• Server version 8.0.000 – 09/15/2011

This version contains the following enhancements:

- Added Databeam's tool set as a new tool in the HomeRun Package.
 - HomeRun now comes with Databeam's dataCapture and dataAlert. These new tools will allow the customer to capture data from the HomeRun suite in real time and report via email, message queues, or calling a program to be proactive. It is now possible to create a report from data collected in HomeRun and have it automatically ran and even emailed to you without ever starting the HomeRun suite.
- ✤ Added Open Database File exit point tool.
 - To start the audit function, run: XCENTER80/STRAUDOPN
 - This will prompt you for the job names and job users that will be audited. The open exit point does not take affect for currently running jobs, just jobs which start after the exit point is registered. The prompt also allows you to set the number of days that the audit data is kept before being removed from the XCENTERD80/XCAUDOPNLG file. This command creates our files if they don't exist, saves data from the prompt, registers the exit point, and schedules a cleanup task. The Archive data is sent to a file EACH day at 2AM to a file called XCOF****** where ****** is the date in format YYMMDD. If you want to change how often this cleanup job is run or when it is run you can change the job schedule entry (XCOPNFCLNU). One note about this entry, if you call STRAUDOPN or ENDAUDOPN this entry gets deleted so you will have to change it again if you want it to run at a different time again.
 - To end the audit function, run: XCENTER80/ENDAUDOPN
 - This command removes the scheduled task and unregisters the exit point.
 - Data will be stored in file XCENTERD80/XCAUDOPNLG to write SQL reports for auditing.
- A fix for running an insure/INDEX and ANALYSIS profile (DBMON). After running a profile you will see these messages in the XCCLIENT joblog: "Value for column or variable CONNECTID not compatible."
- A fix for When the XCODBCINIT exit point program is called, it returns whatever return code value was passed to it by the invoking program. If this value was not initialized before passing it to XCODBCINIT, unexpected results can occur in any program checking the returned value.
- Added an option in insure/MONITOR to speed up the startup and refresh of data by giving the customer an option to view Temporary Query Storage or not.

• Server version 7.0.000 – 12/31/2009

In addition to previously required PTFs, we've become aware of a new one: SI33967

This version contains the following enhancements:

- ◆ New graphical interface for the AutoDBA portion of HomeRun
- ✤ New reports in AutoDBA
- MONITOR added columns for QTEMP library storage and Temporary Query Storage per job. These metrics are also tracked between two Refreshes. A Chart has been added for each of the 4 metrics (total & between refreshes). Right-Click menu options have been added to itemize QTEMP objects per job as well as display a SQE Plan Cache dump for a particular job.
- Advice is now automatically generated within a few hours after the install. The most active files on the system are analyzed and recommendations are produced.
- Additional policy controls for index creation that will allow customers to automate the implementation of advice produced by AutoDBA:
 - By default, the installation will scheduled a job to run nightly that automatically implements advice. Since, also by default, automated actions can not be taken until the user has granted AutoDBA permission, this job will only take actions once this permission has been supplied.
 - A limit on how much time (in minutes per day) has been added to restrict the amount of time used to implement automated advice. This allows advice to be deployed over a longer period of time to get incremental improvements without taking too much system resources.
 - Restrict the automatic creation of new indexes over files unless they are older than a specified number of days. This prevents indexes being created over temporary work files which may prohibit them from being deleted.
 - Restrict the automatic creation of new indexes over files that already have more than a specified number. This prevents undo overhead from being introduced for files that are changed frequently.
- Advice is now generated for V5R3 and V5R4 to enable the use of the SQE optimizer even if there are derived indexes in the database. This advice can be implemented and/or undone from the graphical interface.
- A new policy permission and filter has been added to allow indexes that have been created through AutoDBA to be more aggressively removed if they are not being used. This allows the user to manage their existing logical files and SQL indexes separately from those created within the HomeRun product.
- ◆ License keys are unconditionally migrated from a previous version of HomeRun.
- Performance improvements for job tracking in insure/MONITOR.
- Busiest files now tracked in a database file so customers can now analyze that.
- Fixes/Miscellaneous enhancements
 - Various advice categories were not taking into account the different file types when generating CL commands (e.g. PF vs. LF).
 - The repository load was modified to capture the current user profile and put it into the appropriate tables. This makes it easier to do per-user analysis using the built-in reports.

• Server version 6.2.000 – 07/31/2008

This version also contains the following enhancements:

- ✤ Changes to make HomeRun compliant with i5/OS releases from V5R3 through V6R1.
- Insure/MONITOR now shows the requester for QSQSRVR jobs. The requester is the job that has an active connection to DB2 using the Call Level Interface (CLI) in server mode. This allows a system administrator to easily see which job is using either long running or resource intensive SQL it has delegated to QSQSRVR jobs. Available only on V5R4 and higher with IBM PTF's applied see below.
- Insure/INDEX and ANALYSIS can now automatically start data collection for QSQSRVR jobs on behalf of a job using CLI server mode. For example, if an EnterpriseOne batch job called R41250 needs to be tuned, a profile collection can be started using that job name even though it will not run any SQL directly because it delegates the execution of SQL to QSQSRVR jobs. Insure/INDEX and ANALYSIS will, if the profile has been configured to do so, identify which QSQSRVR jobs are being used by R41250 and automatically add them to the profile definition. Available only on V5R4 and higher with IBM PTF's applied – see below.
- When a profile is ended, the performance of the subsequent repository load will now be faster than in previous releases.
- ✤ Various bug fixes:
 - AutoDBA: some indexes were incorrectly being identified as duplicates when the right-most key column name was a subset of another indexes' column name in that same ordinal position.
 - AutoDBA: the index advisor was being too liberal about recommending indexes based on being Managed Temporary Indexes (MTI's).
 - AutoDBA: eliminate situations where index advice was produced again even the object had been created.

Required PTFs list by release:

- ✓ V5R3:
 - MF34816, MF33782, SI12938, SI13432, SI13245, SI14274, SI14782, SI19716, SI24085, SI23483, SI17723, SI17968, SI23364, SI21673, SI16566, SI30203, SI29088, SI30145, SI30146
- ✓ V5R3M5:
 - MF40395, SI12938, SI13432, SI13245, SI14274, SI14782, SI19716, SI24085, SI23483, SI17723, SI17968, SI23364, SI30203, SI29088, SI30145, SI30146
- ✓ V5R4:
 - MF39418, MF39419, MF39466, SI24100, SI23714, SI23713, SI24580, SI23891, SI23890, SI24569, SI24504, SI23485, SI25668, SI25041, SI23365, SI23514, SI28951, SI28952, SI28953, SI30076, SI30013, SI30014, SI31631, SI31633
- ✓ V5R4M5:
 - SI24100, SI23714, SI23713, SI24580, SI23891, SI23890, SI24569, SI24504, SI23485, SI25668, SI25041, SI23365, SI23514, SI28951, SI28952, SI28953, SI30076, SI30013, SI30014, SI31631, SI31633
- ✓ V6R1:

o SI31727, SI31641, SI31407

• Server version 6.1.000 – 01/02/2008

Version 6.1 contains several improvements to AutoDBA's and insure/INDEX to help administrators capture database activity, understand the data and implement advice.

- Insure/INDEX now includes an additional source of information that improves the ranking of recommended indexes.
- Insure/INDEX sessions that are automatically generated now include the name of the database profile they are associated with.
- Data collections can now filter by additional criteria. These functions work back to V5R2.
 - Current user profile
 - Current group profile
 - o IP address or range of addresses
- AutoDBA advice now contains commands that can be used to implement the advice outside of HomeRun. This allows advice that can not be implemented in the tool or that can not be automated to be used by customers.
- ✤ AutoDBA actions can now be submitted to Batch or Scheduled for subsequent processing
- HomeRun now supports 128 character and mixed case passwords (QPWDLVL = 3).
- Fix patch level (cumulative patch) information has been added to the DSPRLS command and in the Help | About window on the client.
- Install changes
 - o By default, the Centerfield server will run in the XCSBS62 subsystem.
 - Clustered index advice will not be migrated from a 6.0 installation because the format of the advice has changed.
 - New install screens allow the user to optionally install new exit points that support the new filtering capability.
- Fixes
 - Additional index advice is now generated on systems running V5R3 or earlier that was missed in previous releases.
 - Data collection for prestarted jobs now correctly captures database activity even when entering prestart wait and becoming active again.
 - Incorrect IP addresses returned from some IBM APIs are now retrieved using a more reliable method.
 - Quoted column names that contain blanks are now handled correctly in the index advisor.
 - Clustered index advice is now only produced once for a given physical file and the object shown in the advice is the physical file that should be reorganized and the logical file (or SQL index) used to reorder the rows is now listed in other columns.
 - Save files that are used to undo certain types of advice are now deleted when the "undo" is performed.

INTERNAL CHANGES (for testing)

- passwords are automatically migrated from 6.0
- SQL views added to install for AutoDBA

This version is compliant for i5/OS releases from V5R2 through V5R4.

Required PTFs list by release:

- ✓ V5R2:
 - MF34303, MF34224, MF34225, SI16313, SI16269, SI16348, SI16307, SI18780, SI14275, SI11525, SI11682, SI12724, SI23484, SI09175, SI09277, SI12651, SI13738, SI15285, SI17502
- ✓ V5R3:
 - MF34816, MF33782, SI12938, SI13432, SI13245, SI14274, SI14782, SI19716, SI24085, SI23483, SI17723, SI17968, SI23364, SI21673
- ✓ V5R3M5:
 - MF40395, SI12938, SI13432, SI13245, SI14274, SI14782, SI19716, SI24085, SI23483, SI17723, SI17968, SI23364
- ✓ V5R4:
 - MF39418, MF39419, MF39466, SI24100, SI23714, SI23713, SI24580, SI23891, SI23890, SI24569, SI24504, SI23485, SI25668, SI25041, SI23365, SI23514, SI28951, SI28952, SI28953

• Server version 6.0.000 – 06/19/2007

Version 6.0 of Centerfield's HomeRun suite of tools is focused on automating index management. This is the first step in a series of enhancements that will be made to provide customers expert advice on database administration and SQL optimization – which will be called Autonomic Database Assistant (AutoDBA for short). Specifically this version has had the following enhancements:

- Insure/INDEX and insure/ANALYSIS
 - Version 6.0 is the first release of AutoDBA; Centerfield's expert and automated database administration features. The focus of this release is database index management. This feature has extensive configuration capability to allow database objects to be included/excluded, and many policy settings that allow recommendations to be customized. Included in the policy configuration is the capability to allow HomeRun to automatically implement recommended actions. This includes:
 - Improved index recommendations for SQL and query environments. For V5R3 customers this brings the benefits of V5R4 i5/OS to that release.

- Similar support for the old query engine (CQE) and the new query engine (SQE).
- Recommendations of Encoded Vector indexes in appropriate situations.
- Database index analysis to identify unused indexes, recommend an action to reduce their impact, and optionally implement that recommendation automatically.
- Database use analysis to identify indexes that would improve performance and optionally implement that recommendation automatically.
- Identification of poor select/omit logical files that should be converted to use the DYNSLT keyword to reduce the number of indexes to maintain and to encourage more use of the SQE optimizer.
- Identification of access paths that could be shared if they were created in the correct order.
- Identification of potentially redundant SQL indexes based on their definition and actual use.
- Identification of indexes with a maximum size of 4GB that should be converted to 1TB maximum size based on the amount and type of file activity.
- Identification of indexes that should be converted to use larger logical page sizes due to the amount they are accessed and the pattern of use.
- Identification of the index over a table or physical file member that is the best candidate for being used to reorganize the physical file to achieve the best disk I/O characteristics (aka clustered index)
- Identification of indexes that should have their FRCACCPTH attribute changed to *NO to reduce disk writes and improve response times.
- When a data collection profile is ended, the insure/INDEX advice generator will automatically be invoked to generate a list of recommended indexes. Prior to Version 6.0, this step had to be done by the user.
- Snapshots of the SQE plan cache are automatically captured to enable the comparison of SQL statement execution against known baselines. This allows diagnosis of performance issues without the explicit capture of database monitor data.
- The default maximum size for an active data collection has been increased from 300MB to 3GB to allow longer data collections.
- iSeries Navigator has been integrated with Centerfield's Visual Explain to allow the use of IBM's Visual Explain support with SQL taken from Centerfield's reports. This allows both tools to be used and a customer to take advantage of each tool's specific strengths.
- Insure/MONITOR
 - The general performance of the product is better and has less system impact.
 - Improved throughput for high-volume systems with a large number of client/server or web connections.
 - A new view has been added to show only jobs that have been active in the past 15 seconds. This support has also been added to the CFGMONHST command to allow audit data to be kept on 'high activity' jobs.

- The performance of the CHKCMTCTL command has been significantly improved with the addition of per-journal monitoring.
- Added remote location name support has been improved with DNS lookup functions used to supply a named client.
- Sorting has been enhanced to provide a visual indicator of sort order.
- The size of the SQL statement that can be put in the joblog has been increased when an SQL audit policy has been defined.
- Configuration functions have been added for the Citrix service to eliminate the need to re-install the software.
- JDE user names can now be put in ODBC server joblogs (QZDASOINIT) in a Citrix environment.
- ✤ General
 - o Full support for V5R4 added
 - Longer SQL statements
 - More concurrent database monitors
 - Four additional DRDA providers are now supported by insure/MONITOR and insure/SECURITY
 - o Compatibility with various i5/OS interface changes up to V5R4
 - o Install and upgrades
 - Customers upgrading from a previous release now have the option to start with a fresh installation and not migrate a previous installation's configuration data.
 - Cumulative fix pack support now allows new installations to easily apply all patches in one operation.
 - Supplemental group profiles are now supported for insure/RESOURCES, insure/SECURITY, and insure/MONITOR policies.
 - o Security
 - Invocation of programs that adopt authority has been reduced so that audit journal entries are correspondingly reduced.
 - Support for PCI standard has been added for accounts that must store credit card information and be able to control the use of system administration tools.
 - o Licensing
 - License passwords are now 25 characters long
 - The HomeRun suite password eliminates the need to enter individual passwords for products within that suite.
 - The new DSPPWDEXP command shows how many days are left on a temporary license.
 - The new DSPLICINF command provides information needed by Centerfield to generate a license key.
 - The Centerfield server now runs in a private subsystem
 - Subsystem is automatically started at IPL
 - Background jobs necessary for data collection and management are automatically started
 - New commands

- DSPMON displays any Centerfield exit points currently registered and any secondary exit points they chain to as part of their processing.
- ADDOBJFLT/RMVOBJFLT add and remove object filters. These commands manage include/exclude rules for objects processed as part of the AutoDBA functions.

This version is compliant for i5/OS releases from V5R2 through V5R4.

Required PTFs list by release:

- ✓ V5R2:
 - SI09175, SI09277, SI12651, SI13738, SI15285, MF34303, SI17502, SI11525, SI11682, SI12724, SI23484, SI16313, SI16269, SI16348, SI16307, MF34224, MF34225, SI18780, SI14275
- ✓ V5R3:
 - MF34816, MF33782, SI17723, SI17968, SI24085, SI23483, SI12938, SI13432, SI13245, SI14274, SI14782, SI19716
- ✓ V5R3M5:
 - MF40395, SI17723, SI17968, SI24085, SI23483, SI12938, SI13432, SI13245, SI14274, SI14782, SI19716
- ✓ V5R4:
 - SI24569, SI24504, SI23485, SI25668, SI25041, SI24100, SI23714, SI23713, MF39418, MF39419, SI24580, SI23891, SI23890, MF39466

• Server version 5.0.000 – 08/28/2006

This version is being updated to become V5R4 compliant with the current version of IBM System i TM .

Required PTFs list:

- ✓ V5R1:
 - o SI08861, SI09122, SI12892
- ✓ V5R2:
 - SI09175, SI09277, SI12651, SI13738, SI15285, MF34303, SI17502, SI11525, SI11682, SI12724
- ✓ V5R3:
 - o MF34816, MF33782, SI17723, SI17968, SI24085, SI23483
- ✓ V5R3M5:
 - o MF40395, SI17723, SI17968, SI24085, SI23483
- ✓ V5R4:
 - o SI24569, SI24504, SI23485

This list is current with release date of this document. For latest PTF and product patches list visit our website <u>http://www.centerfieldtechnology.com</u>.

- V5R4 compatibility
- New over-the-top installation scheme removing the requirement to perform install in restricted mode when exit points programs are actively running on the system
- Time threshold filtering in data collection profiles
- Exit point monitoring scalability enhancement (up to 72000 jobs)
- Cross day scheduling in data collection profiles
- Centerfield Citrix (Terminal Server) windows service is Windows 2003 Server compatible

• Server version 4.6.005 –10/14/2005

This version is being updated to deliver new functions promised to the existing customer base as well to include some scaling performance enhancements for products using exit point technology.

Required PTFs list:

- ✓ V5R1:
 - o SI08861, SI09122, SI12892
- ✓ V5R2:
 - o SI09175, SI09277, SI12651, SI13738, SI15285, MF34303, SI17502
- ✓ V5R3:
 - o MF34816, MF33782, SI17723, SI17968

This list is current with release date of this document. For latest PTF and product patches list visit our website <u>http://www.centerfieldtechnology.com</u>.

Great majority of changes went into insure/MONITOR product per external commitments made to the customers.

- Added green-screen only CHKCMTCTL command to allow users to report and be alerted when commitment control boundaries have exceeded user defined boundary limits. This functionality is especially helpful to shops using save-while-active as the save will timeout and fail if it can't establish an synch-point due to extremely long active commit cycles. See insure/MONITOR Appendix for details.
- Added ability to archive historical statistics usually seen in about 80 columns in insure/MONITOR product. Use CFGMONHST green-screen command to turn this functionality on and set other configuration options. There are a number of sample Query Manager reports and SQL views shipped with the product. See insure/MONITOR Appendix for details.
- Made charts hot-clickable. Just right-click on the face of the bar in the bar graph or pieslice in pie graph and select "Examine details for job" menu item. This will highlight the row in question and bring the jobs view to focus.
- ✤ Added 15 new charts to insure/MONITOR
- ✤ Added 11 new statistical columns for the jobs to insure/MONITOR
- Statistical delta points for "Since Last Refresh" columns for system jobs (new) as well as network (existed) are maintained and reported on. Check out CPU, Auxiliary I/O, Temporary Storage and Page Faults "Since Last Refresh" columns. This enhancement also makes CPU percentage column valid and accurate for system jobs, but does require 2 quick consecutive refreshes to ensure percentage formula time denominator does not "water down" the percentage and make it converge to zero percents.
- ✤ Added new jobs filter for OneWorld system jobs and all ODBC jobs, not just the ones we captured the Oneworld (Citrix) user profile for.

Previous versions

• Server version 4.6.004 – 08/23/2005

This version is being updated to deliver new functions promised to the existing customer base as well to include some scaling performance enhancements for products using exit point technology.

Required PTFs list:

✓ V5R1:

- o SI08861, SI09122, SI12892
- ✓ V5R2:
 - o SI09175, SI09277, SI12651, SI13738, SI15285, MF34303, SI17502
- ✓ V5R3:

o MF34816, MF33782, SI17723

This list is current with release date of this document. For latest PTF and product patches list visit our website <u>http://www.centerfieldtechnology.com</u>.

- Mutex/DETECTOR added to insure/MONITOR
- Removed the requirement to have OneWorld® security file (F98OWSEC) present on the iSeries. Since we strongly recommend using Citrix user ids for unique OneWorld® ODBC job identification on the iSeries, group profile was made optional part of the iMOW (insure/MONITOR for OneWorld®) config.
- Added "Files" filter to the insure/INDEX & insure/ANALYSIS database profile collection filters (i.e. can collect DBMON data for specific files only, if configured that way)
- Exit point programs updated with scaling performance enhancements for systems with large number of client/server connections (insure/MONITOR & insure/SECURITY)
- Corrective interprocess communication changes to the XCFILTER part to avoid "Ready to load" issue (insure/INDEX & insure/ANALYSIS)
- Capturing IP address for all client/server interfaces (iMOW)
- Internationalization changes for the EMEA customers
- CHKCMTCTL green-screen command added for beta purposes. It informs users when a committable transaction has been open for more than predetermined amount of time. Its intended purpose is primarily to detect application bugs, but it can also be used to inform administrators when their save-while-active processing is likely to fail.
- Function added to capture all files used (touched) via ad-hoc queries across ODBC/JDBC interfaces, for auditing or migration purposes.
- DSPRLS command added to verify insure/SQL release version
- CFGOWCHK command prompt removed from the initial installation as we're moving away from using dbmon for OneWorld® user correlation method
- Added code paths to correctly determine output queues used when special values are displayed in job settings (i.e. *USRPRF, *DEV etc.)
- File server actions logged
- Miscellaneous patches for insure/RESOURCES and insure/SECURITY

• Server version 4.6.003 – 11/16/2004

This version is being update primarily due to V5R3 compatibility changes. Centerfield had to make several code changes to accommodate IBM's OS and API modifications.

- Updated list of required PTFs based on customer experience:
 - PTF's required on V5R1: SI08861, SI09122, SI12892
 - o PTF's required on V5R2: SI09175, SI09277, SI12651, SI13738, SI15285
- QSYGETPH API has changed massively and required code changes in our connection protocol.
- Critical change made to the XCSERVER server daemon job. This is our socket listener job and would occasionally fail due to binding errors. This was traced back to heavy or lengthy usage of the daemon and is corrected in this release.
- Miscellaneous changes to sql/OPTIMIZER code.
- Insure/MONITOR for OneWorld® windows service running on Citrix (Terminal) server has had several changes:
 - o service was made more robust to handle disabled connection profiles etc.

- enabled Domain Administrator accounts to end windows service regardless of state service is in
- o error logging to windows Event Viewer added
- CenterfieldDebug.exe debug executable added in case technical support is required for Centerfield Service
- enabled service to work in a split set up (Citrix server having ODBC connections to more than one iSeries ERP servers)

• Server version 4.6.002 – 06/16/2004

Minor changes occurred across the product line. Some major additions to the insure/Monitor tool, now at version 5.2.

What's New:

- Recommended PTFs for use of SQL Optimizer
 - o V5R1 SI12892
 - o V5R2 SI12651
 - o see Previous Versions section for more recommended PTFs
- Insure/Monitor changes:
 - Incorporated new Semaphore Wait Detector tool into insure/Monitor product. Its purpose is to detect jobs in a semaphore wait status and allow system administrators to post appropriate values to the semaphore being waited on, in effect "releasing" the jobs from the semaphore wait state and permitting them to run. Administrator can also view any orphaned semaphores and semaphore sets and delete them. For the time being, licensing will be based on Lock Detector license.
 - Added a page faulting chart to the list of charts.
 - Changed insure/Monitor for OneWorld® add-on that runs on the Terminal Server code for purpose of correlating iSeries ODBC jobs to OneWorld® user ids. This code now runs as windows service. Also, OneWorld® administrators now have an option to perform correlation using purely Terminal Server solution, or a combination of Terminal Server solution along with our ODBC exit point program. Each customer will need to consult with the Centerfield support personnel to verify which configuration is appropriate for their environment.
 - Several fixes and enhancements to SQL Optimizer tool (aka Visual SQL Explain).

• Server version 4.6 - 01/07/2004

Server version is shared across insure/SQL suite. However, to better illustrate major changes for different modules within the suite, we are introducing different version numbers for each module. Accordingly, insure/MONITOR version is 5.1 (major functional changes from 4.5 edition), insure/ANALYSIS & INDEX & SECURITY are at 4.6 and insure/RESOURCES is at 4.5 (minor functional changes from 4.5 edition).

What's New:

- Insure/Monitor changes:
 - o PTFs required on V5R1: SI08861 & SI09122
 - PTFs required on V5R2: SI09175 & SI09277
 - We can fully correlate the JDE OneWorld® user and group with the iSeries profile for the OneWorld interactive jobs (ODBC QZDASOINIT jobs). NOTE: customer needs to install Centerfield.exe and Centerfield.dll on any Windows® servers in 2nd tier (i.e. Citrix® server) as well as any 'fat' clients. These two files can be placed in any Windows® folder as long as they are located in the same folder.
 - Customer can define Monitor policies for the JDE OneWorld® profiles and groups to help diagnose user issues.
 - Added Day of Week to time frame definitions in policies configuration window.
 - JDE OneWorld vs. System jobs graph produces accurate chart due to the full correlation.
 - o Integrated Centerfield Technology SQL Optimizer with insure/Monitor
 - Integrated IBM Visual Explain with insure/Monitor
 - Added ability to display OneWorld users and group for any active and inactive UBE jobs JOBQ status (insure/Monitor for OneWorld).
 - Added iSeries JDE.INI file editor (insure/Monitor for OneWorld).
 - Added OneWorld IFS logs viewer for both regular and debug log files.
 - Fixed minor bugs if user attempts to open same chart multiple times, change iSeries connection real time, color coding in SQL Optimizer etc.
- Insure/Security changes:
 - Added Day of Week to time frame definitions in policies configuration window.
- Insure/Analysis & insure/Index changes:
 - PTF strongly recommended for V5R2: SI09277
 - Added ability to see OPNQRYF and QRY400 (RUNQRY) statement text in the collection analysis windows. This provides ability to filter on those particular statements during the analysis and have recommended indexes report for the particular statement of interest.

NOTE: we had to integrate part of insure/Resources functionality with insure/Analysis to make this work. Due to this dependency on insure/Resources, customer that desires this functionality will require an insure/Resources license.

Version 4.5 - 03/01/2003

- insure/Monitor benefited from most changes:
 - Lock Detector functionality
 - Save current dashboard functionality
 - Better grid population, new grid fields, more views, copy and view right-click options, right align numeric values, sort ascending/descending on the column
 - o Improved charts, new functions (copy, export, print, explode slice)
 - o Doubled number of observable jobs

- Integration with insure/Resources to view Resource validity checker interface statements in the Last Statement column (OPNQRY file, RUNQRY etc.)
- Limited yet useful JDE OneWorld user capture and according policy definitions, chart.

NOTE: we can only capture JDE OneWorld user for one of the set of ODBC jobs started on iSeries when JDE user connects. Investigation is under way to discover a technically feasible way to capture rest of the jobs in the set.

- Greatly improved performance of Security Operation Detail by User report in insure/Security.
- Enhanced policy collections so report files are populated with more accurate and detailed information.
- Report improvements:
 - Did much clean up of common routines to ensure that files are populated correctly for the reports.
 - Fixed all products that use reports to show the report title in the top Window menu option
 - Permit multiple reports to be opened at the same time for all products using Crystal reports.
- Installation:
 - Fixed registry and file authority issues when multiple users are using the client on the same PC (NT, 2000, XP). Installation attempts to set security settings on our files and registry entries that would permit all PC users access to the client software.
 - Fixed server side issue with the Job Notify exit point (conflicting with Help System Robot version 9)
- Fixed multiple internationalization issues in Index & Analysis.

Version 4.0 and 4.1 of *insure/SQL* were a full replacement for Centerfield's previous product suite, *Database Essentials*. Overall, *insure/SQL* will be familiar to users of Database Essentials but includes the following enhancements:

- The product has been restructured to be a set of independent modules. Each module is licensed separately. If you are licensed to the Advanced Performance Server, E-Connect Server, or QueryController (components of Database Essentials), you are licensed to the equivalent module(s) for insure/SQL. They include:
 - **insure/INDEX** (formally part of the Advanced Performance Server)
 - insure/ANALYSIS (formally part of the Advanced Performance Server)
 - **insure/SECURITY** (formally part of E-connect Server)
 - **insure/MONITOR** (formally part of E-connect Server)
 - **insure/RESOURCES** (formally QueryController)
- insure/RESOURCES
 - Support to define policies that apply only to batch or interactive jobs
 - Performance improvements in reports
 - Various usability enhancements
 - Updated documentation that includes a quick start guide

- insure/SECURITY
 - Greatly increased policy coverage of network access points
 - Addition of support to log network requests (ODBC/JDBC SQL statements, FTP requests, etc.) for the purpose of security auditing
 - Various usability enhancements
- insure/MONITOR
 - New support for a large number of network access points to allow monitoring of activity from remote connections
 - Greatly increased policy coverage of network access points
 - New policy support to record client requests in an AS/400 or iSeries joblog for easier problem diagnostics for network-based applications

Version 3.0 of *Database Essentials* is a full refresh with the following changes and additions:

- The addition of QueryController as a new member of the Database Essentials family of products. You can view a demonstration of QueryController by going to the "Demo QueryController" directory and running the demonstration contained in it.
- E-Connect Server now has enhanced policy handling to allow policy changes to be enforced more quickly when they change at time boundaries.
- E-Connect help desk now can show jobs connected via external clients (e.g. ODBC, FTP, DDM, etc.) and optionally all jobs on the system. Additionally, you can request that the list of jobs be refreshed at a configurable interval.
- The active user window in E-Connect has improved scrolling behavior to better enable dynamic monitoring.
- Additional process documentation on product use has now been included on the cd.
- SQL and performance tuning presentations on the CD have been updated and expanded.
- Visual Explain now includes additional support for V4R5.
- You can now edit profiles with job-based criteria.
- Index manager now includes new status types to indicate when an index has been dropped.
- The analysis manager now has improved error messages when reports can not be run and the CD now includes documentation on how to diagnose and fix configuration problems related to ODBC.
- Patches made to Version 2.3 have been incorporated into the base product.

Version 2.3 of *Database Essentials* contained the following enhancements:

- All data in the Centerfield data repository can now be removed in one quick step. This allows you the ability to purge all existing data so that disk space can be reclaimed faster than if all database profiles were deleted individually.
- Individual collections can now be deleted. For regularly scheduled profiles, this allows you to remove older collections and still preserve existing profile definitions.
- Visual Explain has been enhanced to take advantage of new optimizer "INI" settings (via the QAQQINI options file). All settings currently documented are now supported to allow even greater flexibility in the optimization of individual SQL statements. For settings only made available through IBM support, arbitrary settings and values can also be entered.
- The performance of data loads at the end of a collection has been improved. The amount of performance improvement will be depend on the amount of data already in the data repository and the number of existing profiles/collections that exist (fewer profiles and collections will result in faster load times).
- In the E-Connect Server help desk feature, the IP address of the connecting client is now displayed. This allows jobs such as ODBC server jobs (QZDASOINIT) to be linked to a specific PC.

- Additional documentation has been provided on the optimization of SQL statements in the form of PowerPoint presentations. These new presentations are in the Training subdirectory on the cd.
- Journals created by Centerfield are now automatically managed by the system.
- Version 2.3 includes patches for problems reported for Version 2.0, 2.1, and 2.2. All patches available on the Centerfield web site have been put into the base support for Version 2.3.

Version 2.2 contained the following enhancements:

- New enhancements that allow you to better control the use of disk space on your AS/400. You now have the ability to prevent database profiles that are inadvertently left running from consuming more than a predefined amount of disk space. Additionally, new support has been added to automatically reclaim space used by deleted records in the files used by the data collection and Centerfield database on your AS/400.
- Printed reports have been added to the Analysis Manager feature of *Database Essentials*. The Analysis Manger now allows you to not only do interactive analysis of your performance data, but print formatted reports with graphics to aid in your analysis and to communicate findings to co-workers and management.
- Version 2.2 includes patches for problems reported for Version 2.0 and 2.1. All patches available on the Centerfield web site have been put into the base support for Version 2.2.
- A product demonstration has been included on the product CD.
- Additional documentation, training material and demonstration data has been included on the CD. See information in the following sections of this document for further detail.
- The OPNQRYF command can now be analyzed via Visual Explain.
- Long field names are now supported in the Index Manager.

Support for Version 2.3

Version 2.3 will be supported until August 15th, 2001. After that time all problems should be reported for Version 3.0 or later.

Documentation

As mentioned, the product CD now contains softcopy documentation for the products, a "screen cam" demonstration, training material, and demonstration data used by the training presentations and lab.

The insure/SQL *User's Guide and Reference* documents are the softcopy versions of the manuals. Because it is softcopy you can now search it on-line to quickly find answers to your questions.

Presentations and documents are also provided on the CD. These materials are part of Centerfield's 2-day training offering. The intent of providing this documentation is to show you what the training provides. It is not intended as a self-study course on how to use the product or tune your database. Due to the complexity of the topic, we still encourage you to take the 2-day training so you obtain the maximum benefit from the product and the documentation.

The demonstration provided on the CD allows you to see the product without installing it or let a co-worker see the benefit of the product without actually having to use it. The demonstration provides an overview of the product and is intended to give you a flavor of the power it provides.

Contacting Centerfield

As with prior versions of the product, support is provided in a variety of ways depending on your needs.

- E-mail send to support@centerfieldtechnology.com
- Web fixes and required IBM PTF's (by release) can be found at our web site <u>http://www.centerfieldtechnology.com</u>. Take the support link from the home page to find additional information.
- Phone phone support is provided from 8:00am to 6:00pm CST Monday through Friday at (507) 287-8119.

Thank You

Thanks for your purchase of *HomeRun*. Please let us know what you think of the product and how we can better serve your needs. For specific product feedback or suggestions please email <u>support@centerfieldtechnology.com</u> or call (507) 287-8119.