

A horizontal banner with a collage of images including a globe, a person at a computer, and abstract data visualizations. The text 'Information On Demand' is overlaid in white.

**Information On Demand**

# IDS, Today and Future - Chat with the labs

**Jerry Keesee, Director IDS**  
**December, 2006**



**ON DEMAND BUSINESS™**

## Key take-aways from today's presentation

**1**

**IDS is a strategic data server in the Information Management portfolio**

**2**

**IDS has a rich history of innovation and technology leadership that will continue well into the future**

**3**

**IDS is the optimal data server for high-transaction OLTP environments**

**4**

**You have an advantage over your competitors because *IDS is not a commodity***

# Agenda

- **IDS Positioning**
- **Key Strengths**
- **Cheetah**
- **Initial IDS Uptime Survey Results from**



# IDS Positioning

# IBM Data Servers Strategy

- **Continue leadership in all database segments with the right technology**

- IDS
- DB2
- IMS, ...



**#1 Leader – “Database World Wide Market Share” - Gartner**

- **Capitalize on market strengths of Informix Dynamic Server (IDS)**

## ***On line Transaction Processing***

IDS 10 increases the performance of OLTP applications

## ***Integrated Applications***

IDS is IBM’s flagship database for industrial-strength integrated solutions.

## ***Small & Medium Businesses***

New Express & Workgroup editions of IDS 10 appeal to the SMB market. Low DBA requirements are a strong selling point.

## ***Key Industries***

IDS has significant market presence within key industries including Telco, Government, Retail & Banking

# Gain Competitive Advantage Using IDS

Customer Success Stories Published in 2006 Across Many Industries

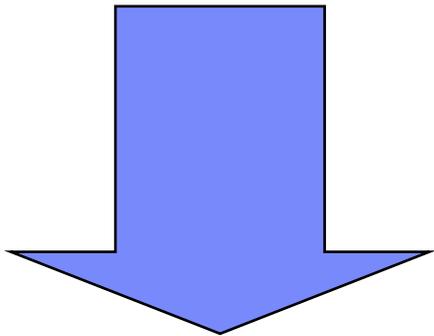
- Customers
  - Harps Food Stores
  - The Finish Line
  - Mazda North America Operations
  - Bayerwald
  - Tyler Technologies MUNIS Division
  - WorldWinner
  - RealPlus
  - Everett School District (Washington State)
  - HTH Koekkener A/S
- Partners
  - Orbit IT Solutions GmbH
  - retarus GmbH
  - iSoft Deutschland GmbH
  - Rent a Brain IT Solutions GmbH

Contact your local Account Rep for a copy of the Success Story

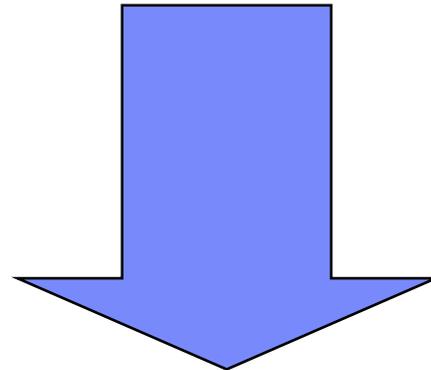
# Key Strengths

# Value Proposition

High Availability + Ease of Admin = Best TCO  
DBAs Closer to the Business Than to the Disks  
Ideal Data Server for Integrated Solutions



**Reduces DBA's  
Administrative  
Load**



**Reduces  
Downtime**

## Ease of Admin & Reliability Example

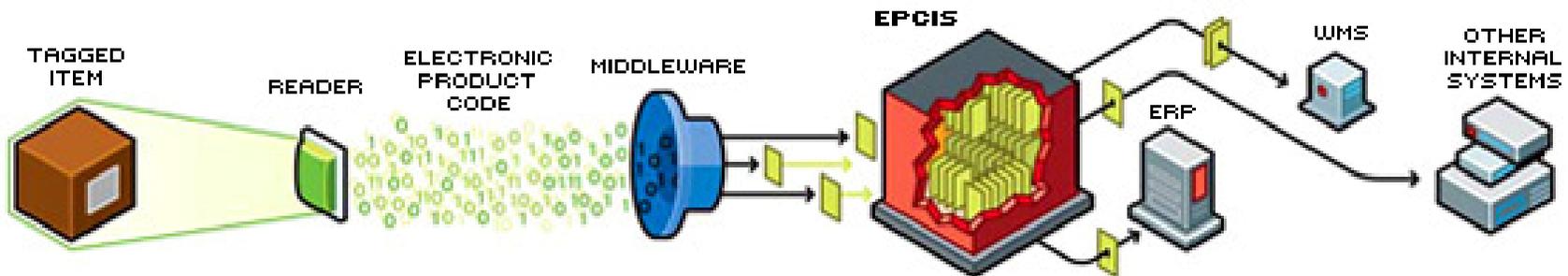
- Large retailer runs 2 instances in nearly every store
  - One for Retail, one for Pharmacy
  - This amounts to > 10,000 instances worldwide
  - With over 100 TB's supported
  - Customer reported availability of 99.999 (less than 5 mins outage/year)
  - Using only 8 DBAs
- IDS ER, distributed queries, and proprietary datablades used
  - Upgrades thousands of nodes at a time
  - Distributed queries across multiple databases within a server instance & across server instances
  - Health check for thousands of nodes via background scripts



# TCO and Embeddability Example



- EPCIS/RFID product from Websphere
  - RFID Info Center 1.0 will GA this month
  - Using IDS for similar reasons – embodies key strengths of IDS
    - Need ER to propagate changes
    - Deployed in warehouses where there will be no DBA
    - Uses datablade technology for specialized indexes and datatypes
  - IBM's major initiative into the RFID space is based on IDS technology



## Performance/Scalability Example

- Wall Street firm takes in all stock quotes from every market around the world
  - 6 days/week
  - 24 hours/day
- Requires less than 1 sec lag between receipt of data and availability for queries
  - Need to run both historical and real-time queries
- Data rate is > 100,000 messages/sec for much of the day
- Messages kept for many years, more than 5 TB of history kept online
- All needs to run on a 4 CPU Linux box!
- Uses TimeSeries and RealTime Loader Datablades



# Hot off the press: The first IDS 10 **Redbook!**

- Covers all aspects of IDS 10
  - Overview / Architecture
  - Installation / Configuration
  - SQL Features / Extensibility
  - Security / Encryption
  - Backup / Restore
  - Administration / Dev. Toolsand
  - **One chapter on SOA with IDS**
- Lots of step-by-step examples
- Availability: Q4 2006
- Download **for free** at:  
**<http://www.ibm.com/redbooks>**
- Redbook ID: SG24-7299

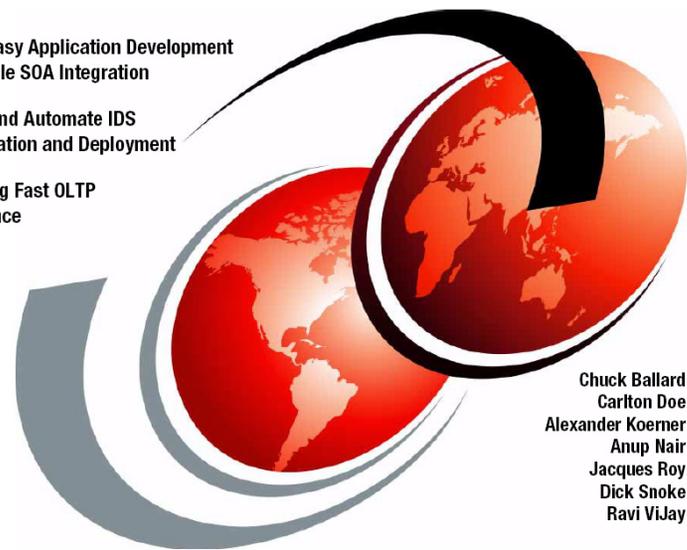
Information Management software

IBM

Draft Document for Review September 8, 2006 9:51 pm

SG24-7299-00

## Informix Dynamic Server V10 ... Extended Functionality for Modern Business

Enables Easy Application Development  
and Flexible SOA IntegrationSimplify and Automate IDS  
Administration and DeploymentGet Blazing Fast OLTP  
PerformanceChuck Ballard  
Carlton Doe  
Alexander Koerner  
Anup Nair  
Jacques Roy  
Dick Snoke  
Ravi ViJay[ibm.com/redbooks](http://ibm.com/redbooks)**Redbooks**

# IDS V10 Information Center

- **Comprehensive source** of all IDS v10.0 and CSDK v2.90 user documentation, plus links to other essential Informix information
- **Task-based** contents pane helps locate information; bookmarking feature keeps favorite topics handy
- **Updated content** can be refreshed more frequently than books
- Extensive **built-in search** capability:
  - Exact words & phrases
  - Wildcards
  - Boolean operators
  - Criteria group
  - **New**: Quick Search of targeted subject areas
  - Returns prioritized
- And you can Google it!

IBM Informix Dynamic Server v10.0 Information Center - Microsoft Internet Explorer

Address: <http://publib.boulder.ibm.com/infocenter/idshelp/v10/index.jsp>

Country/reg

Home | Products | Services & solutions | Support & downloads | My account

Search [ ] GO Search scope: All topics

**Contents**

- Informix Dynamic Server v10.0
- Product Overview
- Installing, Migrating, and Config
- Installing and Connecting to Cli
- Designing
- Administering
- Developing
  - Developing SQL Statements
    - Syntax Diagrams
    - Guide to SQL: Reference
    - Guide to SQL: Syntax
    - Introduction
    - Overview of SQL Synt
    - SQL Statements
      - In This Chapter
      - ALLOCATE COLLE**
      - ALLOCATE DESCR

Print this topic

Print this topic and subtopics

Search this topic

Search this topic and subtopics

ALTER SEQUENCE

ALTER TABLE

BEGIN WORK

CLOSE

CLOSE DATABASE

COMMIT WORK

CONNECT

CREATE ACCESS\_

CREATE AGGREGA

**Developing**

**IBM Informix Guide to SQL: Syntax**

[Previous Page](#) | [Next Page](#) | [Index](#) | [SQL Statements >](#)

**ALLOCATE COLLECTION**

Use the ALLOCATE COLLECTION statement to allocate memory for a variable of a collection data type (such as LIST, MULTiset, or SET) or an untyped collection variable.

Only Dynamic Server supports this statement, which is an extension to the ANSI/ISO standard for SQL. Use this statement with ESQL/C.

**Syntax**

```
>>-ALLOCATE COLLECTION--variable-----
```

| Element         | Description  | Restrictions  | Syntax                            |
|-----------------|--|---|-----------------------------------|
| <i>variable</i> | Name of the untyped or untyped collection variable to allocate | Must be an unallocated ESQL/C collection-type host variable | Language-specific rules for names |

**Usage**

The ALLOCATE COLLECTION statement allocates memory for an ESQL/C variable that can store the value of a collection data type.

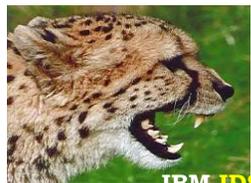
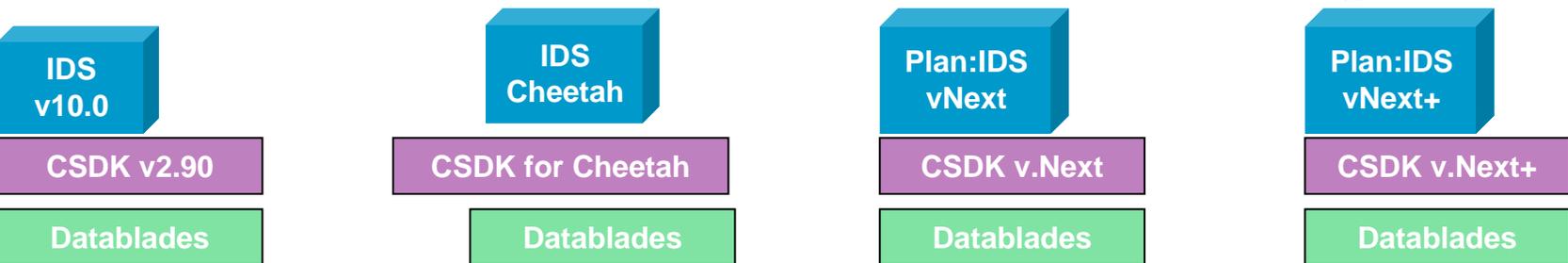
**To create a collection variable for an ESQL/C**

# Road Map

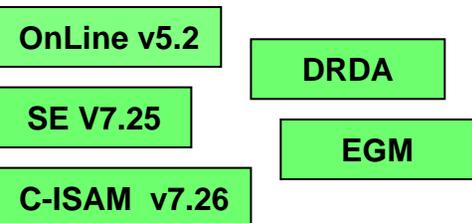
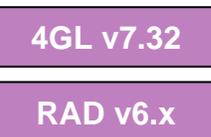


# IBM Informix Product Roadmap

Continuous IDS investment in feature releases



IBM IDS



# IDS: Then, now, and what's to come

## IDS 10 2005

- Fastest, most-available Informix OLTP engine ever
- IDS Express
- PHP driver
- Baan benchmarks

## OLTP Performance 2006

- Continuous advances in OLTP engine solidify market position
- Enhanced memory management
- Enabled for sub-capacity

## Enhanced Data Services 2007 – Cheetah\*

- Web Services support for Spatial Applications
- Performance and High Availability enhancements
- Security enhancements meets Common Criteria specifications
- Significantly improved administration functions
- Enhanced support for unstructured data
- Customizable footprint on installation
- HDR Evolution
- And much more....



## Administration Free Zone vNext+\*

- Intelligent administration and monitoring
- Enterprise security enhancements
- Enhanced enterprise data management
- Replication evolution
- Enhanced administration functions
- And much more

\* Subject to change

# IDS Cheetah Beta Programs

- Closed beta going on right now!
- Beta ends on 5/18/2007
- 18 WW customers participating
- Some customer experiences:
  - Successful migrating a 200GB production database from 9.4 to Cheetah!
  - Conversion succeed without any issues in less than 5 minutes
  - Smooth reversion from Cheetah to 9.40.UC7
  - Easy Install and registration of Spatial Datablade.
- Test Drive to start in February.
- Test Drive (beta CDs) to be distributed in major technical conferences
- Downloads will be available as well
- Watch for one near you!



# Cheetah in the News

IBM To Unleash Cheetah, The Next Informix IDS Release - Database - CRN - Microsoft Internet Explorer

Address: http://www.crn.com/sections/software/software.jhtml?articleId=193004835

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**SOFTWARE**

## IBM To Unleash Cheetah, The Next Informix IDS Release

'Rock-solid' performance has gained the database a loyal following

By **Barbara Darrow, CRN**  
12:01 AM EDT Mon. Sep. 25, 2006  
From the September 25, 2006 CRN

Page 1 of 2

True to its word, IBM continues to update the Informix IDS database, a cult favorite among some database VARs and customers.

The next release, code-named Cheetah, is due to beta this spring and will feature record-level locking, technology carried over from [the latest release of IBM DB2](#), said Arvind Krishna, vice president of database servers for IBM Software's Information Management Group, Somers, N.Y.

IBM is also making sure the new release will win federal security certifications including the Evaluation Assurance Levels 3 and 4.

The current IDS Version 10 Release Change 5—IDS uses its own release terminology—offers row-level and column-level locking. IDS has long been known for its extensibility, its ability to run for long periods without human intervention, and its ability to handle non-

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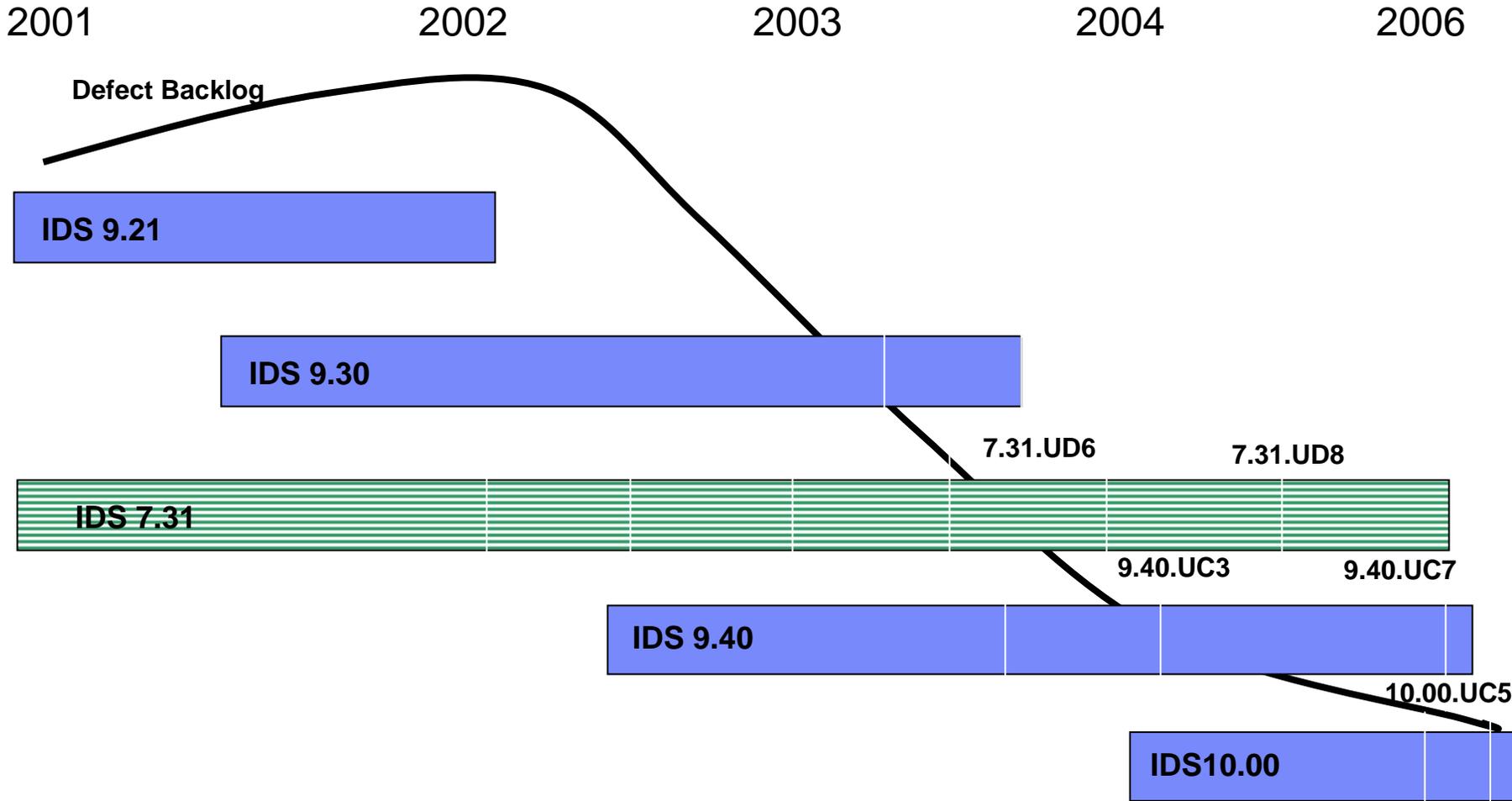
10:28 AM Monday 10/2/2006

Fw: CRN - I... messaging.ib... jtoso - Notes... On Demand ... IBM To Unle... GCG Aug06 BofA Visit Oc... Microsoft Po...

## Disclaimer

- Timeline for delivery of these features is subject to change
- Design and implementation for individual feature is subject to change
- Not an exhaustive list

# IDS Fix Packs and Defect Reduction



# Customer Requests Collected as part of Outside In Design

## Security & Regulatory Requirements

Common Criteria CAPP at EAL4

LBAC

Encrypted HDR Communication

Data Encryption & Key Management

## Reduce Downtime/Improve DBA Experience

Parallel Full System Backup

Backup/Restore to Directories

Continuous Log Restore

## Ease of Embed-ability / Autonomics

Admin APIs

Last Committed Concurrency

Embed-ability Kit

## Application Development

Enhanced AD Support (PHP, Ruby, .NET 2.0)

XML

Web Feature Service for Geodetic and Spatial

# Common Criteria (ISO15408) Certification

U.S. Government requirement for bidding of contracts

- CAPP (Controlled Access Protection Profile)
  - provides Discretionary Access Control (DAC)
    - Permit users to entirely determine access granted to their resources
    - => they can give (intentional or not) access to unauthorized users
  - Similar to C2 certification as required by DoD (Orange Book)
- LBPP (Label Based Protection Profile)
  - Provides Mandatory Access Control (MAC)
    - Deny users full control over access to resources that they can create
    - System security policy determines the access rights granted
    - User may not grant less restricted access to their resources than the Admin
  - Similar to B1 certification as required by DoD (Orange Book)
  - Includes implementation of LBAC (Label Based Access Control)
- Use of auditing agency SAIC

# Security: Common Criteria Certification (CC), EAL 4

- **Providing the required assurance for security functions:**
  - Identification and Authentication, Access Control, Audit, Communications Security and Data Protection
  - EAL 4 - The most rigorous evaluation assurance level for an existing commercial product
- **How do you Benefit ?**
  - A certified level of security assurance, keep your data safe and available
  - Improve your position on compliance – SOX, HIPAA, Gramm-Leach-Bliley
  - Stay Competitive – CC is a recognized certification across governments in several countries, including the US

# Web Feature Service

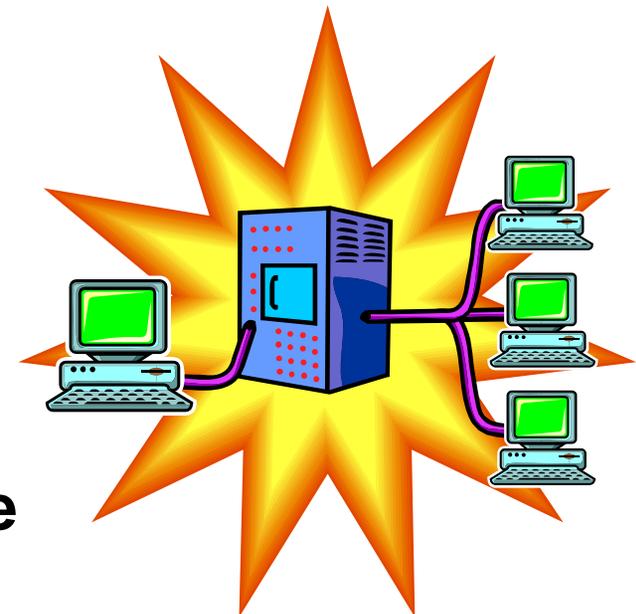
- Build a WFS (Web Feature Service) server
  - Web Feature Service Implementation Specification 1.1 from OGC
  - Build on top of Geodetic initially, then extend to other DataBlades
  - Leverage our investment in spatio-temporal technology and open it to more vendors
  - Uses XML (with GML extensions) to query, insert, update and delete features from a spatial data store using both geometry and traditional data types
  - Many GIS applications (including ESRI) have WFS clients that can consume this data
  - WFS data can be consumed by many different applications (Java, .NET, PHP, traditional 3<sup>rd</sup> generation languages)

# XML Support - Roadmap

- Document centric vs. Data Centric XML applications
- IDS is concentrating on Data centric applications
- XML Publishing
  - Transform result set into XML and publish XML schema
  - Modeled after SQL Server's FOR XML clause
  - Use GenXML() set of functions and other utility functions, e.g. XMLPARSE, XMLSERIALIZE, and XMLEXISTS
  - XSLT datablade to transform XML document into other formats
- XML Shredding
  - Map XML schema into relational schema
  - Shred XML document into relational tables

# What is IDSAAdmin

- **IDSAAdmin is a web-based administration tool for the IBM Informix Database Server**
- **The IDSAAdmin package is installed only on the web server**
- **A single web server can monitor many IDS data servers**
- **No need for any additional software to be installed on the IDS data server**
- **A single installation can administer one or more IDS data server**



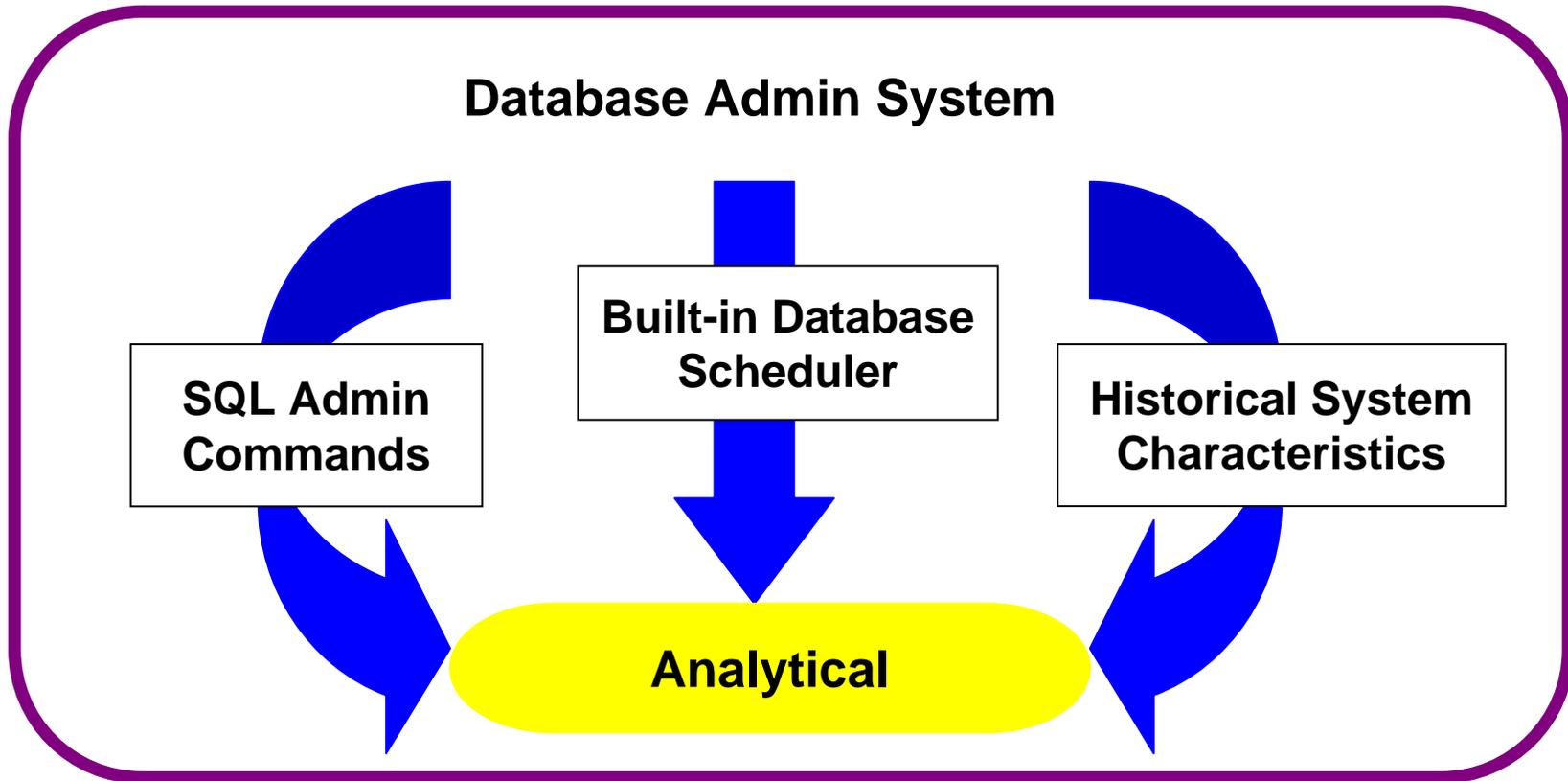
## Simplified Powerful Administration

- Focus on Self-Optimizing and Self-Healing features
- Assist DBA and support engineers with what has changed
- Clear and concise view of performance information
  - Put in terms of a DBA understanding
  - Reduce the cost and overhead of collecting and analyzing data



Provide meaningful information to DBA

# Database Admin System Overview



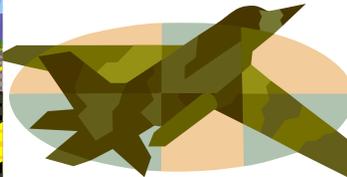
SQL Programming Language

IDSAdmin

# What are Location-Based Services?

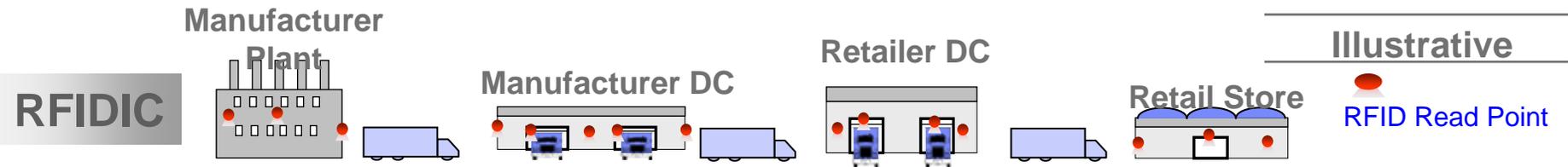
- Applications that deliver information based on geographic or relative location in real time
- Examples range from
  - Targeted advertising and service provision
  - Supply chain optimization
  - Security and compliance
- Technologies associated with LBS
  - Spatial data management
  - Time series analysis

# Location-Based Services with IDS



## Location, Location, Location

- Ability for real-time location tracking, sensing, and communicating fuels new class of services to add business value
- RFID and mobile devices with network connectivity leading the way
- Broad spectrum of emerging Real World Web applications



## WebSphere RFID Information Center (RFIDIC)

- End-to-End middleware solution for RFID tracking, planned GA in Q4 06
- IDS is the embedded RFID server with spatial datablade

## Web services interface for Spatial App Dev (SOA-enabled)

- Web Feature Service Implementation Specification 1.1 from OGC
- Build on top of Geodetic initially, then extend to other DataBlades
- Leverage our investment in spatio-temporal technology and open it to more vendors
- Uses XML (with GML extensions) to query, insert, update and delete features from a spatial data store using both geometry and traditional data types
- Many GIS applications (including ESRI) have WFS clients that can consume this data
- WFS data can be consumed by many different applications (Java, .NET, PHP, traditional 3<sup>rd</sup> generation languages)

# Database Application Development

## ■ Strategy

- Deliver superior AD capabilities
- Provide comprehensive tooling allowing customers to create business applications including Web services with ease



WebSphere. software



Rational. software

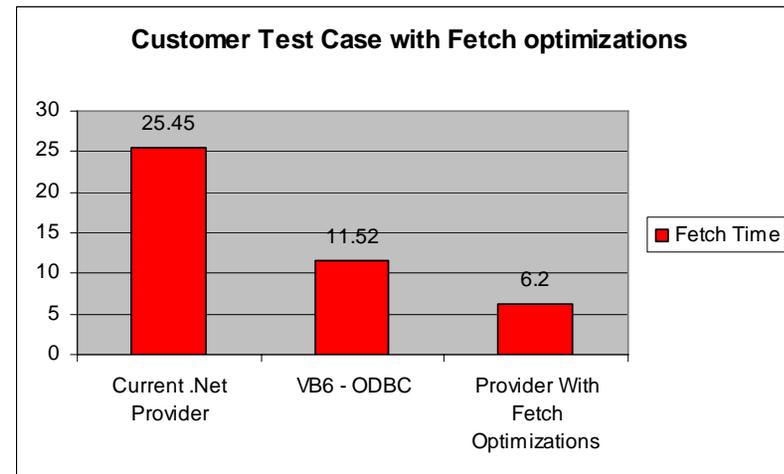


# Application Development – APIs

- .NET 2.0 and Visual Studio 2005 to be available early 2007
  
- More enhancements coming via common .Net provider
  - Support for base types to be available by 2H07
  - Common 100% managed provider planned for 2008
  - Orcas support
  - 64 bit
  - More extensive Visual Studio tooling support
  
- PHP & Ruby driver to be available mid 2007
  
- Java Common Client (JCC – Common JDBC driver)
  - IDS integration into JCC in progress, base types to be available by mid 2007
  - JDBC 4.0

# IDS 2.0 provider – even faster! and VS 2005

- Issue:
  - Slower performance during large fetches using IDS .NET provider. ODBC bridge was fine.
  - Lack of IDS.NET add-on to VS 2005
- Performance enhancements:
  - Reduce cross calls (Managed layer to unmanaged layer) by moving data across in bulk
  - Data type conversions of data within unmanaged code for better performance
- 2.0 .NET provider release with the above performance enhancements
- VS 2005 Tooling with 2.0
  - Informix .NET provider add-on for Visual Studio 2005
- Currently in closed beta; GA 1Q07



# Application Development – Languages and Tooling

- **EGL V 7.0**
  - IBM's business development language
  - Migration path for 4GL customers
  - GUI support for 4GL
  
- **Developer Work Bench (DWB)**
  - Planned to enable IDS 2H07
  - Out-of-box Database application development
  - Free download to IDS customers when enabled
  
- **Rational Data Architect (RDA)**
  - Industry-grade data modeling tool
  - Available now!

# Initial IDS Uptime Survey Results



# Survey Objectives

- To demonstrate that IBM Informix Dynamic Server (IDS) is a strategic data server that provides:-
  - Scalability - superior online transaction processing (OLTP) performance
  - Reliability – minimal downtime
  - Hands free administration – low TCO

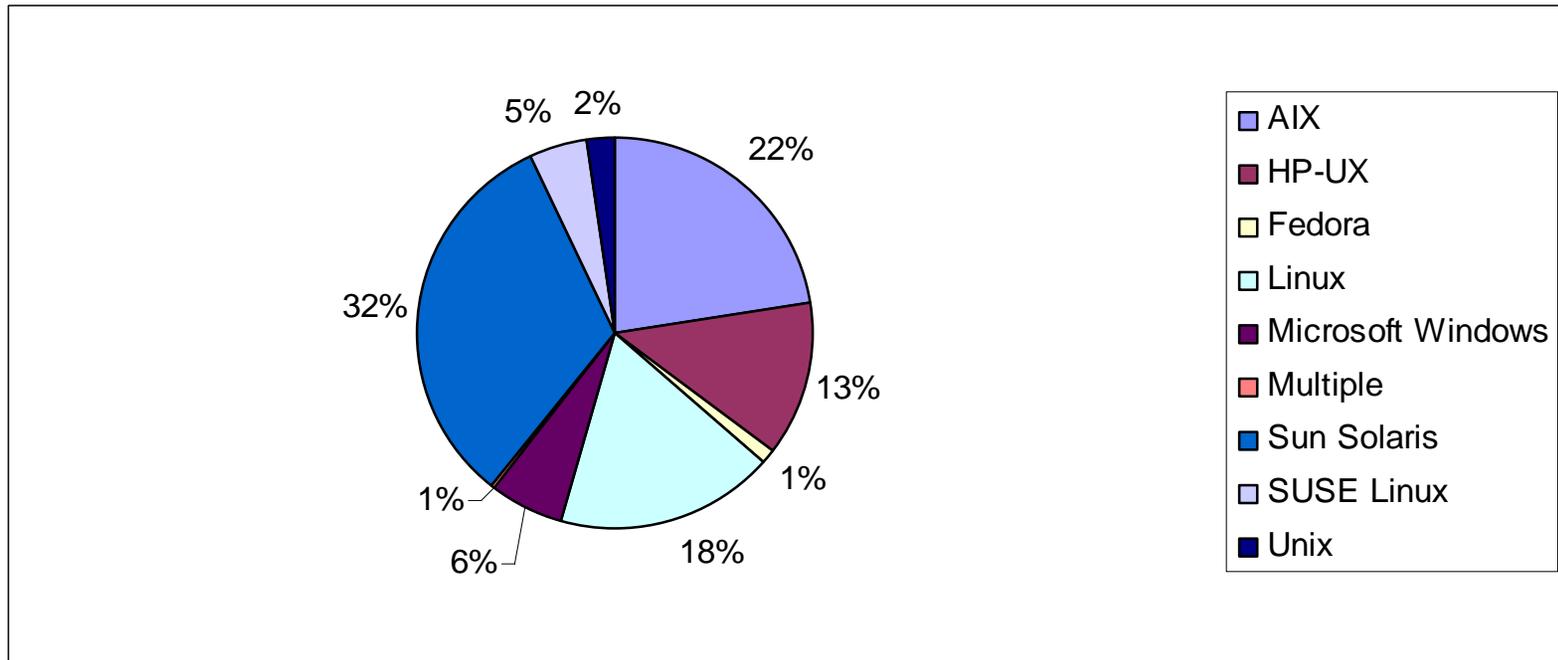
The logo for Oninit, featuring the word "Oninit" in a bold, yellow, sans-serif font. The text is enclosed within a yellow rounded rectangular border with a slight drop shadow effect.The logo for openpsl, featuring the word "openpsl" in a blue, sans-serif font. The "o" is stylized with a dotted trail of blue and purple dots extending upwards and to the left.

## Key Questions

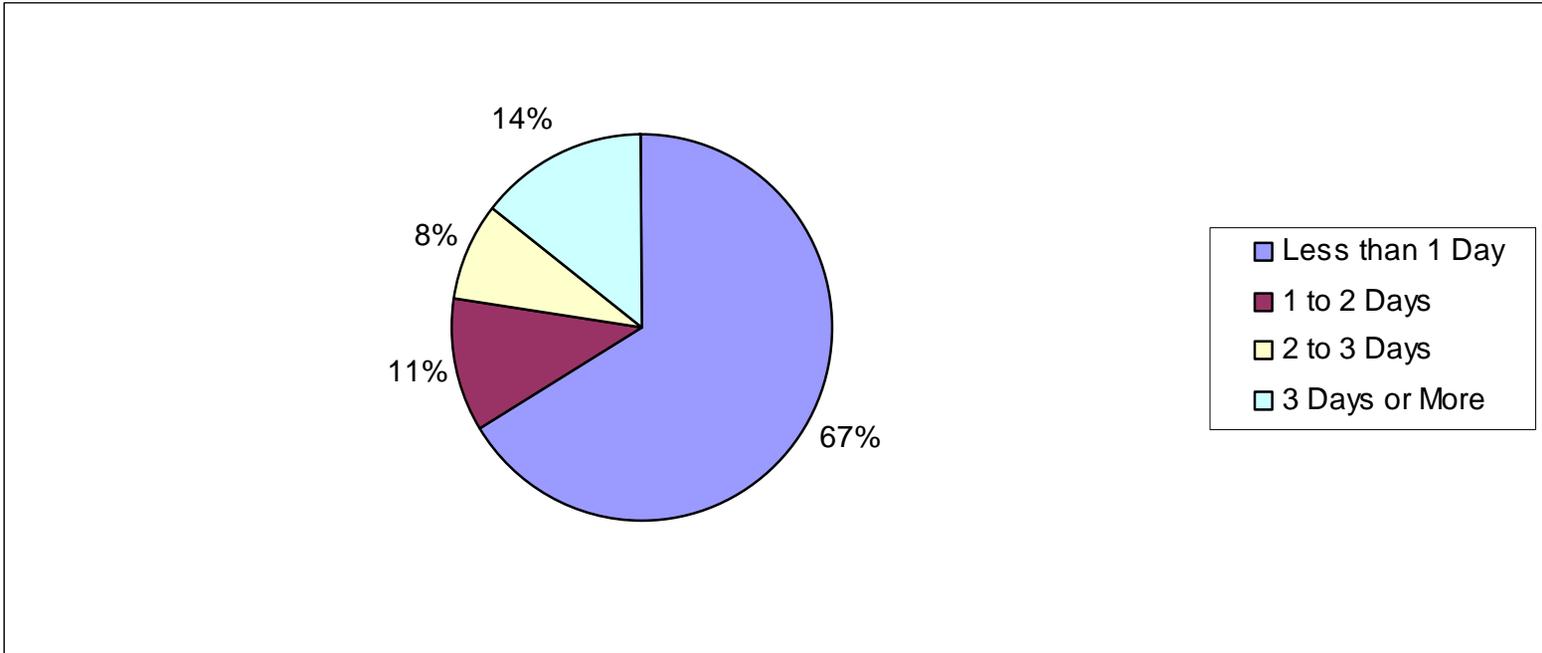
- Applications supported
- Informix Version
- Operating System
- Number of CPUs
- Number of users
- Daily transaction volumes
- Installation date
- Uptime (days)
- DBA time (hours / week)
- Number of outages
- Reasons for last outage
- Any other comments



# Survey Breakdown by Operating System



**Average DBA Days / Year**  
**25% report no DBA time at all**  
**An Average of 7 minutes per user week**



## Comments – Last Outage

“Can't remember ever having an IDS related outage”

Brian Grellinger, Doosan, Infracore America Corp

“Our last outage due to Informix was at least 5 years ago”

Bill Marshall, Stober Drives

“This database has never been down except for server OS upgrades”

Bob Ungaretti, CTO, Garrett Group Inc.

“Informix IDS has been approved as a very solid DBMS”

James Xu, Safeway

“ Can't remember the last outage...over 5 years ago ”

Rich Campbell

“The last unplanned outage was in 2004 when we had a massive power failure”

Lennie Jarratt





# *Questions*