

ERP environments, business performance reporting, and web applications all have one thing in common, they need to operate efficiently or the business will suffer financially. Tuning these large, complex applications can be a daunting task. The options users have are limited. The only real performance leverage they may have is to create indexes since modifications to the application are typically impossible to make or cost prohibitive.

With automated index identification, **insure/INDEX** provides sophisticated analysis, just like an on-staff database administrator - analysis designed to give mission critical applications the exceptional performance and availability necessary to deliver maximum business value. **insure/INDEX** makes it easy to identify critical access paths for enterprise applications, steps the user through the process of creating indexes, easily tracks changes, and avoids problems associated with application changes and upgrades.

A principal benefit of **insure/INDEX** is the automated identification of indexes without the need for a high level of expertise required with traditional methods. **insure/INDEX** provides an environment to create those indexes and keeps a history of their creation so they can be managed. IBM System i users, who need to create indexes to help tune applications or queries, must go through a tedious, error prone, and complex process. They manually collect performance information, write queries to analyze that information, and then interpret the results.

key benefits

- **Advanced** - Without **insure/INDEX** users may miss opportunities to create the 'perfect' index. With Centerfield's proprietary algorithms, a process called index melding, indexes are recommended that can provide the greatest benefit - even indexes that aren't intuitive to a performance expert.
- **Automated** - Lets users selectively collect on the workload that is giving them the most trouble and then automatically present index recommendations that would be most beneficial to their environment.
- **Wizard driven** - Both first time and experienced users get the most out of the **insure/INDEX** because of its intuitive graphical wizards. Traditional command interfaces provide little assistance with index needs analysis or index creation.
- **Manageable** - **insure/INDEX** provides historical tracking that allows a database administrator to keep a history of index creation and deletion. This allows users to understand the scope of database changes and properly control a production environment.
- **Flexible** - The index creation wizard allows the database administrator to create recommended indexes, and apply their own expertise to the creation process.
- **Integrated** - The **insure/INDEX** tool integrates with the IBM System i environment by allowing the user to leverage the server's capabilities. For example, the index build can be scheduled when it's convenient and the source file can be stored on the system for use by traditional source control systems.

key features

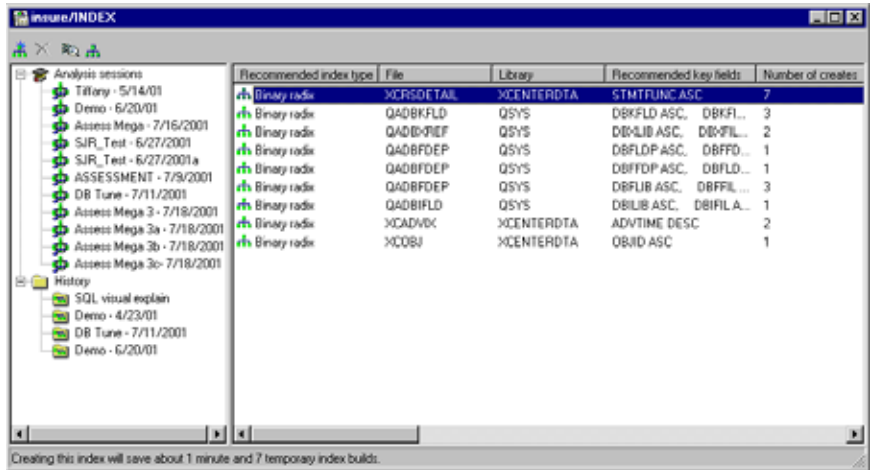
insure/INDEX is the fast path to tuning your applications and database. Using a policy based interface to selectively track database system activity, you can focus on areas that provide the most benefit. Database activity can be collected by user, job, subsystem or a combination of these.

The information generated is placed into a flexible, optimized repository to minimize storage overhead and maximize access performance. The repository incorporates a star-schema data mart architecture used in the **insure/INDEX** as well as **insure/ANALYSIS**.

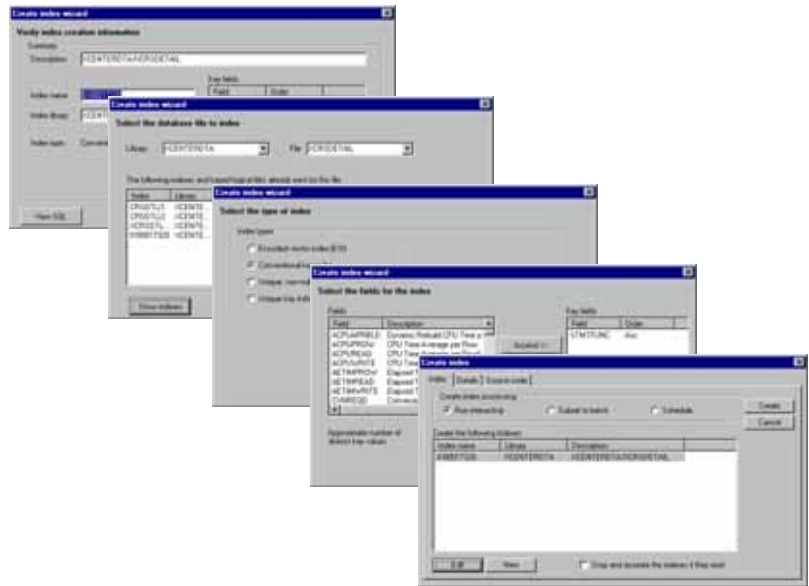
insure/INDEX automatically analyzes collected activity looking for index changes needed on your system. It uses a process known as "index melding" to determine the optimal set of indexes needed to improve over all performance.

insure/INDEX management capabilities allow you to:

- Review index information
- Create indexes
 - Easy to use wizard interface
 - Create Encoded Vector for V4R3 or higher
 - Save index creation scripts in source files for tracking and flexibility
- Tracks all indexes created in the **insure/SQL** modules



Automated Index Recommendations



Simple Index Creation

Often it is important to understand the relationship between files, indices and key fields. **insure/INDEX** includes our **insure/EXPLORER** feature so index cross-referencing can be done. You have quick access to information like; indexes associated with physical and logical files, key fields contained in other indexes, logical files or SQL views with associated physical files and views, and physical files with associated indexes.

The index melding coupled with the **insure/INDEX's** automation features make it easy to determine the optimal set of indices for your database. The features contained in **insure/INDEX**, provide the fast path to application performance and control.



insure/INDEX is part of *HomeRun* All you'll ever need to tune SQL for DB2 on IBM System i

insure/SQL, insure/INDEX and HomeRun are registered trademarks of Centerfield Technology, Inc. All other products mentioned are either registered trademarks or trademarks of their respective companies. Technical specifications are subject to change without notice. Please contact Centerfield Technology for latest information. Copyright 2010 Centerfield Technology, Inc. All rights reserved.

3131 Superior Drive NW - Ste C
Rochester, Minnesota 55901 USA
ph 888.387.8119 / 507.287.8119

<http://www.centerfieldtechnology.com>

Centerfield's **insure/ANALYSIS** module gives database administrators or performance analysts a powerful and intuitive tool to gain knowledge and understanding of database and SQL activity for their mission-critical applications. Using a simple "drill around" paradigm, the user can easily do advanced data analysis and answer key questions about application behavior, performance bottlenecks, usage patterns, and file access.

Armed with the right information analysts can make informed, effective decisions with minimum effort. In situations where immediate performance problems must be found and resolved, **insure/ANALYSIS** enables the administrator to identify and diagnose problems quickly so action can be taken to correct the situation.

key benefits

- ❖ **Comprehensive information** - **insure/ANALYSIS** provides data about SQL statements, individual jobs, application users, files, and indices. Both summary and detail information is provided for key performance metrics necessary to isolate and fix problems.
- ❖ **Correlation capability** - **insure/ANALYSIS** allows different facts to be easily correlated. This provides a way to verify conclusions and reinforces the need for and the characteristic changes necessary to improve performance. For example, it becomes a relatively straightforward process to identify the worst performing queries in a workload and tie those SQL statements to recommended indexes. The correlation can also be done from a 'usage tracking' perspective, so IT can generate metrics that drive overall management decisions (like system configuration or the need for user education).
- ❖ **Innovative drill around paradigm** - The intuitive interface gives the user an ability to 'drill around' a particular aspect of a performance problem so it can be identified quickly. Other approaches require a greater investment of time because the user must write or modify queries to find the same information.
- ❖ **Management reporting** - **insure/ANALYSIS** provides reporting capabilities so IT can generate reports for upper management or internal development groups. This gives operations a way to communicate with external groups effectively - with up-to-the minute information.
- ❖ **Extensible** - **insure/ANALYSIS** can also be extended to include additional reports IT would like to see beyond built-in reporting. These reports take advantage of the same intuitive interface and drill around capabilities, providing a consistent environment to perform analysis.

key features

insure/ANALYSIS provides the flexibility and power to analyze your data in numerous ways. You can customize your views with multiple criteria to focus on areas that will give you the greatest benefit. Some analyses that can be accomplished include:

Job Analysis identifies which jobs on your system are most active, most efficient, and least efficient. This analysis can be done for a single job or set of jobs so you can optimize the access of the database for performance or usability.

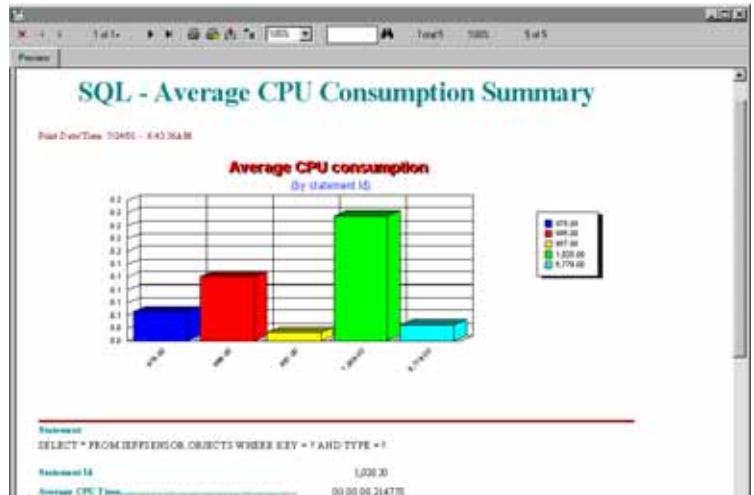
Program Analysis assists application developers and implementers identifying the impact different programs have on the system. This allows you to improve the application to better utilize the database or improve the database to better support the application.

User Analysis identifies, tracks, and manages user activity on your AS/400 data so you can improve the quality of service to your users.

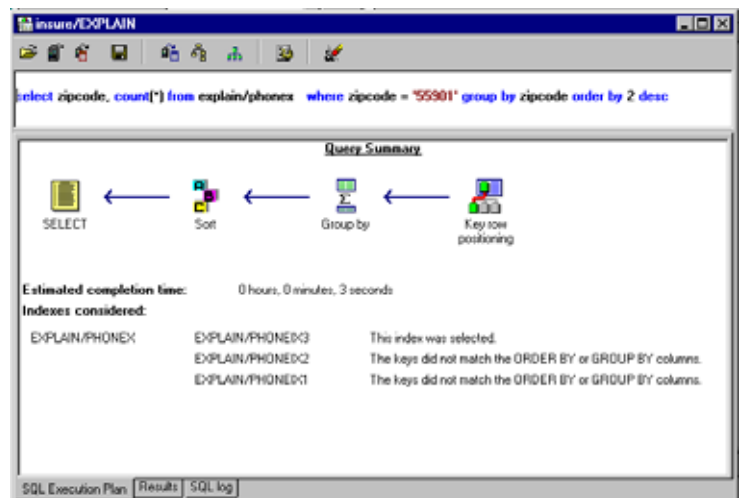
File Analysis identifies what files are being accessed, how they are being accessed, and by which users and programs. This information can help maximize performance and tailor your database for the way it is being used.

SQL Analysis determines what affect SQL statements are having on your IBM System i by giving details on implementation, reuse, prepare, parameter and full-open analysis. With all this information at your fingertips, application developers and administrators can truly control how SQL performs on IBM System i.

This module has been tightly integrated with our **insure/EXPLAIN** feature so you can select your statements directly from reports and graphically see how the DB2 optimizer implements them. The explain feature surfaces the various tuning options for the database and our built-in performance tuning options, such as index creation and context-sensitive performance help text, making it easy to adjust the SQL implementation.



Focus on the 20% that gives you the 80% benefit



Graphically analyze individual SQL statements



insure/ANALYSIS is part of *HomeRun* All you'll ever need to tune SQL for DB2 on IBM System i

insure/SQL, insure/ANALYSIS and HomeRun are registered trademarks of Centerfield Technology, Inc. All other products mentioned are either registered trademarks or trademarks of their respective companies. Technical specifications are subject to change without notice. Please contact Centerfield Technology for latest information. Copyright 2010 Centerfield Technology, Inc. All rights reserved.

3131 Superior Drive NW - Ste C
Rochester, Minnesota 55901 USA
ph 888.387.8119 / 507.287.8119

<http://www.centerfieldtechnology.com>