Zim 8: New Features, Enhanced Value

Zim 8 is the newest offering from ZIM Corporation that uses our proven Entity-Relationship architecture and "English-like" 4GL and boasts many new features and improved functionality to take your database systems to a higher level. Zim 8 includes new technology and functionality not available in any other Zim product. Zim 8 will include an advanced, dedicated lock manager to dramatically reduce the possibility of dead-locks; an online back up that automatically generates a mirror database and prevents the loss of crucial data; and improved scalability that will support more concurrent users with the same level of processing. With new data, transaction and locking mechanisms built to handle even the most complex data processing needs, we know you'll be amazed at what Zim 8 can do for you. The following is a highlight of some of the new features in Zim 8.

1. Advanced Zim Lock and Data Management - now integrated into Zim Server

> Multi-threaded Lock and Data Management controls.
> Operating system-independent lock management.
> Automatic and immediate deadlock detection linked to a 'pending list' where lock requests are serialized and prioritized.
> Serialized lock requests eliminate the need to swap out and involve Lock Manager when a lock is granted.
> Redesigned internal transaction execution dramatically reduces deadlock occurences.
> Time limits control how long a lock request can remain on the 'pending list'.
> Lock request priority lists aim to apply the oldest lock requests first so the older the pending request, the higher its priority in the queue.
> Once committed to disk, changes are kept in the shared memory, increasing the number of supported users and making database changes immediately available to other processes.
> All transactions are exclusively and centrally controlled by the Data Manager within Zim Server.
> Individual checkpoint threads apply the transaction log to the database while users continue processing - no more waiting for database to be updated before users can write new changes.

2. Online Back up

> Zim 8's Online Back up automatically generates a mirror database, to dramatically improve your database integrity and recovery, minimizing its downtime after system crashes or human errors. The "mirror database" is always ready to handle queries, even during "main database" normal operation. If a crash does occur, all committed transactions, up to the last checkpoint, are available in the backup database and users can simply switch over to the mirror database to continue their work. When downloading the mirror database to a tape, Online Back up is suspended and all pending committed transactions are applied to the mirror upon resumption.

3. Server Side Sequence Numbers Eliminate Lock Competition

> Sequence numbers are assigned by the server, ensuring files can remain open and are only updated at checkpoints. This effectively eliminates lock competition between Zim 8 instances that use sequence numbers.

4. Enhanced Code Protection

> All data set definitions now carry a 'last modified' time stamp to ensure the data will not be corrupted or overwritten by outdated code.
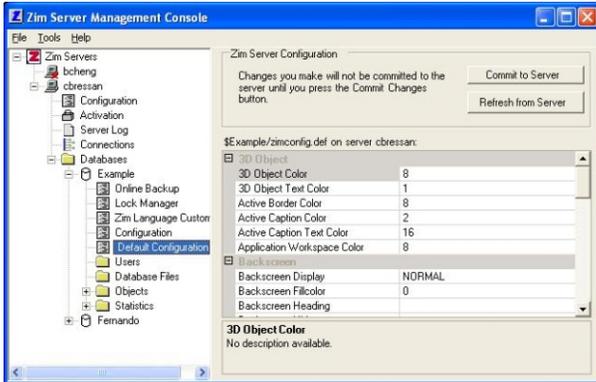
5. Expanded Administrator Control

> Administrators can now monitor shared memory operations in real time, allowing them to quickly identify who has what locked, locate hot spots, or suspend the database during application changes. The database administrator can also control which files are targeted for data reclamation if shared memory is needed for new objects.

6. True Multi-User Development

With its new shared memory model, Zim 8 now runs in multi-user mode even during database development. Therefore changes made to fields, roles or entity set definitions, as well as all erase/create operations, are immediately visible to users. This enables a team of developers to share the same development database and keep production databases.

7. Increased Performance

With reading and writing functions handled by one thread and transactions separated on their own spindle, interaction between Zim 8 and the operating system has been significantly reduced. Therefore the speed and performance of Zim 8 can increase as your CPU power does.

8. Centralized Zim Explorer

Zim Explorer increases administrator control and flexibility as it allows the entire Zim network to be monitored from a single location, even if databases are housed on multiple machines or in heterogeneous environments (Windows and Unix platforms).

9. Redesigned Utilities Functionality

All Zim utilities are now launched from within Zim Explorer, so databases can be updated without switching to the operating system. The Zim explorer utilities have been upgraded and improved to create more powerful and reliable Zim database tools for every user.

10. Improved Configuration File Structure

All configuration options and files have been reorganized according to the appropriate functionality. That means that file-specific configuration options are kept separate from other files and file 'layers' have been eliminated to make the database configuration process easier to maintain. Zim Explorer's graphical format makes handling these configuration files easier than ever.

11. Zim Server

The 'Always Online' Zim Server enables the Lock Manager and On Line Backup to be scheduled for automatic starts. The Zim Server also handles multiple databases, thus reducing processing and resource requirements.

Discover Enhanced Value with Zim 8

- **Open Connectivity:** The Zim language provides you with the flexibility to access information on most SQL servers.

- **Improved Efficiency:** The Entity Relationship architecture and 4G language means building, maintaining and updating systems can be done quicker and more efficiently with Zim than with other database systems.

- **Scalability:** Zim is hardware independent so you can grow your application from a stand alone PC to a huge multi-server environment with having to rebuild or modify your code.

- **Web-enabled:** Zim has built in capabilities to allow to quickly web enable applications with HTML templates and XML/XSLT stylesheets.

- **All in One Solution:** All the components for enabling rapid design, implementation, testing and maintenance of complex applications are included with Zim 8. No need to purchase additional software or components.

Contact ZIM Today

For further details about **Zim 8**, call a ZIM Account Executive at 1-613-727-1397 or e-mail a ZIM sales representative at sales@zim.biz.

For more information on ZIM Corporation and our entire product suite, please visit **www.zim.biz**.

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