753.

This option was introduced to avoid some performance problems with Microsoft SQL. It should only be enabled if Index Fields containing dates are responsible for a loss of performance.

Important Note: Disabling this option will prevent most 3rd party SQL tools from accessing the Speedbase format SQL database correctly. This option should be regarded as highly specialized and should not normally be used.

Changes to this setting are recognized immediately when the Gateway is running but the setting is only relevant when a database is being created.

This option does not affect the internal structure of the database so it is not necessary to preserve this option during a database transfer. However, the option **does** affect the BDCF file - it is **vital** that the Dump/Reload procedure described in document IN249 is followed to transfer a Microsoft SQL format Speedbase database.

The default setting is "On".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.22 BatchTransactionSize (SPEEDSQL.EXE only)

This setting controls how many operations the Speedbase Microsoft SQL Gateway will attempt in a single transaction. This option only has an effect on sequences of operations where the database is locked (e.g. database loads, rebuilds and conversions). Any other database access will terminate the transaction and a new transaction will be started.

Any value in the range 1 to 10,000 is allowed.

The default setting is 1000.

2.23 LogFilePercentSize (SPEEDSQL.EXE only)

This setting controls the **initial** size of the SQL logfile. The size is specified in terms of the percentage of the MDF file size.

Any value in the range 20 to 1,000 is allowed.

The default setting is 100.

2.24 UseMicrosoftSQLCursors (SPEEDSQL.EXE only)

This setting enables the use of Dynamic Cursors in the Speedbase Microsoft SQL Gateway. Setting this option to "On" can significantly improve the performance of Speedbase SQL format databases.

Changes to this setting are recognized immediately when the Gateway is running but the setting is only relevant when a database is being opened. Once a database is opened with this setting enabled us use of dynamic cursors remains in effect until it is closed. The next database open will cause the setting to be re-examined.

This option does not affect the internal structure of the database so it is not necessary to preserve this option during a database transfer.

The default setting is "Off" for pre-DBX Gateways (i.e. V2.*xx*); and "On" for DBX-capable Gateways (i.e. V3.*xx)*.

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.25 EnableLockSnapshot (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting enables a facility in the Speedbase Gateway that creates a Lock Snapshot file (SPEEDBAS.LCK) when the $BALOCK utility is used, or when <F1> is keyed on a Record Line in $BAST. The Lock Snapshot file, as it name suggests, contains details of all the database locks asserted by the Gateway.

The SPEEDBAS.LCK file created is created in the same folder as the Speedbase Log file (see section 2.5) so it is subject to the SpeedbaseLogFileFolder setting (see section 2.14).

The default setting is "Off".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

2.26 Statistics (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting enables the collection of very low-level Gateway statistics. When this option is enabled the Gateway gathers various low-level statistics, a description of which is beyond the scope of this document. **These internal statistics are only committed to the log-file, SPEEDBAS.STA, when the Gateway is closed.**

This option is only recognized when the Gateway is initiated and should not be changed while the Gateway is running. Thus, the normal use of this option is as follows:

A. Close the Speedbase Gateway down if it is running;

B. Use GLREGED.EXE to enable the Statistics option;

C. Load the Gateway and run the performance tests;

D. Close the Gateway to generate the SPEEDBAS.STA file;

E. Use GLREGED.EXE to disable the Statistics option;

This setting should only be enabled during the investigation of a performance problem. It should be disabled during normal operation.

For versions of the DBX Speedbase Gateway prior to V3.15, changes to this option are recognized immediately when the Gateway is running. For versions of the DBX Speedbase Gateway V3.15, or later, the Gateway must be unloaded and re-loaded in order for the change to have any effect. For versions of the non-DBX Speedbase Gateway prior to V2.23, changes to this option are recognized immediately when the Gateway is running. For versions of the non-DBX Speedbase Gateway V2.23, or later, the Gateway must be unloaded and re-loaded in order for the change to have any effect.

Alternatively, the GSM SP-12 version of the $BADIAG utility can be used to force the V2.23, and later; and V3.15, and later, Speedbase Gateways to re-read this registry setting.

The default setting is "Off".

2.27 EnableGSMSHM (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting enables the Shared Memory (SHM) interface. The SHM interface is considerably faster than either the local RPC (ncalrpc) or TCP/IP RPC (ncacn_ip_tcp) protocols but can only be used when the Global Client(s) is running on the same server as the Speedbase Gateway.

Note that the "local" SHM interface is enabled **in addition** to the "remote" protocol specified by the ProtocolSequence setting (see section 2.1). Thus, a Speedbase Gateway can be configured to "listen" for requests from both "local" Global Clients using the SHM interface and "remote" Global Clients using the ncacn_ip_tcp protocol.

The default setting is "Off".

Any of the Boolean keywords described in section 7.2.1 of the Global System Manager (Windows) manual (e.g. "on", "no", "true", 1 etc.) are valid.

This option is only available in V3.15, or later, of the DBX Gateway; and V2.23, or later, of the non-DBX Gateway. Note that the DBX Gateway will operate with "traditional Speedbase", non-DBX databases. Note also that the Shared Memory interface is only supported by GLOBAL.EXE V3.7, or later.

2.28 NumberOfGSMSHMConnections (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting is only recognized when the Shared Memory interface (see section 2.27) is enabled. This setting can be used to increase the number of Shared Memory interface blocks from the default value of 10. Each Shared Memory interface block is approximately 5Kb. This value should only be increased if more than 10 "local" Global Clients (in a Symmetric Multiple Client configuration) are connected to a single Speedbase Gateway.

The default setting is 10.

This option is only available in V3.15, or later, of the DBX Gateway; and V2.23, or later, of the non-DBX Gateway. Note that the DBX Gateway will operate with "traditional Speedbase", non-DBX databases.

2.29 DelayClosingTimeout (SPEEDBAS.EXE only)

This setting specifies a Database Close Delay time-out in seconds with a minimum value of 10. This option may be required to avoid the inevitable delays that occur when opening Pervasive SQL databases. On a normal multi-user system, this delay is only encountered once (i.e. when the database is opened for the first time in a session). However, when a database is opened by a single user on an ad hoc basis (e.g. when producing reports) then "delay on first open" may be encountered repeatedly. This open can be used to delay the close operation so that subsequent opens, after the initial database open, do not suffer the delay.

This option is only available in V3.09, and later, of the DBX Gateway.

2.30 DiagnosticLogfileLimit (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting can be used to limit the size of the log file created by the Gateway. If this setting is 0 or absent this feature is turned off (i.e. the log file continues to grow until there is no more free space on the hard-disk partition). If the value is non-zero, it specifies the maximum size of the log-file (in lines).

If the value is 10,000, or higher, the Speedbase log-file is closed when it contains that number of lines. The log-file is renamed (see below) and a new file is created.

If the value is between 1 and 9,999, a minimum value of 10,000 is used. The minimum value of 10,000 is enforced to prevent too many log-file close/re-open operations.

The initial Gateway log-file is named SPEEDBAS.LOG. When this file becomes full, it is renamed to SPEEDOLD.LOG and a new, empty SPEEDBAS.LOG is created. When the new SPEEDBAS.LOG becomes full, it is renamed to SPEEDOLD.LOG (deleting the existing file) and another new, empty SPEEDBAS.LOG file is created. This technique ensures that there is always at least *N* lines of log-file information available at all times (where N is the value of the DiagnosticLogfileLimit setting).

For multiple Gateway instances the current Gateway log file is named SPEEDB*nn*.LOG (where *nn* is the Gateway Instance number). The backup Gateway log-file is named SPEEDO*nn*.LOG.

This option is only available in V2.17, or later, of the pre-DBX Gateways. It is supported in all versions of the DBX Gateway..

2.31 SpeedbaseSQLInstance (SPEEDSQL.EXE only)

This setting governs which "Instance" of Microsoft SQL Server 2000 or above the Gateway will communicate with. If the setting is absent the Gateway communicates with SQL V7 or the 1st "Instance" of Microsoft SQL 2000. Otherwise the Computer Name that the Gateway is running on is concatenated with this parameter to identify which Instance the Gateway will logon to. This concatenated name is \\ComputerName\SpeedbaseSQLInstance, this is also how Microsoft Query Analyzer uses it.

Important Note: When running with Microsoft SQL Express this parameter must be set to “SQLEXPRESS”.

This option is only available with v2.16, or later, of the "legacy" Gateway; and V3.07, or later, of the DBX Gateway.

The V3.70A, and later, SPEEDSQL.EXE Gateway has been extended to run on a different server (the "Gateway server") from the server running Microsoft SQL (the "remote SQL server"). This "distributed Gateway" option is specified by the SpeedbaseSQLInstance setting as follows:

SpeedbaseSQLInstance setting	Comments
Absent or <NULL>	The Gateway connects to the Primary SQL Instance on the same server.

InstanceName	The Gateway connects to SQL "InstanceName" on same server.
@ServerName	The Gateway connects to the Primary SQL Instance on the remote server "ServerName".
@ServerName\InstanceName	The Gateway connects to SQL "InstanceName" on the remote server "ServerName".

2.32 RecordErrors (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting controls whether "Returning Error" messages are logged together with the Opcode/Sub-opcode and a time stamp in the SPEEDBAS.ERR log-file.

The default setting is "Off".

This option is only available with v2.18, or later, of the "legacy" Gateway; and V3.08, or later, of the DBX Gateway.

2.33 SharedMemoryID (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting is only recognized when the Shared Memory interface (see section 2.27) is enabled. This setting MUST be used when multiple instances of the Speedbase Gateway are configured. This option must be set to a unique free-format string for each instance of the Speedbase Gateway.

No default is available.

This option is only available in V3.15, or later, of the DBX Gateway; and V2.23, or later, of the non-DBX Gateway. Note that the DBX Gateway will operate with "traditional Speedbase", non-DBX databases.

2.34 ErrorfileLimit (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting can be used to limit the size of the Error Log File (SPEEDBAS.ERR) created by the Gateway.

If this setting is 0 or absent this feature is turned off (i.e. the Error Log File continues to grow until there is no more free space on the hard-disk partition). If the value is non-zero, it specifies the maximum size of the Error Log File (in lines).

If the value is 10,000, or higher, the Speedbase log-file is closed when it contains that number of lines. The SPEEDBAS.ERR file is copied to SPEEDBAS.FRR and a new SPEEDBAS.ERR is created.

If the value is between 1 and 9,999, a minimum value of 10,000 is used. The minimum value of 10,000 is enforced to prevent too many log-file close/re-open operations.

This option is only available in V3.57, or later, of the DBX Gateways. It is **not** currently supported in the non-DBX Gateway.

2.35 IntelligentConversion (SPEEDBAS.EXE)

This parameter controls the $BADN, $BN32, $DXU database conversion option for both DBX and pre-DBX databases. This option, which is currently only implemented for Pervasive SQL format Speedbase databases, is only available with the combination of GSM SP-15, and later, and Gateway Version 3.94, and later.

There are currently three variations of the Database Conversion processing controlled by the value of the IntelligentConversion setting:

IntelligentConversion value	Description
0 (default)	Database conversions are performed in the same way as pre-V3.94 versions of the Gateway. **All** the relational aspects of the database are recalculated as if a rebuild had been performed. An error report is produced if any problems occur. However this type of conversion can be very slow for a large database with a simple conversion (e.g. the addition of an index or a non-relational field/column).
1	This mode is essentially the same as 0 from the database conversion point of view. However the conversion is performed in a separate Gateway thread. The conversion utility (i.e. $DXU, $BN32 $BADN) pauses between requests to allow other tasks to get a share the CPU capacity. The separate conversion thread continues processing during these pauses. An error report is produced as above showing any errors.
2	This mode combines the separate conversion thread technique of mode 1 with an approach that: • Avoids performing updates to record types that haven't changed. This is achieved by simply by copying the input record type to the output record type; • Avoids performing Master Updates to records where the Master relationships haven't changed. These record types can still have changes to non GVF/GVA fields and can include new or changed Indexes. This process also leaves the current System Area of the records intact so subsequent servant records don't need to apply Master Updates. This type of conversion will not recognize all existing faults with the database although it will report on any new faults that are detected. Such faults are usually caused by external updates to the database. Note that changing certain relationships between record types, particularly when using Cascading GVF's, can also cause these faults.

In summary type 0 or 1 conversions should be used if there are any doubts about the database's integrity. If the changes to the database are not extensive then type 2 conversions can provide a large performance increase.

2.36 CheckForISOCharSet (SPEEDSQL.EXE only)

This parameter controls the display of the warning window that it displayed by the Speedbase gateway if the Microsoft SQL Registry parameter "AutoAnsiToOEM" is set to "On". See section 1.2 for a discussion of this important parameter.

The default setting is "On".

2.37 ExclusiveDatabaseOpen (SPEEDBAS.EXE & SPEEDSQL.EXE)

If this parameter is set to "On" the Speedbase Gateway will automatically open and lock the BDCF File at database open time. This option ensures that in a multiple Speedbase Gateway configuration only one Speedbase Gateway can access the SQL database simultaneously. By default, this setting is disabled in the v3.xx series Speedbase Gateways but can be enabled for v3.73B, and later. This setting is enabled by default in the v4.xx series Speedbase Gateways. Note that the v4.00, and later, Speedbase Gateways are compiled with a different C-Compiler which allows for more flat files to be open concurrently. If the parameter is enabled with the V3.xx series Speedbase Gateways then only about 16 databases can be open per Speedbase Gateway.

If you are using multiple Speedbase Gateways with this parameter enabled, you should consider very carefully the use of either the Speedbase Registry parameter "DelayClosingTimeout" (see section 2.29) or the permanent database open feature provided by GSM start-up (see gsmsp17.doc for further details). Use of either of these features in combination with ExclusiveDatabaseOpen set to "On" may stop a second instance of the Speedbase Gateway accessing a database even though there are no current users on the first Speedbase Gateway.

2.38 LogSQLCommands (SPEEDSQL.EXE only)

This parameter controls the writing of all Microsoft Transact-SQL comands to the Speedbas.err file. If this parameter is set to "On" every SQL Command is written to Speedbas.err in a format suitable for playing back as a script into Microsoft Query Analyzer. Other existing entries written to Speedbas.err are prefixed with a "—" which turns them into comments as far as Query Analyzer is concerned. This facility is implemented in Speedbase Gateway version 3.76 and later. By default, this setting is disabled for performance reasons. It must be enabled before the Speedbase Gateway is started to ensure fully re-runable scripts produced for Microsoft Query Analyzer. **This is particularly important if SQL cursors are in use.**

2.39 SQLCommandBiteSize (SPEEDSQL.EXE only)

This parameter controls the way in which Microsoft SQL Commands are broken into separate lines when they are being written to Speedbas.err. The commands are broken up on the closest separator to this boundary unless very long literals or identifiers are used. This parameter can be set from 64 to 512. The default value is 132.

2.40 UseServerRegisterIfEx (SPEEDBAS.EXE & SPEEDSQL.EXE)

The V3.72, and later, versions of the Speedbase Gateway use the Windows RpcServerRegisterIfEx function to register as an RPC server. This function, rather than RpcServerRegisterIf, which was used by earlier versions of the Speedbase Gateway, is required for Windows XP SP-2 (see Technical Note IN319 for further details of Global and Windows XP SP-2). If the RpcServerRegisterIfEx function is not supported on the version of Windows running on the Speedbase server then this setting may be set to "Off" to revert to the RpcServerRegisterIf function.

Important note: It is highly unlikely that this setting will ever be required.

The default setting is "On".

2.41 MinimumMalloc (SPEEDBAS.EXE & SPEEDSQL.EXE)

The V3.68, and later, versions of the Speedbase Gateways include logic to ensure that all "malloc" or "calloc" calls allocate at least a minimum amount of memory. The default minimum amount of memory allocated is 4096 bytes (i.e. 4Kb).

By adjusting this parameter the size of memory, allocated by the Speedbase Gateway in each “malloc” or “calloc” call, can be varied.

The default value is 4096. The minimum value allowed is 1024.

Important Note: The Minimum Memory code was needed to avoid a bug in the C Compiler System Routines.

2.42 UseFastCursors (SPEEDSQL.EXE only)

From v4.03 of the Gateway this parameter enables the use of Fast Internal Cursor processing in addition to the existing Transact SQL Cursors. The Registry Parameter “UseMicrosoftSQLCursors” (2.24) needs to be set to ON before this parameter has any effect.

2.43 MaxFastCursorsPerRT (SPEEDSQL.EXE only)

The parameter controls the number of IO Channels that can be accessing a Record Type by the use of Fast Cursors. If an attempt is made to open more channels than this parameter they will revert to Transact SQL Cursors. It must be set before initializing the Gateway. The parameter has a range of 1 to 200 and if not provided it defaults to 50. This parameter affects the amount of memory the Gateway uses. It may need to be adjusted down for servers with small memory or up for large servers with lots of users.

2.44 InternalCursorSize (SPEEDSQL.EXE only)

This parameter specifies the number of records that can be stored in a Fast Internal Cursor. The parameter has a range of 1 to 20 and if not provided it defaults to 10. This parameter also affects the amount of memory the Gateway uses. It may need to be adjusted down for servers with small

memory or up for large servers with lots of users. This parameter has a very significant effect on the performance of Internal Cursors but 10 appears to be a good value.

2.45 SQLTransactionIsolation (SPEEDSQL.EXE only)

This parameter specifies the Transaction Isolation Level that Microsoft SQL will run the Speedbase Gateway Transactions at. The parameter is not case sensitive but only the following four values are allowed:

"READ COMMITED" this is the default
"READ UNCOMMITTED"
"REPEATABLE READ"
"SERIALIZABLE"

Transactions are used by the Gateway to ensure all Master Updates are committed with a Servant Update. Setting this to "SERIALIZABLE" would provide more protection when External Updates are being done concurrently.

This parameter is only supported by the V3.79, and later, Speedbase Gateway.

2.46 CreateSQLShortNames (SPEEDBAS.EXE only)

This parameter only has an effect when creating non-DBX Pervasive databases with the "LongNames" option set to "Off". The option tells the Gateway to produce Record Names in the File.ddf file in the same format as produced for Table Names by the Microsoft SQL Gateways. This facility allows external accesses to the databases to be coded in much the same way regardless of whether the databases is Pervasive SQL or Microsoft SQL.

This parameter is only supported by the V3.82, and later, Speedbase Gateway.

The default setting is "Off".

2.47 SequenceIncrementValue (SPEEDBAS.EXE & SPEEDSQL.EXE)

This setting can be used to change the default value (of 65,536 i.e. 64K) used for $SEQ Increments. It Defaults to 65,536 (#10000). The allowable range is 1 to 8,388,607 (#7FFFFF). If the value is outside the allowed range the Gateway reverts to the default value.

This parameter is only supported by the V3.85, and later, Speedbase Gateway.

The default value is 65,536.

2.48 UseBtrieveTransactions (SPEEDBAS.EXE only)

This option instructs the Gateway to complete Master/Servant record updates within Btrieve Transactions. This operation makes the Update/Write/Delete operations more robust but will result in a slight performance degradation on high throughput databases.

This parameter is only supported by the V3.86, and later, Speedbase Gateway

The default setting is “Off”.

2.49 CascadeTrace (SPEEDBAS.EXE & SPEEDSQL.EXE)

This option can be used to obtain detailed diagnostics from the DBX Cascaded GVA logic within the Gateway.

This parameter is only supported by the V3.86C, and later, Speedbase Gateway

The default setting is “Off”.

2.50 ReportMissingMasters (SPEEDBAS.EXE & SPEEDSQL.EXE)

This option can be used to suppress the return of “Master Not Found” errors during database conversion runs.

This parameter is only supported by the V4.02N, and later, Speedbase Gateway

The default setting is “On” (i.e. by default, “Master Not Found” errors **are** reported by the Gateway during database conversion runs).

2.51 MaxSQLLoginRetries (SPEEDSQL.EXE only)

This value specifies the number of times the Gateway will attempt to login to Microsoft SQL server. Any value between 0 (no retries) and 100 can be set.

This parameter is only supported by the V3.87F, and later, Speedbase Gateway

The default value is 12.

3. SPEEDBAS.NLM Equivalent Settings

Several of the Speedbase Gateway options controlled by Windows registry settings have equivalent options in the Speedbase NLM (SPEEDBAS.NLM). This section describes the options supported by the Speedbase NLM. The parameters that control the Speedbase NLM are set either on the Parameter Screen of the Speedbase NLM that appears on the Novell Server or on the command line that invokes the Speedbase NLM.

3.1 ProtocolSequence

This option has no equivalent for SPEEDBAS.NLM.

3.2 Endpoint

This option has no equivalent for SPEEDBAS.NLM.

3.3 MaxCalls
This option has no equivalent for SPEEDBAS.NLM.

3.4 DiagnosticDisplays
The equivalent option for SPEEDBAS.NLM is the following option on the **Diagnostics Menu**:

Debug screen

This option cannot be enabled from the SPEEDBAS.NLM command line

3.5 DiagnosticLogfile
The equivalent option for SPEEDBAS.NLM is the following option on the **Diagnostics Menu**:

Debug file

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/G=1	Enable Debug File option when SPEEDBAS.NLM starts
/G=0	Disable Debug File option when SPEEDBAS.NLM starts (default)

Note that this command line option is only available with SPEEDBAS.NLM V2.16, or later.

3.6 SpeedbaseSQLUser
This option has no equivalent for SPEEDBAS.NLM.

3.7 SpeedbaseSQLPassword
This option has no equivalent for SPEEDBAS.NLM.

3.8 DefaultDatabaseSize
This option has no equivalent for SPEEDBAS.NLM.

3.9 FastConversion
The equivalent option for SPEEDBAS.NLM is the following option on the **Parameters Menu**:

Fast Conversion Run

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/F=1	Enable the “Fast Conversion Run” option (default)
/F=0	Disable the “Fast Conversion Run” option

3.10 IdentityFillin
This option has no equivalent for SPEEDBAS.NLM.

3.11 FieldDDFCompress
The equivalent option for SPEEDBAS.NLM is the following option on the **Parameters Menu**:

FIELD.DDF Compression

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/C=1	Enable Compress FIELD.DDF
/C=0	Disable Compress FIELD.DDF (default)

3.12 LogFileFolder

This option has no equivalent for SPEEDBAS.NLM.

3.13 MDFFileFolder

This option has no equivalent for SPEEDBAS.NLM.

3.14 SpeedbaseLogFileFolder

This option is not currently supported by the SPEEDBAS.NLM.

3.15 LongNames

The equivalent option for SPEEDBAS.NLM is the following option on the **Parameters Menu**:

Long Names Enabled

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/L=1	Enable Long Names
/L=0	Disable Long Names (default)

3.16 LongNameType

The equivalent option for SPEEDBAS.NLM is the following option on the **Parameters Menu**:

Long Name Type

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/N=*nn* Where *nn* is the Long Name type (between 0 and 3), default 0.

3.17 UpperCase

The equivalent option for SPEEDBAS.NLM is the following option on the **Parameters Menu**:

Upper Case Longnames

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/U=1	Upper Case Longnames
/U=0	Mixed Case Longnames (default)

3.18 PervasiveTrueNullDate

The equivalent option for SPEEDBAS.NLM is the following option on the **Parameters Menu**:

Enable True Null Dates

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/T=1	Enable True Null Dates (default)
/T=0	Disable True Null Dates.

3.19 PervasiveIncludeIdentity

The equivalent option for SPEEDBAS.NLM is the following option on the **Parameters Menu**:

Include Identity Field

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/I=1	Include Identity Field
/I=0	Don't Include Identity Field (default)

Important note: The default option will be 1 in the DBX version of SPEEDBAS.NLM.

3.20 PervasiveUseMKDExtn

The equivalent option for SPEEDBAS.NLM is the following option on the **Parameters Menu**:

Use .mkd Btrieve Fmt.

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/M=1	Use .mkd Btrieve format
/M=0	Don't use .mkd Btrieve format (default)

3.21 MicrosoftTrueNullDate

This option has no equivalent for SPEEDBAS.NLM.

3.22 BatchTransactionSize

This option has no equivalent for SPEEDBAS.NLM.

3.23 LogFilePercentSize

This option has no equivalent for SPEEDBAS.NLM.

3.24 UseMicrosoftSQLCursors

This option has no equivalent for SPEEDBAS.NLM.

3.25 EnableLockSnapshot

The equivalent option for SPEEDBAS.NLM is the following option on the **Parameters Menu**:

Enable Lock Snapshot

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/K=1	Enable Lock dump
/K=0	Disable Lock dump (default)

3.26 Statistics

The equivalent option for SPEEDBAS.NLM is the following option on the **Parameters Menu**:

Statistics

This option can also be enabled by the following option on the SPEEDBAS.NLM command line:

/S=1	Enable statistics
/S=0	Disable statistics (default)

3.27 EnableGSMSHM

This option has no equivalent for SPEEDBAS.NLM.

3.28 NumberOfGSMSHMConnections

This option has no equivalent for SPEEDBAS.NLM.

3.29 DelayClosingTimeout

This option will not be available until the DBX version of SPEEDBAS.NLM is released.

3.30 DiagnosticLogfileLimit

The option has no equivalent on the SPEEDBAS.NLM **Parameters Menu.**

However, the size of the log file (in lines) can be specified by the following option on the SPEEDBAS.NLM command line:

/Z=*nnnnn*	Size of SPEEDBAS.LOG file (default = 0)

3.31 SpeedbaseSQLInstance

This option has no equivalent for SPEEDBAS.NLM.

3.32 RecordErrors

This option currently has no equivalent for SPEEDBAS.NLM.

3.33 SharedMemoryID

This option currently has no equivalent for SPEEDBAS.NLM.

3.34 ErrorfileLimit

This option currently has no equivalent for SPEEDBAS.NLM.

3.35 IntelligentConversion
This option currently has no equivalent for SPEEDBAS.NLM.

3.36 CheckForISOCharSet
This option currently has no equivalent for SPEEDBAS.NLM.

3.37 ExclusiveDatabaseOpen
This option currently has no equivalent for SPEEDBAS.NLM.

3.38 LogSQLCommands
This option currently has no equivalent for SPEEDBAS.NLM.

3.39 SQLCommandBiteSize
This option currently has no equivalent for SPEEDBAS.NLM.

3.40 UseServerRegisterIfEx
This option currently has no equivalent for SPEEDBAS.NLM.

3.41 MinimumMalloc
This option currently has no equivalent for SPEEDBAS.NLM.

3.42 UseFastCursors
This option currently has no equivalent for SPEEDBAS.NLM.

3.43 MaxFastCursorsPerRT
This option currently has no equivalent for SPEEDBAS.NLM.

3.44 InternalCursorSize
This option currently has no equivalent for SPEEDBAS.NLM.

3.45 SQLTransactionIsolation
This option currently has no equivalent for SPEEDBAS.NLM.

3.46 CreateSQLShortNames
This option currently has no equivalent for SPEEDBAS.NLM.

3.47 SequenceIncrementValue
This option currently has no equivalent for SPEEDBAS.NLM.

3.48 UseBtrieveTransactions
This option currently has no equivalent for SPEEDBAS.NLM.

3.49 CascadeTrace
This option currently has no equivalent for SPEEDBAS.NLM.

3.50 ReportMissingMasters

This option currently has no equivalent for SPEEDBAS.NLM.

3.51 MaxSQLLoginRetries

This option currently has no equivalent for SPEEDBAS.NLM.

4. SPEEDBAS.NLM Only Settings

The following options in the **Parameters Menu** are only supported by the Speedbase NLM (SPEEDBAS.NLM) and have no equivalent settings in the Windows registry.

4.1 TLI Deadman Timer

This option has no equivalent for SPEEDBAS.EXE.

Select the "TLI Deadman Timer" entry to change the time period that the server will wait before considering a workstation as "dead". This option is only available on NetWare V4.*x* servers. This option should only be changed if workstations are being disconnected unexpectedly (in which case you are recommended to increase the value from 2 to 4).

This option can be specified by the following option on the SPEEDBAS.NLM command line:

/D=*nn*	Set the “Deadman Timeout” parameter to *nn*

4.2 TCP/IP Port address

This option has no equivalent for SPEEDBAS.EXE.

Version V1.91, and later, of the SPEEDBAS.NLM has the ability to listen on a TCP/IP port for connections from GSM (Windows) clients (in addition to listening on SPX for connections from GSM (Novell) clients).

The TCP/IP port is specified by the following option on the SPEEDBAS.NLM command line:

/P=*nnnn*	Specify the TCP/IP port used for connections from GSM (Windows) clients

The default value is 3100. This parameter must agree with the equivalent registry setting for the GSM (Windows) client.

4.3 ArcServe Backup option

This option is obsolete.

This option could also be specified by the following (obsolete) option on the SPEEDBAS.NLM command line:

/A=0	Disable the “ARCSERVE Backup” option
/A=1	Enable the “ARCSERVE Backup” option

4.4 TLI Spin Waiting

This option is obsolete.

This option could also be specified by the following (obsolete) option on the SPEEDBAS.NLM command line:

/S=0	Disable the “TLI Spin Waiting” option
/S=1	Enable the “TLI Spin Waiting” option