

**Category:** Client/GDS32

ID	SF ID	Description	Priority
1416	446227	<b>Implement ThreadSafe code/operation</b> The current GDS32 library is NOT thread-safe.	5 - Medium (next major release)
1361	428605	<b>Cannot dlopen libgds under Linux</b> When php interbase extension used as module, it links libgds dynamically with dlopen and unloads libgds with dlclose (dlfcn.h). Because libgds registers in init() gds__cleanup with atexit(), when program exits, it calls gds_cleanup, but gds_cleanup is not in program (libgds was freed by dlclose()). Under Linux problem may be fixed by using _init and _fini functions exported by libgds. Example is appended. Function _init is called, when shared library is loaded (by dlopen or when library is linked with compiler when linking) and function _fini is called when shared library is unloaded (as _init). By exporting and using this functions, libgds needs not use atexit to register gds__cleanup.  This interface works in Linux and Solaris.  Under windows may be used dllmain function for similarity functionality.  DllMain (HANDLE hInst, ULONG ul_reason_for_call, LPVOID lpReserved);  ul_reason_for_call may be: DLL_PROCESS_ATTACH: DLL_THREAD_ATTACH: DLL_THREAD_DETACH: DLL_PROCESS_DETACH:  but I don't know what is shared by all process when linking the same library.	5 - Medium (next major release)

**Category:** Core Engine

ID	SF ID	Description	Priority
274	225218	<b>NULLs always at the tail</b> According to the standard, it's up to the db vendor where NULLs should be, either at the tail or at the head of an ordered recordset. In IB, when you order ASC (default) on a field with NULLs, they go to the tail. That's a vendor decision. However, the engine must be consistent and in this case, it doesn't: if you order DESC on the same fields, NULLs will appear at the tail, too. One of the answers should be changed.	5 - Medium (next major release)
287	227776	<b>More information about dependencies is needed</b> I've logged this issue as a request for enhancement and I hope others will append what they think IB needs about keeping dependencies.  Following with my example script described in: [Bug #125219] isql -a: wrong order with domains based on table's fields  I decided to drop the procedure named valid16 that handles the validation for the domain dom16. No problem. IB destroyed it. I still was able to select from tab16 (the one that uses the domain and it's used by the domain at the same time), since the proc was loaded in memory. As soon as I disconnected and reconnected, doing a simple  select * from tab16  caused the following (expected) message:  Invalid request BLR at offset 8 procedure id 28 is not defined  I had to drop the constraint from the domain for IB to allow me to define the proc again (or it kept complaining about id 28) then I recreated the check constraint.  IB keeps track of table2table dependencies through PKs in rdb\$ref_constraints. Procedures, views and triggers that depends on tables are tracked at rdb\$dependencies and it tracks also procedure2procedure and trigger2procedure dependencies.  What's missing, among others dependencies: - domain using procedure - domain using table = These two cases are legal despite what docs say. - domain using generator - domain using view	5 - Medium (next major release)

**Category:** Core Engine

ID	SF ID	Description	Priority
		<ul style="list-style-type: none"> <li>= Subtle consequence of above findings.</li> <li>- computed field using table</li> <li>- computed field using procedure</li> <li>- computed field using generator</li> <li>- computed field using view</li> <li>= when I deleted a proc that was serving a computed field and tried to do a SELECT from the affected table, I got: Invalid request BLR at offset 26 procedure proc_name is not defined</li> <li>Interesting: in the case of a computed field, the binding seems to be by name and not by proc number as in a constraint, since I only defined again the proc and it was ready, no need to drop and recreate the computed field.</li> <li>- procedure using generator</li> <li>- trigger using generator</li> <li>- view using generator</li> </ul>	
1421	446234	<b>Support for Nested Transaction</b>  Support should be added to provide support for nested transactions	3 - Low (to be reviewed)
1422	446236	<b>Session variable space</b>  Support should be added to allow for session variables to be maintained. This includes support for Create/Set/Get/Drop operations.	3 - Low (to be reviewed)
1391	446182	<b>Enable support for 32kb pages</b>  Modify the engine and GBAK routines to allow for the database pages of 32kb in size to be specified.	5 - Medium (next major release)
1432	446249	<b>Server Bi-directional cursors</b>  Enable Bi-directional cursors for server processing	5 - Medium (next major release)
1370	433293	<b>Replication in linux</b>  Add multi-machine replication support on linux	5 - Medium (next major release)
1338	412673	<b>using collate in stored procedure</b>  It would be nice to have collate in stored procedure for varchar data type.	5 - Medium (next major release)
1437	446255	<b>Support explicit record lock/unlock</b>  ?	5 - Medium (next major release)
1405	446214	<b>Triggers/SPs on database operations</b>  It would be a good thing if a trigger or SP was run when a database is attached/detached by the engine or when a user logs in or disconnect from a database.	5 - Medium (next major release)
1412	446223	<b>True SMP support</b>  Old news -- FB doesn't support SMP very well.	5 - Medium (next major release)
1420	446233	<b>Kill Query - server timeout/runaway</b>  The server should have built-in support to ensure that a query cannot run 'away'. A parameter in the server config file should establish the maximum query execution time.	5 - Medium (next major release)
1419	446232	<b>Kill query -- client requested</b>  The user needs the ability to stop/kill a query.	5 - Medium (next major release)
1426	446243	<b>Transaction ID</b>  Similar to the db connection ID, each transaction should have it own unique ID value which should be exposed as a system variable to triggers/SPs and SELECT statements	5 - Medium (next major release)
1435	446252	<b>Hooks for external SP and Trigger debug</b>  Enable hooks/support for external SP and Trigger debugging.	5 - Medium (next major release)
1439	446257	<b>HTML/XML output</b>  Allow for dataset to be returned in HTML/XML format using data-output templates.	5 - Medium (next major release)
1377	437859	<b>Execute procedure and string concat</b>  The engine does not allow to pass an expression with string concatenation to a SP. When I'm compiling a procedure with a line like this one:  execute procedure p_do_something('a'    'b');	5 - Medium (next major release)

**Category:** Core Engine

ID	SF ID	Description	Priority
		I get an error:  Invalid token. Dynamic SQL Error. SQL error code = -104. Token unknown - line 14, char 57.	
1349	421028	<b>Automatic Affinity in ibserver startup</b>  In IB start the affinity mask would be setted automatically to the first processor.	7 - Medium-High (next minor release)
1389	446180	<b>Server-side database aliases</b>  Add functionality to engine to allow for database aliases to be defined in a server side text/INI file (FBAlias.INI) to assist in resolving client database names.  This would allow for clients to specify as database string like server:alias, and have the server resolve the 'alias' value into the full 'path\database.gdb' string.	8
1387	446173	<b>64 Bit Database I/O</b>  Enable 64bit file I/O to allow for single database files to exceed 2/4GB in size.	9 - High Priority/Immediate (next build)

**Category:** DSQL

ID	SF ID	Description	Priority
1455	447001	<b>Create Table as Select ....</b>  Submitted by nick@upsonuk.com  I'd love to see Create Table as Select .... as Ingres does	3 - Low (to be reviewed)
1427	446244	<b>Multi-database access in triggers and SP</b>  Allow for other databases to be accessed from within triggers and SPs.	3 - Low (to be reviewed)
1401	446209	<b>ON SELECT Triggers</b>  Allow trigger to be defined and execute when SELECT statement is executed for a table.	5 - Medium (next major release)
1433	446250	<b>Event # and Text at runtime</b>  Allow for Event #'s and Text to be specified at runtime. Thus removing the requirement for Event to be pre-defined in the database	5 - Medium (next major release)
1381	441942	<b>User Account maintenance in SQL</b>  I think it a good idea to have the ability in the sql interface to Create, Edit and Delete User Accounts.  Create User MyUsername MyPassword;  Delete User MyUsername;  Alter User MyUsername MyPassword NewPassword;	5 - Medium (next major release)
1438	446256	<b>Dynamic SQL in Stored Procedures</b>  Allow for Stored Procedures to support dynamic elements -- tablename, columnnames....	5 - Medium (next major release)
1403	446211	<b>Full Blob susport for Triggers and SPs</b>  Allow blobs to be used as parameters and variables in Triggers and Stored Procedures.	5 - Medium (next major release)
1404	446212	<b>Type Flag for Stored Procedures</b>  Add a new flag to the system tables to distinguish between SELECT and execute only Stored Procedures.	5 - Medium (next major release)
1408	446218	<b>Trigger/SP on start/commit/rollback</b>  Similar to the triggers/SPs for database operations, these procedures would fire on transaction start/commit/rollback.	5 - Medium (next major release)
1417	446229	<b>Blob Type 1 compatibility with VarChar</b>  Currently Blob Sub-Type 1 (text) column can not be treated in the same manner as a VarChar column.	5 - Medium (next major release)

**Category:** DSQL

ID	SF ID	Description	Priority
1418	446231	<b>Order By/Group By computed columns</b> Order By/Group By needs to support computed columns	5 - Medium (next major release)
1424	446238	<b>Unique db connection identifier</b> Each db connection should be assigned a unique identifier which should be available as a system variable for use in triggers/SP and SELECTs.	5 - Medium (next major release)
1425	446240	<b>Exception code and text at runtime</b> Allow exception code and text to be specified at runtime, ie. do not require the values to the pre-defined in order for an exception to be raised.	5 - Medium (next major release)
1428	446245	<b>Domain for Trigger/SP variables</b> Allow domains to be applied to variables within a trigger or SP.	5 - Medium (next major release)
1429	446246	<b>Domain for SP parameters</b> Allow domains to be used in the definition of the input/output parameters of SPs.	5 - Medium (next major release)
1434	446251	<b>Array support in SPs, Select, Insert...</b> Enable support for Array elements in SPs as well as SELECT, INSERT and UPDATE statements.	5 - Medium (next major release)
1436	446253	<b>Expression based indexes</b> Enable support for indexes based on Expressions (i.e. UPPER(NAME) ).	5 - Medium (next major release)
1411	446222	<b>Comments in definition of db objects</b> When defining database objects, the user should be able to provide comments which would be stored in the existing (unused) columns in the system tables.	5 - Medium (next major release)
1388	446177	<b>Add TOP/First and LIMIT syntax to SELECT</b> Add TOP/First and LIMIT syntax to SELECT statements, ala MySQL and PostgreSQL.	9 - High Priority/Immediate (next build)

**Category:** Data Types/On-Disk Struc(ODS)

ID	SF ID	Description	Priority
1409	446220	<b>Object names of at least 64bytes</b> Like other RDBMS's we should be supporting longer object names.	5 - Medium (next major release)
1406	446215	<b>Support for GUID datatype</b> This includes supporting a new function to create GUID values.	5 - Medium (next major release)
1410	446221	<b>Longer index key values -- 1024 bytes</b> The current size limitation (252 char) creates problems for systems which use multi-byte collation sequences.	5 - Medium (next major release)
1440	446258	<b>True Boolean Datatype</b> A new datatype which the three states - true/false/null.	5 - Medium (next major release)
1399	446206	<b>INT64 datatype alias for Numeric(18,0)</b> It is a common request/question for new users -- how do I create INT64 datatypes. Accordingly, we should create an alias INT64 which would equate to NUMERIC(18,0).	5 - Medium (next major release)

**Category:** GBAK

ID	SF ID	Description	Priority
1413	446224	<b>New snapshot DB backup</b> Create a new program which would allow for realtime snapshots of database to be created, with the database online/active/open. This program would create a 'image' of the database, which could be immediately restored, since it would be a physical copy of the source database.	7 - Medium-High (next minor release)

**Category:** ISQL

ID	SF ID	Description	Priority
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**Category:** ISQL

ID	SF ID	Description	Priority
1415	446226	<b>isql - Command Line History Editing</b> It would be nice to have command line history and editing added to isql a la bash or tcsh.	5 - Medium (next major release)

**Category:** Security Issues

ID	SF ID	Description	Priority
227	213433	<b>Poor ib security in unix installed version</b> From: sskracic@lavsa.com (Sebastian Skracic)  Some time ago I found out that default Linux installation of IB4.0 introduces Huge security holes.  I've put up some thoughts about it at <a href="http://acs.lavsa.com/bboard/q-and-a-fetch-msg.tcl?msg_id=000000">http://acs.lavsa.com/bboard/q-and-a-fetch-msg.tcl?msg_id=000000</a>  Pretty much all outlined above is still valid for InterBase 6.0, at least SuperServer which I have just (re)installed. This is no good.  The point here is that _default_ installation must be reasonably secure.  Just to sum up what should necessarily be done in installation process:  - create 'interbas' (or some other) unix user - all installed files should be owned by that user - through 'gsec', add an entry in isc4.gdb for 'interbas' user - through 'isql', exec 'grant all on users to interbas;' to /opt/interbase/isc4.gdb security database to which you have attached as sysdba - the point here is that all future db maintenance will be performed by 'interbas' user, so this step is necessary to allow 'interbas' managing user accounts through 'gsec'. - fix 666 (or 777) modes on some files. - create directory /var/interbase (or something like that) where .gdb files will be stored (or somewhere in ~interbase)  Somewhere deep in server code: - check which will prevent InterBase daemon from as root  I'm sure there are even more things that should be taken care of.	5 - Medium (next major release)

240	217055	<b>Security on IB6 SS running on NT</b>	5 - Medium (next major release)
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Hello, I want to see steps to make IB6 to run under an account that's not SYSTEM or has administrative privileges under NT.

Currently, I was able to setup IB in an administrative account, then I proceed to subtract some privileges from the account, but using a plain userid even with several special OS privileges granted did not work. At least I was able to make IB run on an account other than SYSTEM and ADMINISTRATOR.

The problem seems to be the communication with the Guardian. IB alone can be started automatically as a service, but not through the guardian.

Since only SYSTEM is allowed to interact with the desktop but IB/Guardian as a service don't show a tray icon, I don't see the problem in removing administrative requirements other than revisiting the IPC schema between IB and the Guardian.

298	229239	<b>Password algorithm poor</b>	5 - Medium (next major release)
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Users with the same password currently get the same hashed password stored in the USERS table in isc4.gdb and this seems to be a fairly poor method of doing it.

Also the isc4.gdb installed from Firebird 0.9-4 has the permissions of 666 which leaves it wide open to attack. Having it wide open like this is at least as bad as the backdoor recently discovered and more attention should be given to security issues like this.

For example as a simple denial of service attack, I just did a /opt/interbase/isc4.gdb as a regular user and pow; no users can login anymore to any database on the system! I could just as easily of used a binary editor to copy my password over another users and thus have changed their password to mine (an example why the same crypt result for two identical passwords is bad!).

1430	446247	<b>SQL security rights for adding UDFs</b>	5 - Medium (next major release)
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Restrict adding UDF definitions to specified users.

**Category:** Security Issues

ID	SF ID	Description	Priority
1431	446248	<b>SQL rights for defining External tables</b> Restrict definition of External tables to specified users.	5 - Medium (next major release)

**Category:** UDF/Built-In Functions

ID	SF ID	Description	Priority
1407	446216	<b>Built in GUID generator</b> A GUID generator should be added to the list of built-in functions.	5 - Medium (next major release)

**Legend:**

Categories	Bug Group	Priorities
Build Issues	As Designed/Pitfall	1 - Lowest ("not in your dreams")
Client/GDS32	Confirmed Bug	2
Core Engine	Feature - Fixed v1.0	3 - Low (to be reviewed)
DSQL	Feature request	4
Data Types/On-Disk Struc(O	Fixed v0.9	5 - Medium (next major release)
Documentation	Fixed v0.9-4	6
FreeBSD port	Fixed v0.9-5	7 - Medium-High (next minor release)
GBAK	Fixed v1.0	8
GPRE	Initial Bug	9 - High Priority/Immediate (next build)
IBConsole (No Longer Used)	Irreproducible Bug	
IBGuardian		
ISQL		
Installation - Client		
Installation - Server		
InterClient		
Java/JDBC Client		
Linux ports		
ODBC/JDBC Driver		
Security Issues		
UDF/Built-In Functions		