Informix I-Spy Version 1.01

A monitoring and optimization solution for Informix data warehouses

Product Announcement
April 1999

Overview

Informix® I-Spy™ is a smart data warehouse monitoring and optimization tool designed for Informix databases. I-Spy helps administrators and architects increase the business value of enterprise data warehouses through enhanced utilization efficiency, design improvements and a lower cost of maintenance. I-Spy sits transparently between the database and the client to help the administrator monitor and adjust database resources and client query usage.

I-Spy lets database administrators (DBAs) view the SQL being executed and the data being accessed, and reports execution time and the quantity of data being returned. This product can be used to identify inefficient or long-running queries and pinpoint users who might need help or additional training. In addition, I-Spy has standard utilization reports that can assist with data management and growth by providing the precise data needed for capacity planning efforts. Warehouse architects can use the information collected by I-Spy to help refine their data warehouse data models. They can also analyze query plans to develop optimal indexing strategies, and determine which fact and dimension tables are actually being used.

I-Spy has "rules-based" commands that allow DBAs to place transparent constraints on client activity. This can help prevent excessive consumption of database resources by canceling or prohibiting inefficient queries. I-Spy can be administered through a command line interface or Web interface.

I-SpyVersion 1.01 is a maintenance release that provides Informix Dyanmic Server™ with Universal Data Option™ support (versions 9.14 and later) and other feature enhancements.

Intended Customers

Ideal users of I-Spy are customers who have deployed, or are deploying, an Informix-based data warehouse solution. Both the data warehouse administrator and the data warehouse architect will greatly benefit from using I-Spy.

Highlights:

- Support for Informix Dynamic Server with Universal Data Option 9.14 and later
- Placeholder value retention
- Database as a RULE condition
- Display of I-Spy daemon start date and time
- Capture of the client process ID
- No restrictions on the length of the ISPYSERVER name.

New Product Features and Benefits:

- Support for Informix Dynamic Server with Universal Data Option 9.14 and later

I-Spy Version 1.00 did not provide Informix Dynamic Server with Universal Data Option support. Now, I-Spy Version 1.01 provides support for Informix Dynamic Server with Universal Data Option version 9.14 and later.

- Placeholder value retention

I-Spy now provides a facility to retain the values for input parameter placeholders, signified by the "?" character in prepared SQL statements. For example, consider the following sample taken from an ESQL/C program:

exec sql prepare p1 from "insert into t values(?,?)" ;
exec sql execute p1 using :hostvar1, :hostvar2 ;

I-Spy would log 'insert into t values(?,?)' in the ispy_activity table and the actual values for the two placeholders would be unknown. I-Spy can now update the SQL statement in the activity table, or create new SQL statements with the actual values used and the placeholders removed.

- Database as a RULE condition

I-Spy now allows you to specify a database name in the condition section of a RULE command. For example, you can turn off all logging for a given database.

- Display of I-Spy daemon start date and time

The "Status" page of the web interface now displays the date and time that the I-Spy daemon was started.

- Capture of the client process ID

I-Spy now captures the client process ID and stores it in a new column in the ispy_session table named ses_pid.

- No restrictions on the length of the ISPYSERVER name

I-Spy Version 1.00 required the length of the ISPYSERVER name parameter in the configuration file to be the same length as the SHADOWSERVER name. This restriction has been eliminated and it can now be any length.

Product Feature and Benefits:

- Query Logging and Monitoring Facilitate Tuning of Client Activity

I-Spy records all message traffic as well as statistics on individual SQL statements being submitted. This information is stored in a separate activity database that can be queried over time to track utilization.

I-Spy also allows the DBA to load the "SQL explain" output into the activity database through a post-execution process. When viewed in conjunction with other detailed client information, administrators can identify problem users/queries and either educate the end-user, or tune the query.

Sears, an I-Spy beta customer, states: "When using I-Spy, we obtain critical statistics on number of queries, response times, and records returned." This allows Sears to "identify the heaviest users so we can focus on assisting them in optimizing analysis."

- Utilization Data Facilitates Capacity Planning

Monitoring usage and performance of the warehouse over time can help avoid capacity/performance problems by facilitating a proactive approach to capacity planning. I-Spy provides standard utilization reports that, when comparing utilization/performance trends over time, will help database administrators and data warehouse architects plan for increased demand.

Again, Sears states: "This information allows us to isolate peak demand periods for prioritizing work, [and] perform trending analysis for capacity planning ..."

- Avoid Excessive Resource Consumption by Restricting Inefficient Use of the Warehouse

I-Spy provides "rule-based" commands that allow administrators to place constraints on client activity transparently. Queries can be canceled based on configuration parameters, such as the maximum number of rows returned, total query time, or the actual text of the SQL statement.

- Browser-Based Access Eases Administration

I-Spy includes a Web-based user interface that allows the DBA to administrate I-Spy using a Web browser from anywhere on their intranet.

No special software needs to be installed and maintained on their workstation. The Web interface can be used to start and stop the I-Spy server, modify the configuration file, view the message log, execute and view predefined activity reports, and view currently connected clients.

- I-Spy's Transparency Makes it Easy to Install and Use

The use of I-Spy is entirely transparent to the client process. It can be used with any Informix or third party tool and supports both direct and ODBC connections. It can be installed and used without any changes (i.e. environment variables, configuration settings, etc.) to tools.

Hardware and Software Requirements:

Supported Hardware Platforms

- Sun SPARC running Solaris 2.5.1 or later
- HP running HP-UX 10.20 or later
- IBM running AIX 4.2.1 or later

Note: Both SMP and MPP configurations are supported.

Supported Servers

- Informix Dynamic Server version 7.2x, 7.3x
- Informix Dynamic Server with Advanced Decision Support Option™ version 8.x
- Informix Dynamic Server with Advanced Decision Support Option and Extended Parallel Option™ version 8.x
- Informix Dynamic Server with Universal Data Option version 9.14 and later

Web Server (optional)

I-Spy includes a Web interface for administering the I-Spy server. This interface was developed with a standard http/CGI architecture. Therefore, a Web server that supports the Common Gateway Interface (CGI) protocol (i.e. Netscape, Microsoft IIS, Apache, etc.) must be installed on the same server as I-Spy. This is required to run the user interface, but not for the I-Spy product itself (which can be run from the command line).

Memory and Disk Requirements

- 16 MB RAM minimum
- 10 MB of disk space

Platform Availability:

Initial availability will be limited to the Sun, HP and IBM platforms, and Informix Dynamic Server, Informix Dynamic Server with Advanced Decision Support Option, Informix Dynamic Server with Advanced Decision Support Option and Extended Parallel Option servers, and Informix Dynamic Server with Universal Data Option (as specified in the Supported Hardware and Software Requirements section above). Both SMP and multi-node MPP configurations are acceptable.

Although initial availability is limited to Sun, HP and IBM, I-Spy can run in a middle tier on one of these platforms against a supported server version on any other platform.

Language Support:

Informix I-Spy version 1.01 will be available as an English-only version.

Ordering and Pricing:

Contact your local Informix sales representative for details on ordering and pricing.

About Informix

Informix Corporation, based in Menlo Park, California, provides innovative database products that assist the world's major corporations to attain competitive advantage. Informix is widely recognized as the technology leader for corporate computing environments ranging from small workgroups to very large parallel processing applications. Informix's database server, application development tools, superior customer service, and strong partnerships enable the company to be at the forefront of major information technology solution areas including data warehousing, high-performance OLTP, and Web/content management. For more information, contact the sales office nearest you or visit our Web site at http://www.informix.com.

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