

User Guide

Release Notes

InterBase 2009

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General Information

This chapter of the InterBase 2009 Release Notes provides information on the following topics:

- A summary of the new features provided in this release and the chapter and user guide that explains how to use them.
- Brief descriptions of the InterBase user guides you receive upon purchase.
- A list of contact numbers, email addresses, and websites.
- Instructions on how to migrate to InterBase 2009 from a previous release.

Note For maintenance release updates, including bug fixes since the last major release of InterBase 2009, please see the InterBase 2009 Update 3 [Readme.html](#).

What's new in InterBase 2009?

Table 1.1 summarizes the new features added to InterBase in the 2009 release and identifies the chapter and user guide that explains how to use each one.

Table 1.1 New features in InterBase 2009

Feature name	Description	User guide
Database- and column-level encryption	InterBase now supports the use of weak (DES) or strong (AES) encryption to encrypt a database and/or individual columns in a database table. Due to U.S. export regulations, you must obtain a strong encryption license from InterBase to use AES encryption.	The InterBase Data Definition Guide
Over-the-Wire (OTW) network encryption	Typically, data encrypted at the database- or column-level is not encrypted during the transmission process. OTW encryption, however, allows you to do just that: encrypt data as it is communicated over a network from a client to a server. You can use weak or strong encryption, though to use strong (AES) encryption, you must obtain a strong encryption license from InterBase.	The InterBase Operations Guide .
Encryption of backup files	If you encrypt a database and/or any of its columns, you must also encrypt the backup files for that database. You decrypt the backup files during the restore process. This adds an additional layer of protection to your data.	The Data Definition Guide .
ToGo Edition	The new InterBase ToGo Edition is a small, portable version of the Desktop Edition. Target applications for the ToGo Edition include small devices and public kiosks, as well as Value Added Reseller (VAR) applications that were built using InterBase. Used in the ToGo edition form, InterBase does not have to be installed on any server or end-user workstation.	The InterBase Developer's Guide .

What happened to the InterBase Update Guide?

For the last few releases, documentation explaining how to use new features was placed in an *Update Guide* that was made available in PDF, along with the other InterBase user guides.

For the InterBase 2009 release, information previously contained the *Update Guide* has been integrated into the appropriate user guide, and new features for 2009 are summarized in the InterBase 2009 *Release Notes* and explained in the appropriate user guide. These actions make the *Update Guide* obsolete and unnecessary for this release.

Table 1.2 identifies the InterBase user guide that now explains how to use the major features that had previously been described in the *Update Guide*.

Table 1.2 Where to find coverage of major features from recent previous releases

Feature name	Description	Document name
Journaling, journal archiving and disaster recovery	InterBase now supports the activation and use of journal files and journal archives. A journal file records each database transaction as it occurs. A journal archive contains the most recent completed journal file as well as the most recent archived database backup. Journal archiving provides point-in-time recovery from database or server disasters.	The InterBase <i>Operations Guide</i> .
Incremental backups	You can now use InterBase to perform incremental as well as full backups. An incremental backup copies all of the changes that have been committed to the database since the last full backup.	The InterBase <i>Operations Guide</i> .
Embedded User Authentication (EUA)	EUA must be enabled to use the InterBase encryption features.	The InterBase <i>Operations Guide</i> .
Internationalization changes	A number of changes were made to UTF and Unicode character sets and collation orders.	The InterBase <i>Language Reference Guide</i> .
Batch updates	You can now group and submit multiple SQL statements in a single unit (the batch update).	The InterBase <i>API Guide</i> and the InterBase <i>Operations Guide</i> .
UDFs and Blobs	You can now use VAR and Blob data interchangeably. In addition, you can now pass a parameter as a descriptor.	The InterBase <i>Developer's Guide</i>
JDBC improvements	Various improvements have been made to JDBC parameters and settings.	The InterBase <i>Developer's Guide</i> .

About the InterBase Document Set

The document set in PDF format requires about 13MB of space on your disk. The documents install by default when “Client and Server” or “Client” is chosen during the InterBase install process. However, in a custom install, it is possible to choose an install that does not include the document set. If you want to install documents at a later time, run the InterBase install, choose Custom, and select the documentation.

You can also copy them from the Documentation directory of the InterBase CD-ROM or download file.

Table 1.3 provides a brief description of the subjects covered in each guide. Detailed command-line and step-by-step instructions are provided for most topics. Where applicable, instructions are also provided on how to perform a task or use a feature using IBConsole, the InterBase user interface.

Table 1.3 About the InterBase user guides

Guide Name	Description of topics covered
<i>Operations Guide</i>	<p>How-to information on working with InterBase databases. Topics include:</p> <ul style="list-style-type: none"> • Using IBConsole • Configuring and operating the InterBase server • Network configuration • Performing backups and restores • Using journaling and journal archiving • Database security • Interactive queries
<i>Data Definition Guide</i>	<p>How-to information on designing and building InterBase databases. Topics include:</p> <ul style="list-style-type: none"> • Specifying datatypes • Working with domains, tables and indexes • Working with procedures, triggers and generators • Encrypting databases and columns • Character sets and collation orders
<i>Developer's Guide</i>	<p>How-to information on developing InterBase database applications using Borland and Embarcadero development tools, JDBC, and ODBC. Topics include:</p> <ul style="list-style-type: none"> • Connecting to databases • Understanding datasets • Working with tables, queries, stored procedures, cached updated and events • Working with UDF and Blob filters • Importing and exporting data • Working with InterBase Services • Writing install wizards
<i>API Guide</i>	<p>How-to information on developing InterBase applications using the InterBase API interface. Topics include:</p> <ul style="list-style-type: none"> • Application requirements • Programming with the InterBase API • Working with databases, transactions, dynamic SQL, blob data, arrays, conversions, and service • Using the install and licensing APIs • Exporting XML • Handling error conditions • The InterBase API function reference

Table 1.3 About the InterBase user guides

Guide Name	Description of topics covered
<i>Embedded SQL Guide</i>	How-to information on developing InterBase applications using embedded SQL. Topics include: <ul style="list-style-type: none"> • Application requirements • Working with databases, transactions, data definition statements, data, dates and times, arrays, stored procedures and events • Error handling • Dynamic SQL • Preprocessing, compiling and linking
<i>Language Reference Guide</i>	This is a reference guide to InterBase elements. Topics include: <ul style="list-style-type: none"> • The SQL statement and function reference • Procedures and triggers • Keywords • Error codes and messages • System tables, temporary tables, and views • Character sets and collation orders
<i>IBsetup.html</i>	This document provides detailed installation and registration instructions for all platforms.
<i>Release Notes</i>	This document provides a description of the new features offered in this release, along with a summary of major bug fixes, and updated contact information.

Accessing the InterBase Docs

CD-ROM and download files

The document set is available in the *Doc* directory of your InterBase CD-ROM or download files.

Windows

There are links to each of the books in Start menu | Programs | InterBase | Documentation. You can, of course, copy these links to a more accessible location, or create your own links.

Linux, Solaris, and Mac OSX

To access the PDF document set, go to `<interbase_home>/doc`. You can then display any one of the six books or the Release Notes.

Acrobat Reader

You need Adobe Acrobat Reader to view the *.pdf document files.

Adobe Acrobat Reader is available for free in many languages from
<http://www.adobe.com/products/acrobat>

Contacting CodeGear and Embarcadero Technologies

Note Mailing addresses, and sales email addresses and phone numbers can be found on the CodeGear and Embarcadero websites. In addition, the CodeGear technical support website, listed below, provides a number of examples and troubleshooting tips about using InterBase and other CodeGear products.

Table 1.4 Contact information

Websites	<ul style="list-style-type: none">• For Embarcadero general products, contact, and company information: www.embarcadero.com• For technical support: www.embarcadero.com/support• For education services: www.embarcadero.com/services/education.php• For Embarcadero Technologies general product, contact, and company information: www.embarcadero.com
Email addresses	<ul style="list-style-type: none">• CodeGear and Embarcadero general information: info@embarcadero.com• CodeGear and Embarcadero technical support: support@embarcadero.com
Telephone numbers	<ul style="list-style-type: none">• Embarcadero/CodeGear U.S. technical support: 800-523-7070• CodeGear headquarters: 831-431-5000• Embarcadero headquarters: 415-834-3131

Migrating to InterBase 2009

The following steps represent the general procedures for migrating from a previous version of InterBase to a newer version. For more information about InterBase migration, see Appendix A, “[Migrating to InterBase](#),” in the *InterBase Operations Guide*.

- 1** Back-up all databases, including the security database, before un-installing the previous version.
- 2** Back-up the `ibconfig` file if it has been customized.
- 3** Un-install your previous server.
- 4** Install, register, and start the new server.
- 5** Restore your databases.

Note For a list of key words to avoid using in your databases, see the InterBase [Language Reference Guide](#).

Fixed Bugs

This chapter lists bugs that have been fixed for the following InterBase releases:

- InterBase 2009
- InterBase 2007 SP3
- InterBase 2007 SP2
- InterBase 2007

Bugs fixed in InterBase 2009

The table below lists the bugs that were resolved in InterBase 2009. For information on the latest InterBase 2009 bug fixes, please refer to [Readme.html](#).

Table 2.1 Bug fixes for IB 2009

For InterBase 2009:

Bug Number	QC#	Description
240075		Running <code>gfix -validate -full</code> exhibits index corruption messages on table <code>RDB\$DEPENDENCIES</code> .
252301		IBMgr Cannot Start Server As A Service When Launched Directly From The Bin Directory. Instead, must be launched from the installed shortcut which passes "InterBase Server Manager [instance = gds_db]".
255784	56532	Running a select statement with specific OR conditions causes the InterBase server to crash.
255847		Validating a freshly restored database reports many errors in index <code>RDB\$DEPENDENCIES</code> .

Table 2.1 Bug fixes for IB 2009

For InterBase 2009:		
Bug Number	QC#	Description
256021	56533	JDBC driver: Calling PreparedStatement.addBatch() more than once results in error when calling PreparedStatement.executeBatch().
256054	53957	IBServer crash on select from table with date indexes.
257272		Concurrent delete and select (and probably insert) cause database to be corrupted. "internal gds software consistency check (exceeded index level)" error in interbase.log.
261546	51439	isc_info_num_buffers returns incorrect information.

Bugs fixed in InterBase 2007 SP3

For information on InterBase 2007 SP3, please refer to <http://edn.embarcadero.com/article/39103>.

Bugs fixed in InterBase 2007 SP2

The following bugs were resolved in InterBase 2007 SP2:

Table 2.2 Bug fixes for IB 2007 SP2

For InterBase 2007 SP2:		
Bug Number	QC#	Description
58205		Improve access method for full outer joins.
58257	47598	Left outer join performance without an index fixed.
58462	602721	Index is not used in a co-related sub select of an UPDATE statement, fixed.
60128	47916	Left outer join with table expressions not optimized when indexes should be used, fixed.
60269	20359	Query Optimization when using "IN" or "OR" keywords fixed.
61347	25160	Index is not used for the where clause when the query is outer join fixed.
219990	10264	Left Join on a big table completion lag fixed.
223805	597104	The optimizer uses a sequential table scan to perform co-related sub-query, fixed.
231879	47599	Data inserted in the last transaction not seen if the database is made read only, resolved.

Table 2.2 Bug fixes for IB 2007 SP2

For InterBase 2007 SP2:		
Bug Number	QC#	Description
239883	11219	Installing Desktop Edition as Administrator does not make Programs listing available to other Users, fixed.
243270		Connecting with 8.0 client to 7.1 server fails with unavailable database error, fixed.
243299	40486	InterBase 7.1 server crashes upon disconnect using 8.0 client with remote connection, fixed.
243679	47604	InterBase Server Manager starts as an ordinary user even if you are an administrator on Windows Vista, fixed.
248755		interclient.jar JDBC driver now installed as part of the InterBase SDK.
248850		Bookmarks are missing from Language Reference Manual, fixed.
249045	47600	InterBase 2007 Installer now works on SUSE Linux 10.
249232		INSERT/COMMIT for each record delay when Journaling is enabled on some Windows platforms fixed.
251265	47602	Query with many joins returns "size of optimizer block exceeded", fixed.
251608	44565	Optimizer block exceeded error fixed.
251610	43874	Bad query result on LEFT JOIN when multiple filters in the join, resolved.
256161		Nested loops in triggers crashes the server, fixed.

Note The table above also contains bug fixes from SP1.

Bugs fixed in InterBase 2007

The following bugs were resolved in InterBase 2007:

Table 2.3 Bug fixes for IB 2007

For InterBase 2007:		
Bug Number	QC#	Description
60140		Backup and Restore causes problem with adding constraints
112113		Invalid 'CREATE SHADOW' statement will cause the ISQL crash.
120473		DEFAULT is allowed for BLOBs, but causes errors (such as Conversion error from string "BLOB") when used
122700		FOREIGN KEY constraint DDL fails with multiple indices on REFERENCE key
124028		IBConsole cannot see the view data
124771		The error "constraint not found" is raised when one attempts to create a foreign key constraint if the parent table has both a Primary Key constraint and a separate unique index on the referenced column(s) and the name of the unique index sorts before RDB\$PRIMARY
127168		InterBase server creates databases without absolute path in System32 directory
148143		Instead of getting the normal error message that Field T1 can not be ***NULL*** you get a "conversion error from string "BLOB" "
157531		Obsolete ibconfig parameters included in ibconfig file
169965		SELECT * FROM TMP\$PROCEDURES will crash server if a procedure has been dropped
200567	7997	Support to INSERT and UPDATE in BLOB field with Sql command
213125		It is impossible to drop a trigger that starts with the name RDB\$
217985		List of System temporary tables (currently page 244) does not list TMP\$HEAPS and TMP\$TRIGGERS
218040		Invalid INTERBASE env variable value gives misleading error
228356		Allow connection string to a different port to specify a different port number in addition to the port label we already have
230142		If you select 'no' for 'run interbase server as a service on Linux', it runs InterBase server as a service on Linux.
237809		Better error messages required for database re-routing failures
238414		Select after update generates cannot update read-only view error.
238638		A connection made via a server alias will fail if other non alias connections are concurrent.
239254		Embedded data user authentication section missing from manual.

Table 2.3 Bug fixes for IB 2007

For InterBase 2007:		
Bug Number	QC#	Description
239622	24859	gds32.dll enhancement, require spb support for instance name
239690		Select from view which calls UDF that returns a blob can cause server crash
239730	13183	Alias support for IBConsole
239847	28518	DataDirect ODBC driver doesn't work with SELECT procs with input params
239880	14563	Add support to command select, insert, update on Blob fields
239882	11220	Incomplete entries in Services File
239886	9014	Database Alias fails when database already opened via full path
240793	31288	BLOB as (VAR)CHAR functionality failure in Stored Procedures
241006		IBConsole crashes when you access "IBConsole help" under the "Help" menu