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Avaki EII “Plus” for Access and Integration of Distributed Data Across the Enterprise

SYBASE

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Avaki EII “Plus” for Access and Integration of Distributed Data Across the Enterprise



Bill Jacobs

Senior Product Evangelist
Enterprise Products Group

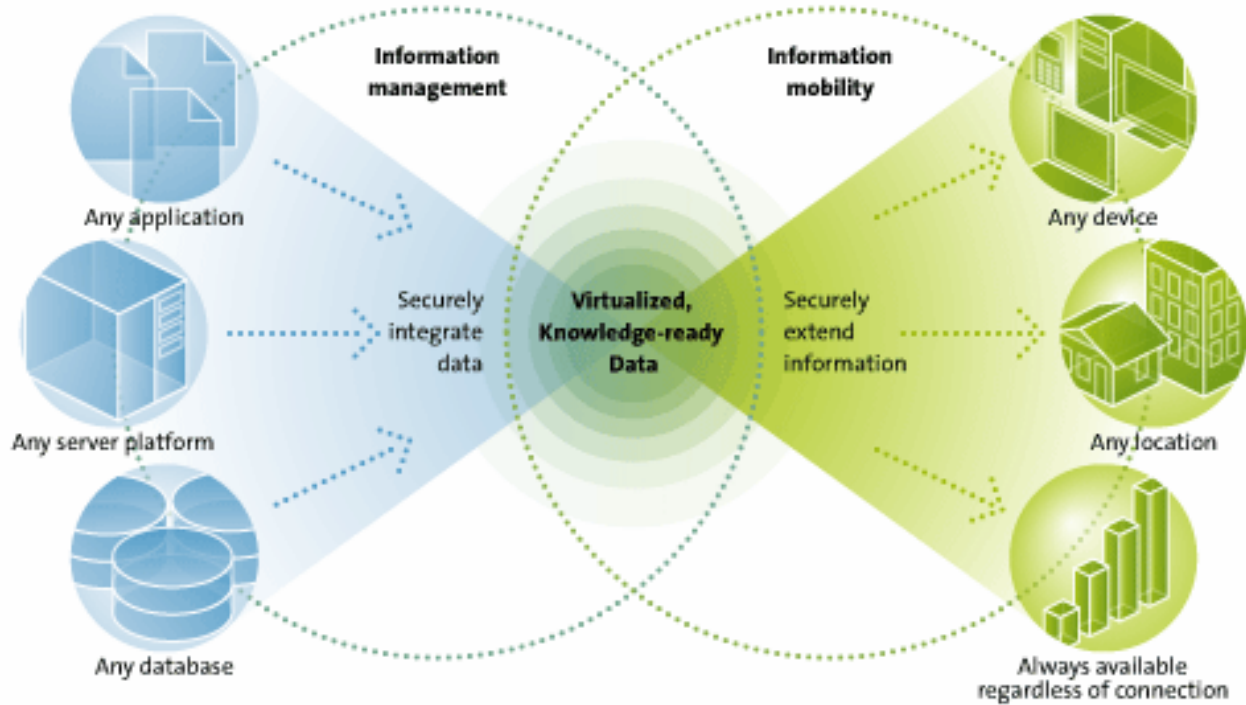


Glenn Klausner

Senior Avaki EII Product
Specialist

INFORMATION MANAGEMENT

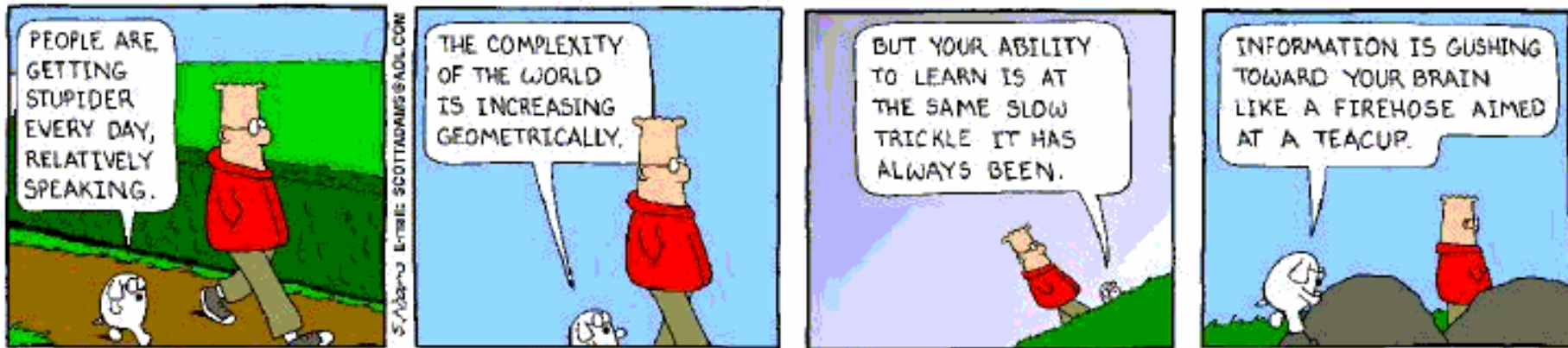
INFORMATION MOBILITY



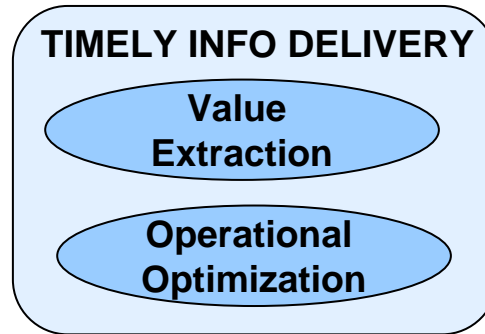
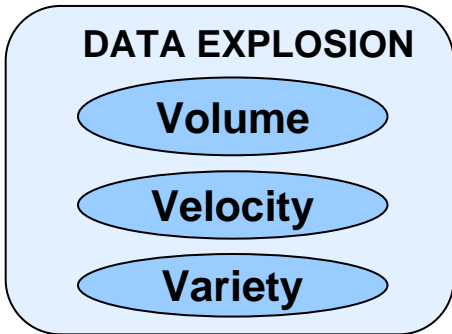
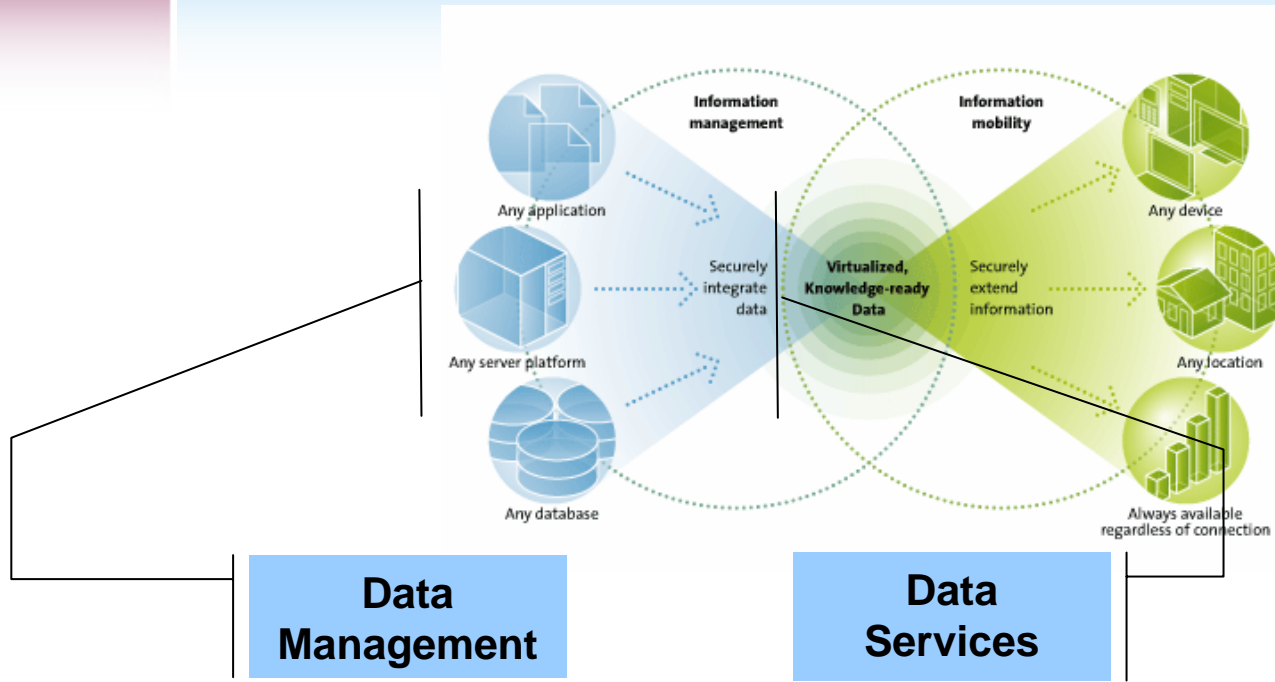
OPTIMIZE

LINK

EXTEND

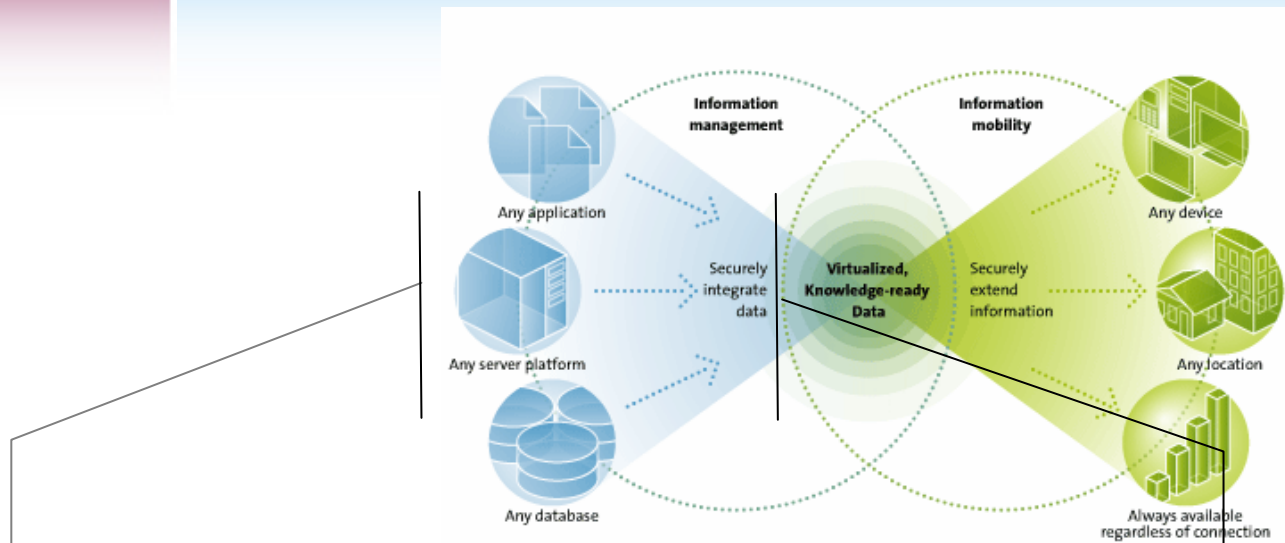


- Volume – 1 to 2 **exabytes** of unique information per year = 250 MB for every man, woman and child
- Velocity – Philadelphia Exchange has to handle 120,000 messages per sec with peaks of 200,000
- Variety -- Email **400,000 TB/ year**, Instant Messaging **274 TB/ year**, Transactions **growing 125%/ year**



- **New Features**
 - Very large database support – from gigabytes to terabytes
 - Native data security - without application changes
 - Efficient transaction processing with decision support

- **Improved Features**
 - Lower Total Cost of Ownership
 - Faster Transaction Performance
 - XML and Unstructured Data Management
 - Connectivity and Support of the Unwired Enterprise



Data Management

Data Services

DATA EXPLOSION

- Volume
- Velocity
- Variety

TIMELY INFO DELIVERY

- Value Extraction
- Operational Optimization

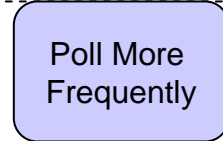
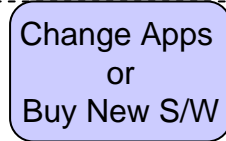
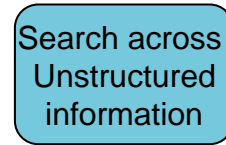
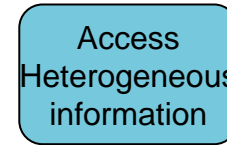
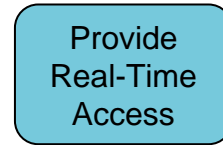
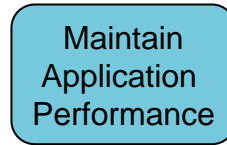
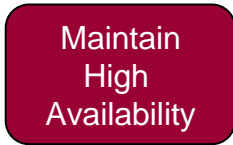
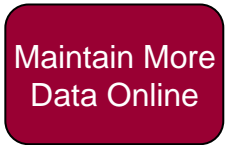
Business Drivers



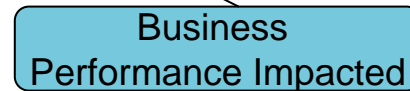
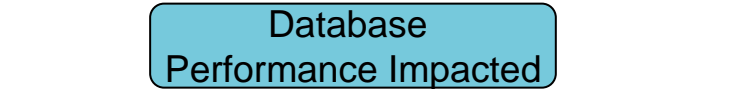
IT Drivers



Business Requirements



Many Answers Introduce Operations Management Complexity

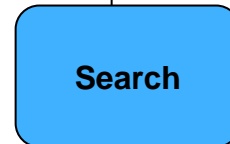
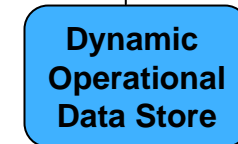
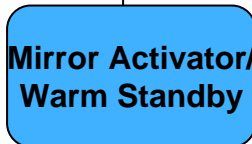
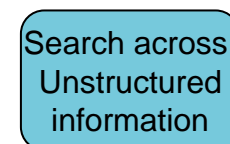
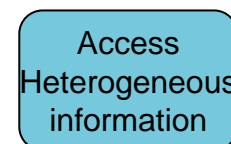
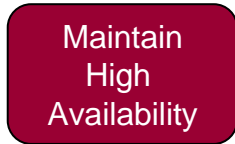
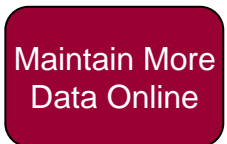
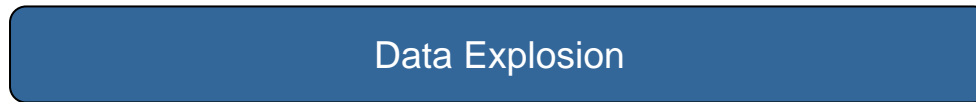


Many Answers Introduce Value Extraction Complexity

Business Drivers



IT Drivers



IT Impacts



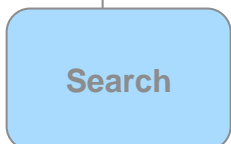
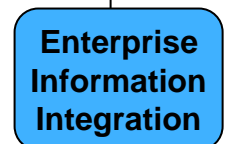
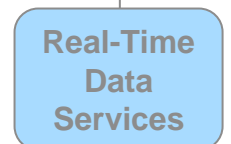
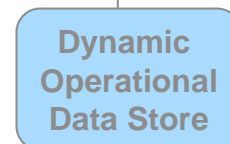
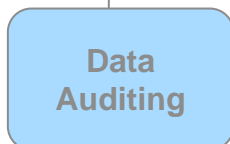
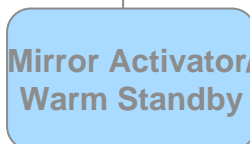
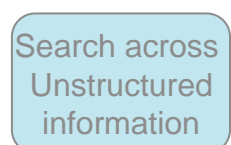
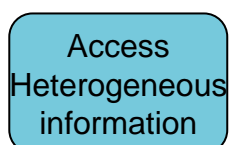
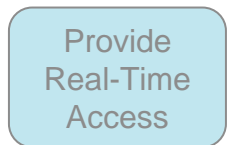
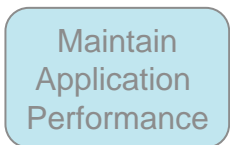
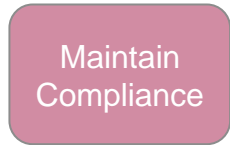
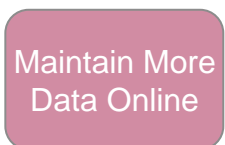
Business Impacts



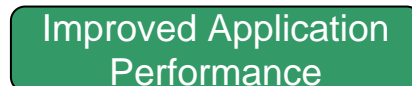
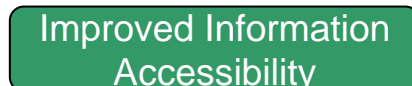
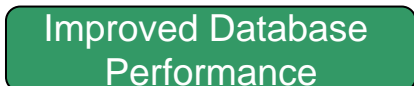
Business Drivers



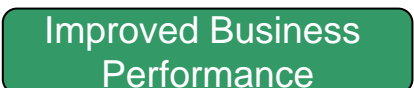
IT Drivers



IT Impacts



Business Impacts



What if you could...

Integrate information from disparate databases, documents, services, files and applications transparently?

Easily and securely share information across organizations?

Use live, up-to-data data in decision optimization?

Expose rich information to users while hiding the complexity of it's sources?

What if you could...

Integrate information from disparate databases, documents, services, files and applications transparently?

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Using EII you can...

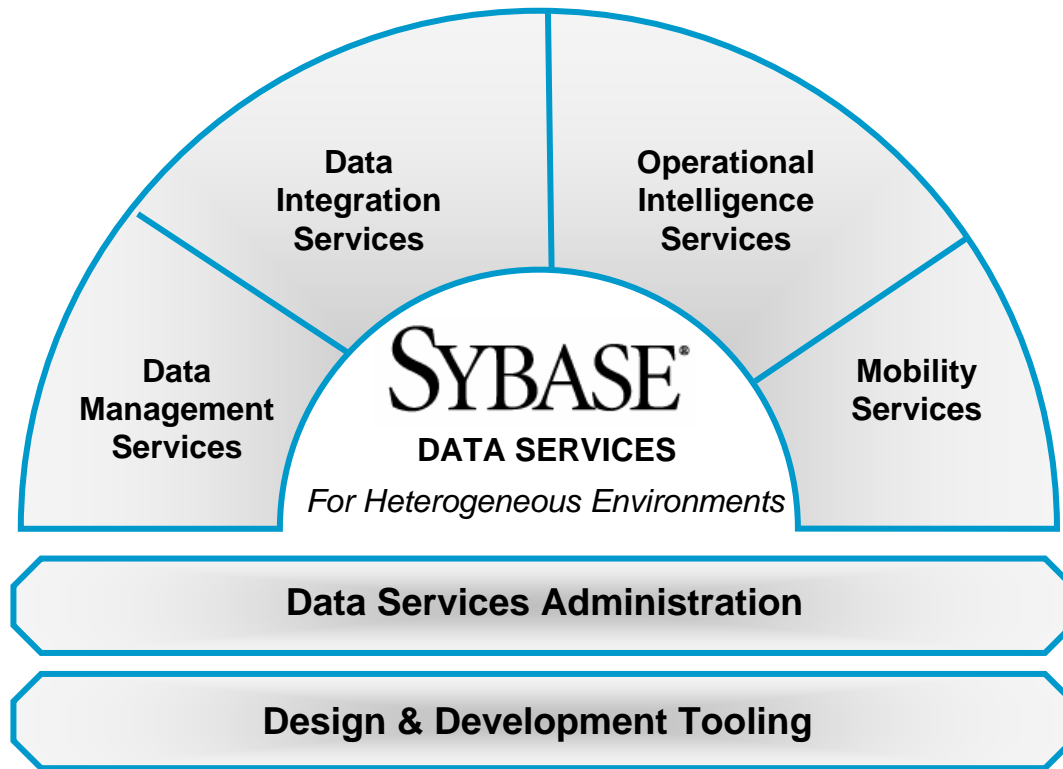
Deliver coherent views of information combined from disparate sources of information

Provide a reusable information services layer

Provide secure, controlled sharing within and beyond the enterprise or agency

Enable transparent access to real-time and historical information

- SET OF INTEGRATED DATA SERVICES
 - Operations Optimization
 - **Data Management Services**
 - Value Extraction
 - **Data Integration**
 - **Operational Intelligence**
 - **Application Mobility**
 - Key Characteristics
 - **Supports heterogeneous environment**
 - **Easy to deploy and use**
 - **Unified to lower cost and complexity**
 - **Services-orientation**
 - **Secure**
 - **Liberal use of standards**



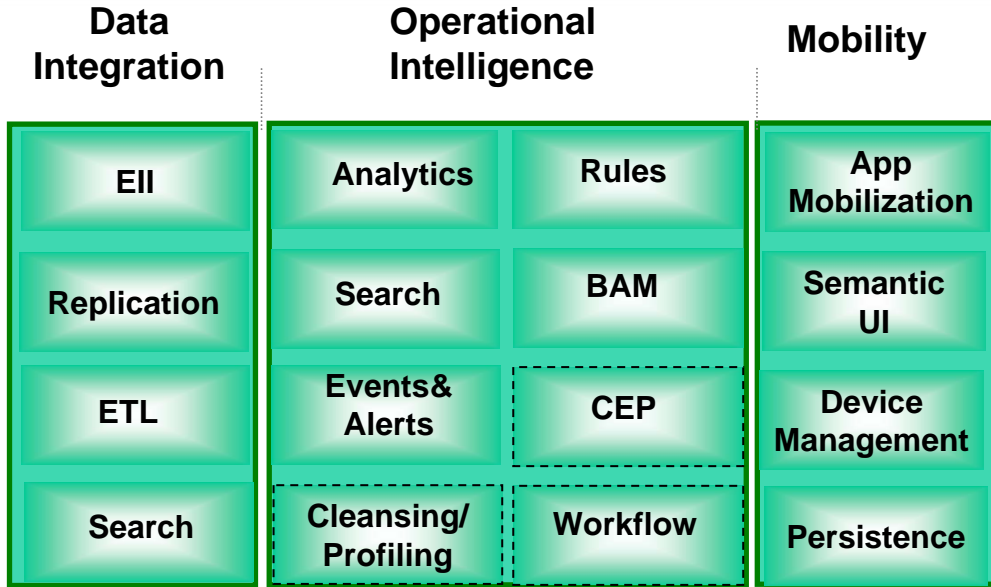
Data Services

Data Management

- Archiving
- Availability
- Auditing

Heterogeneous Services

Sybase Data Services Administrator



Sybase Application Lifecycle Tooling

Application Operating System



SY Data Sources



Non SY Data Sources



Semi-Structured



Unstructured



Rich Media

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Introducing...

Avaki EII Plus

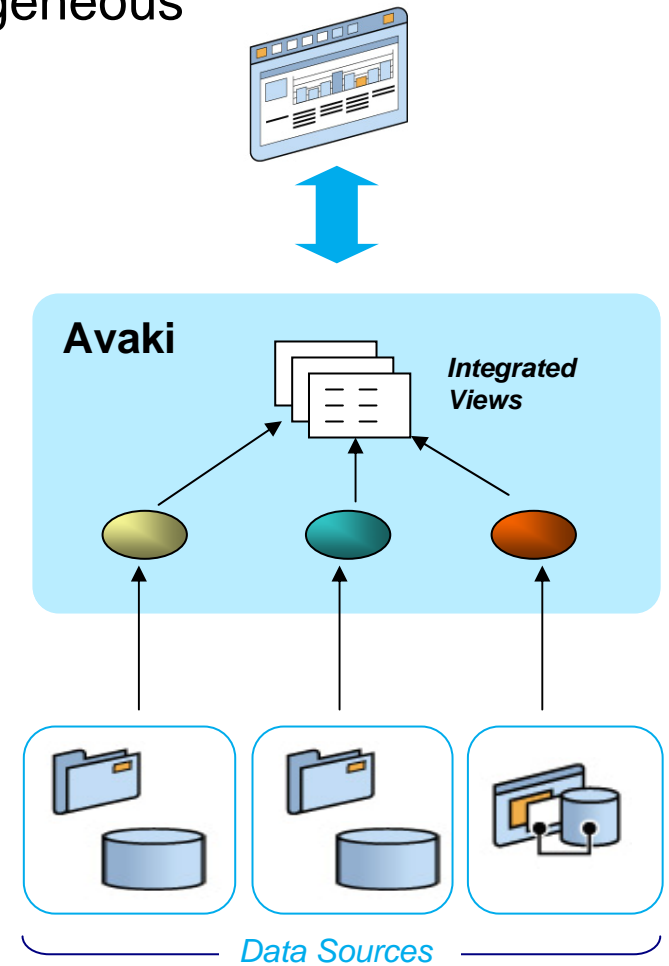


Glenn Klausner

Senior Avaki EII
Product Specialist

SYBASE

- Enterprise Information Integration
 - Federation—not replication
 - Real-time
- Integrated Views
- Distributed Grid Architecture
 - Enterprise scale
 - Data abstraction layer



- Avaki Corporation founded in 2001
- Acquired by Sybase in May, 2005
- EII Plus for real-time integration of distributed data
- Fortune 2000 companies with emphasis on financial service and pharmaceutical markets

Customers









Awards

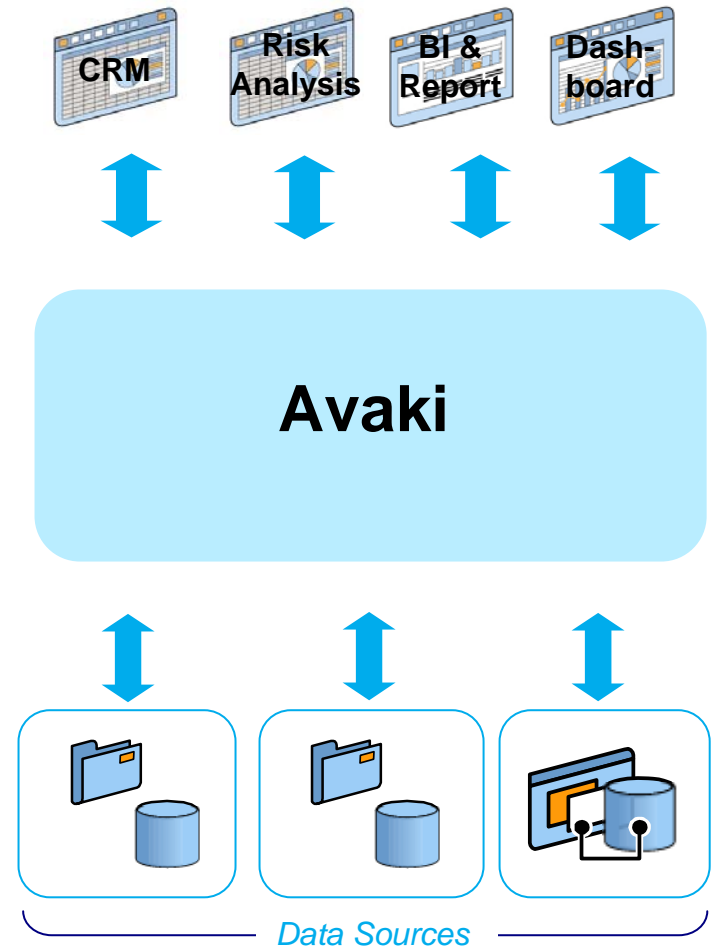





The Distributed Data Challenge

Challenge: Get fresh data from multiple systems cost effectively

- Enterprise
 - “Data Abstraction Layer” servicing many apps
- Operational Applications
 - Single View of Customer
 - CRM & other customer systems
- Decision Support
 - Corporate Performance “Dashboards”
 - Enterprise Reporting & Business Intelligence
 - Risk Management
 - Compliance

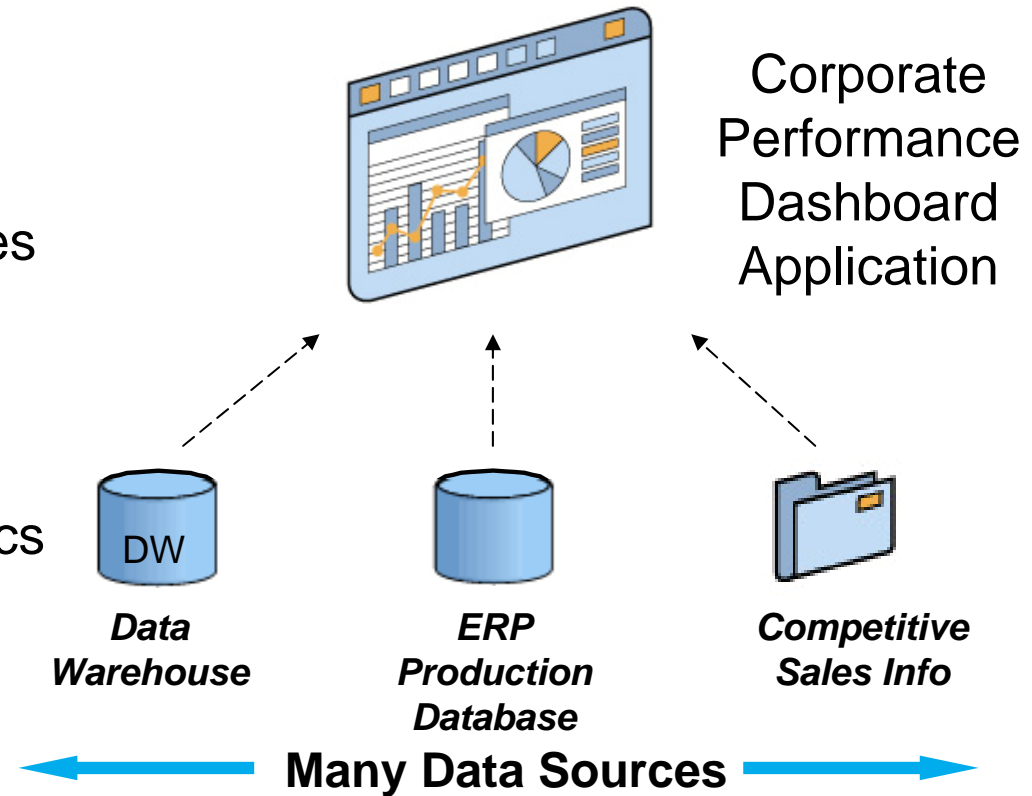


ODS/Mart:

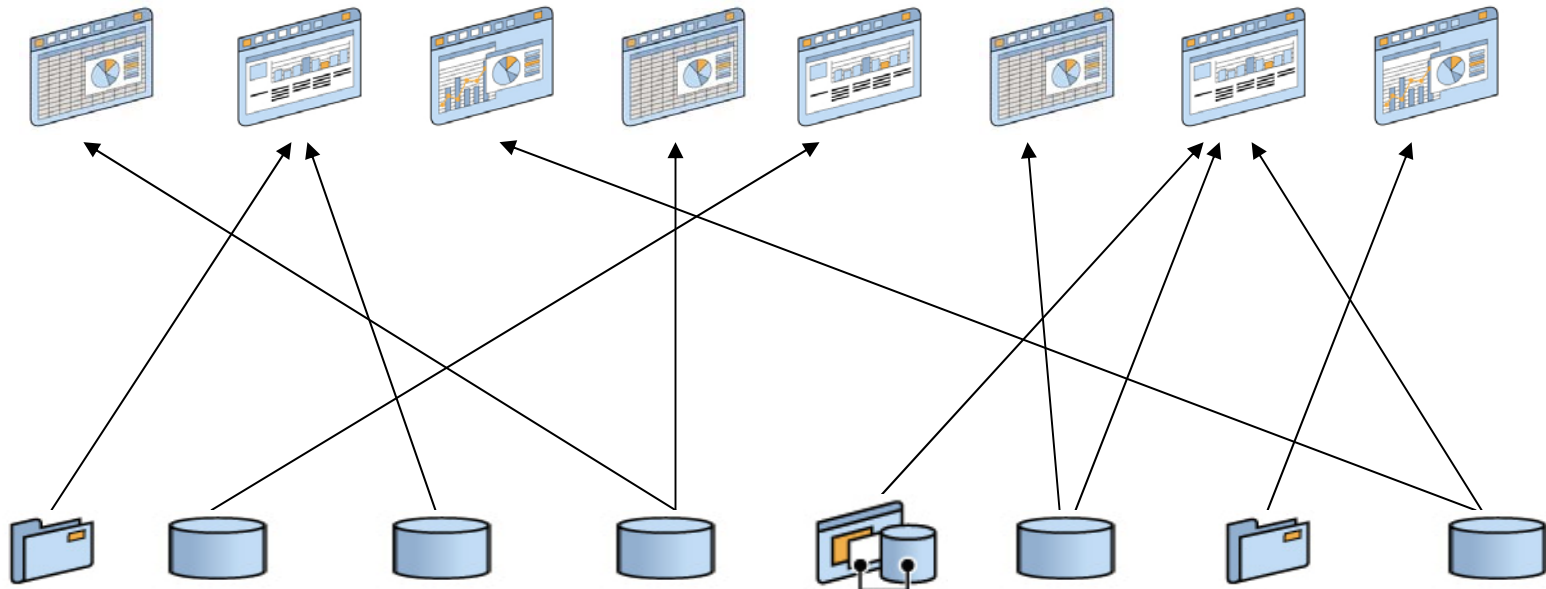
- Data not fresh
- Expensive

Direct Coding

- Different interfaces
- Different security
- Different data structures
- Different semantics



Many Applications and Users Across the Enterprise



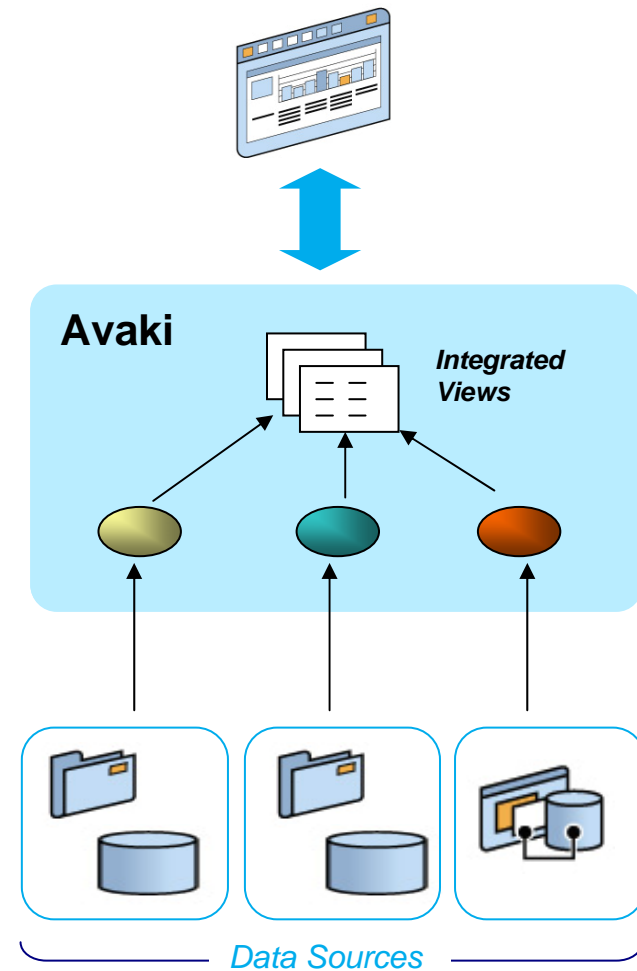
Many Data Sources Across the Enterprise

- Can't find all data
- Integration silos
- No re-use of data/integration
- Data inconsistencies—no "truth"

Avaki Solution Overview

Access & integrate multiple, federated data sources *without replicating data*

- Single virtual data source
- Integrated Views of data
 - Callable service (Service View)
 - Virtual tables (SQL View)
- Framework leverages other tools
- Distributed “Grid” Architecture
 - Project to enterprise scale



Avaki Features and Capabilities

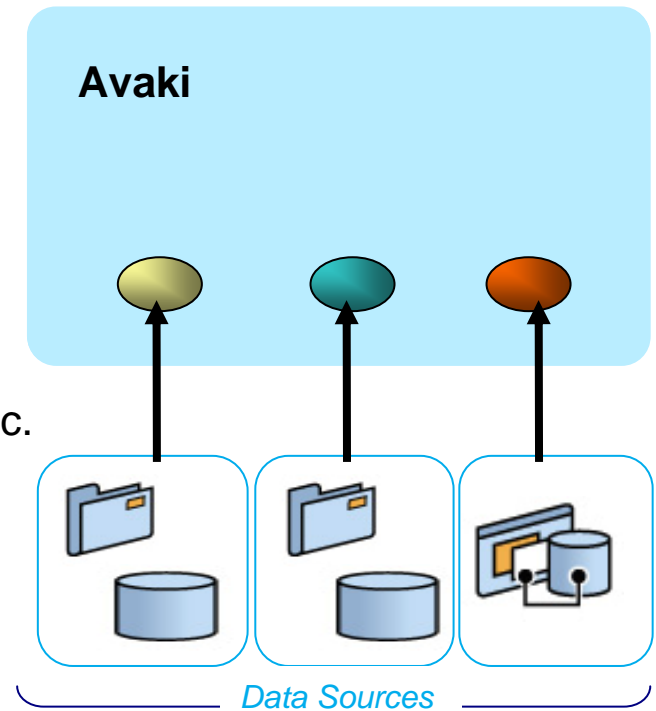


Avaki Studio:
A build-time tool for creating integrated views

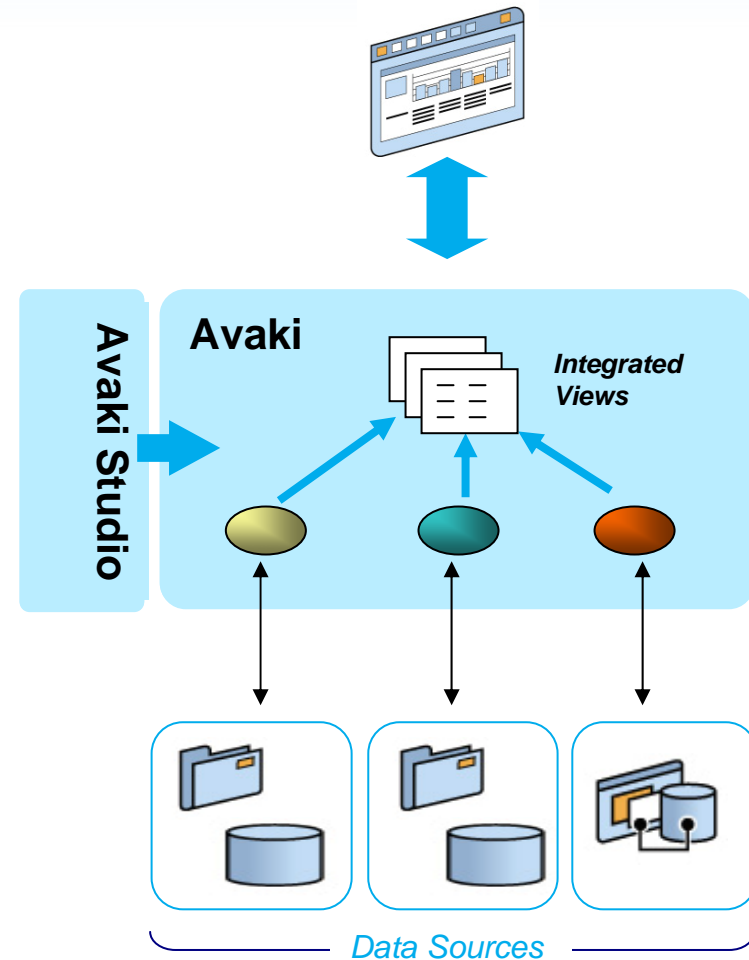


Avaki Data Server:
A run-time environment for accessing integrated views of data

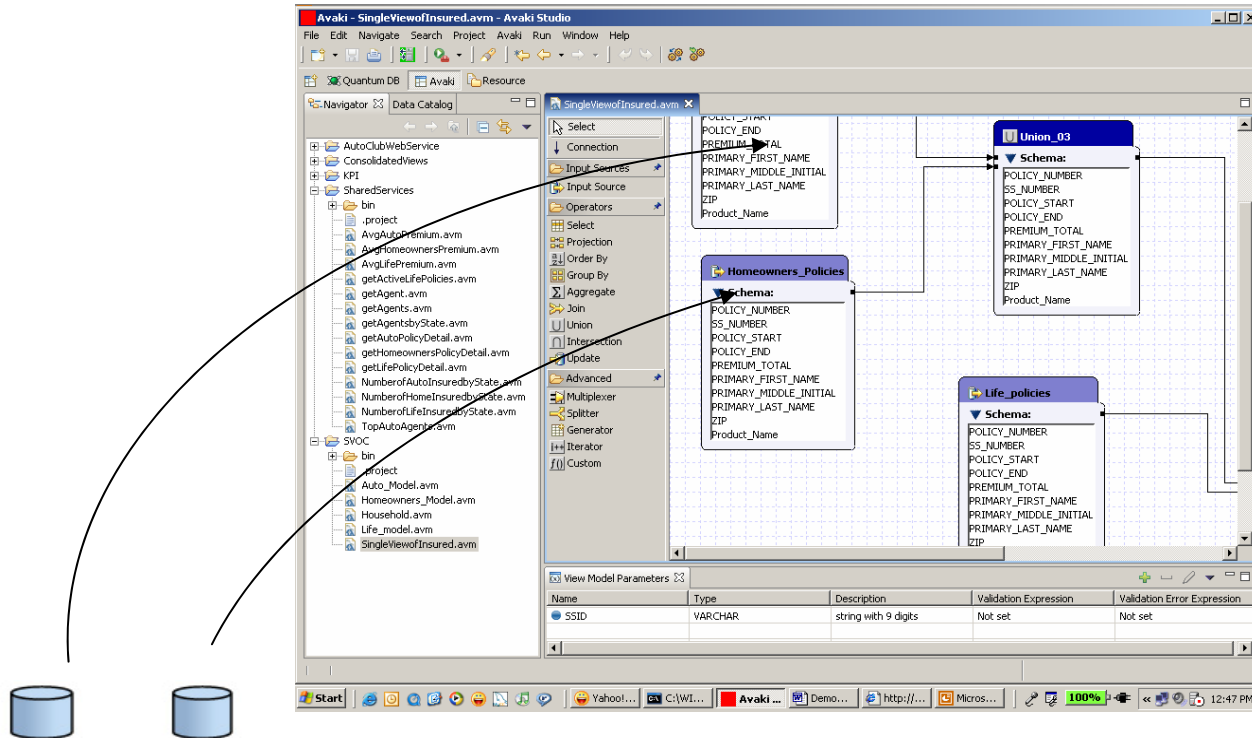
- “Publish” any data from any source
 - Relational – query results, stored procedures, relational tables
 - Application – JCA, adapters, Web service
 - Files
- Register data source & “source view”
 - Data Catalog – runtime registry
 - Generate metadata of source view
 - Import database metadata
 - Generate metadata of view
- Set access control & security
 - Granular access control over view
 - Privileges (read, write etc,)
 - Support LDAP, MS Active directory etc.
 - Single sign-on



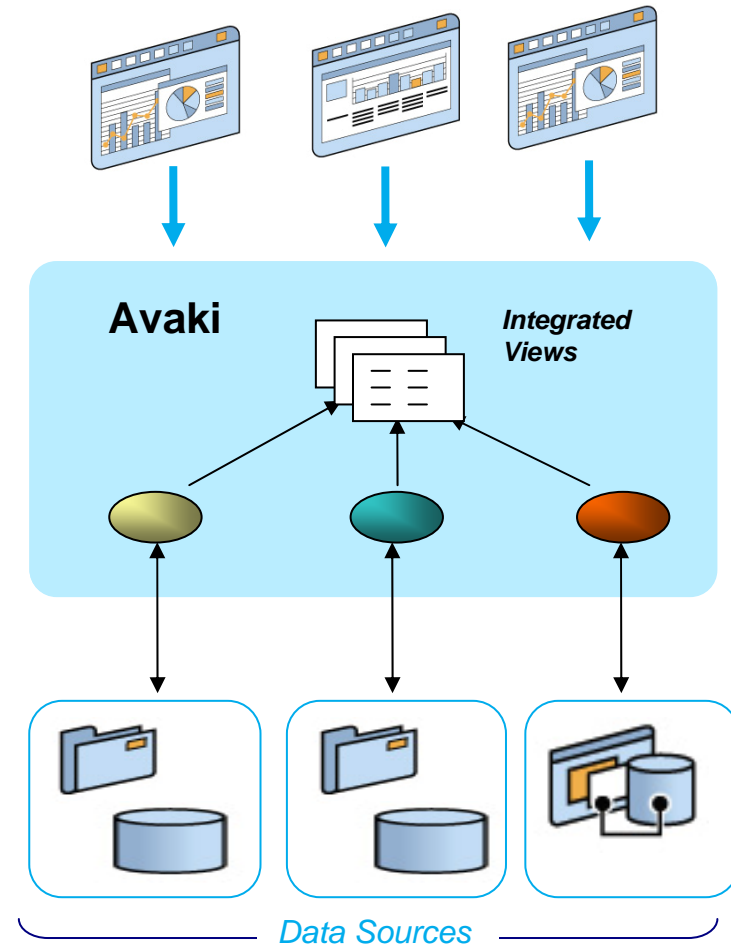
- Create Integrated Views
 - One “virtual” database/data source
 - “Views of views”
 - Distributed query
 - Data transformations
- Avaki Studio – “View Modeler”
 - Integrated View creation tool
 - Use metadata to create integrated views
 - Pre-built data integration building blocks
 - Eclipse-based
- Expose Integrated View
 - Service View – callable service (“customer”)
 - SQL View – virtual relational tables via SQL



- Integrated, Eclipse-based tool
- Create a single, composite view of multiple data sources



- **Single access point for all data views**
 - SQL Views – via SQL
 - Services Views – via call
 - Files
- **Read & Write**
- **Look up in Data Catalog**
 - Discovery, search, invocation
- **Use standard access interfaces**
 - Web Services/SOAP
 - JDBC & ODBC
 - File I/O – NFS, WinFS
 - JSP/Tag library
- **Distributed data caching**
 - Speeds performance
 - Protects data source

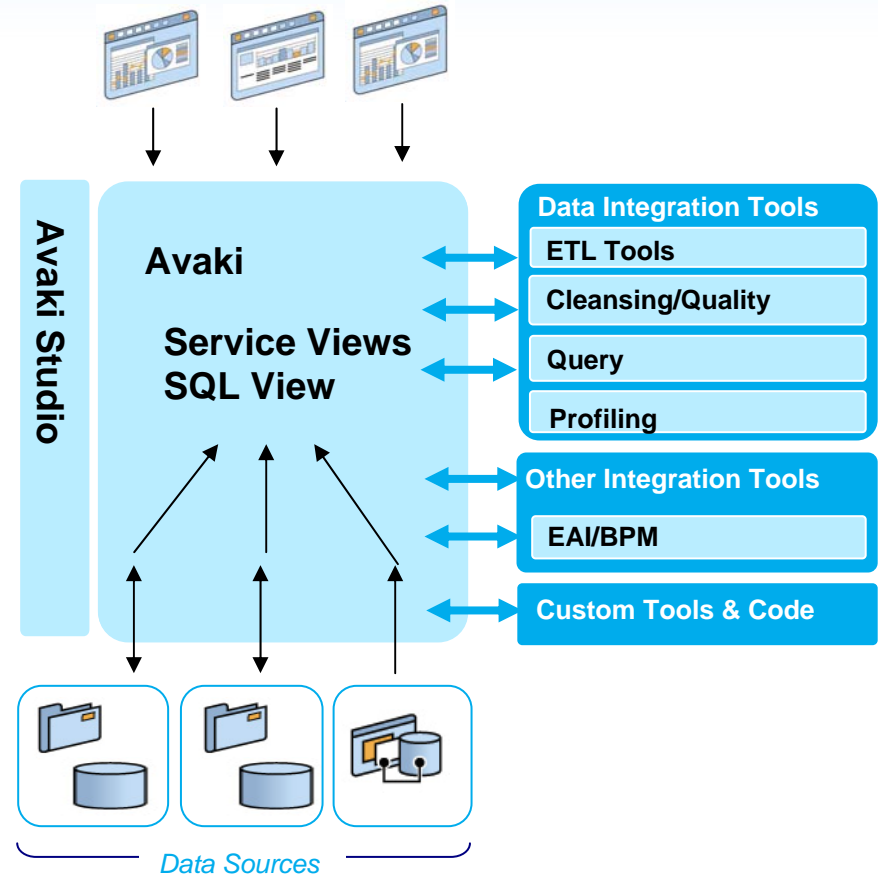


An umbrella for all data integration across the enterprise

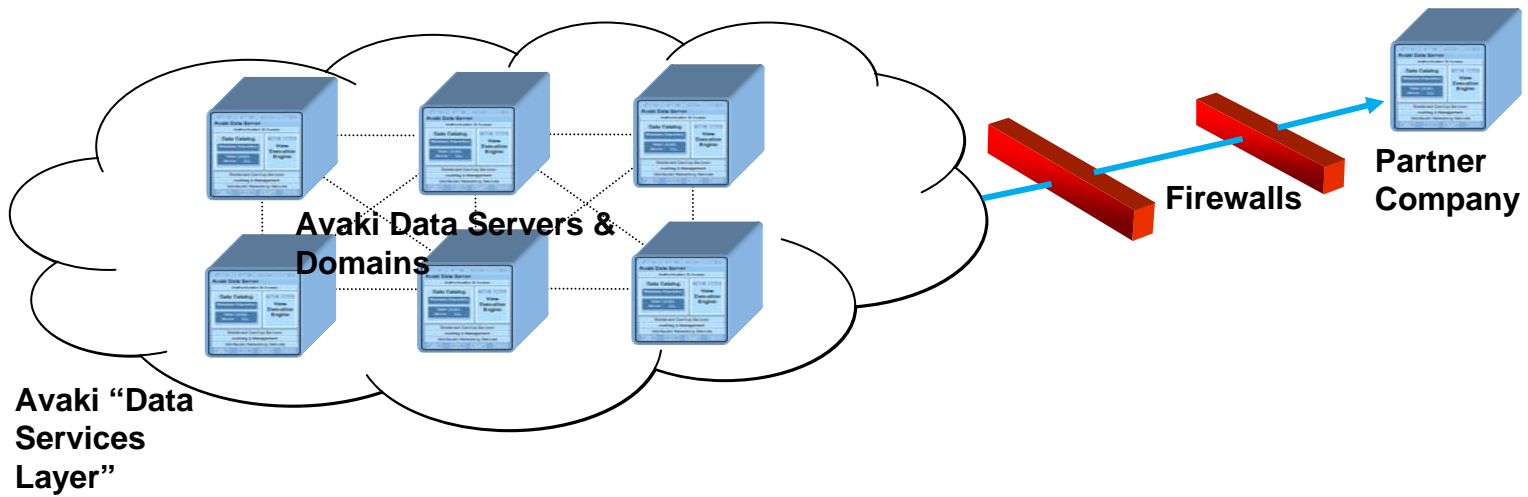
Avaki's unique advantage

Framework Value:

- Enterprise-wide data integration
- Integration flexibility
- Leverage best-of-breed 3rd party tools
 - ETL
 - Data cleansing
 - Profiling
 - Query



- Enterprise-wide “data service layer”
- Peer-level distributed grid architecture – enterprise scale
 - Unlimited number of data sources
 - Unlimited number of applications & load
- Grid architecture – distributed processing
 - Faster performance of integration logic

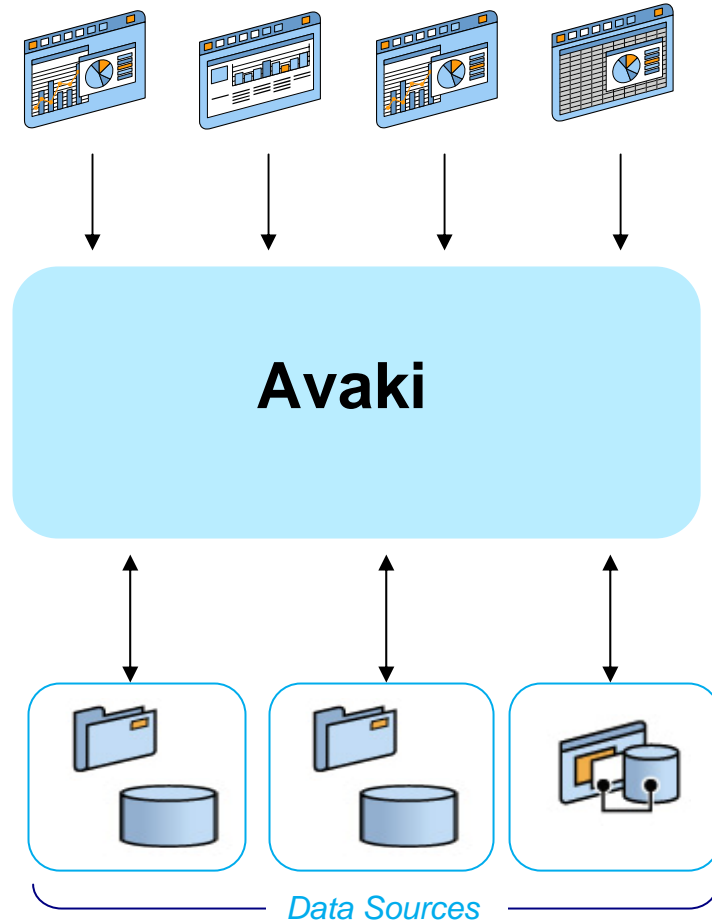


Enterprise Scale & Performance

- Distributed grid architecture
 - Enterprise scale (many apps – data sources)
 - “Grid” processing – faster integration performance
- Data Catalog
 - Manage, discover, and re-use all data & logic
- Distributed Caching

Integration Breadth & Flexibility

- Variety of integration options
 - Callable service – faster performance; more control
 - Virtual tables – via SQL; random queries
- Enterprise Data Integration Framework
 - Leverage 3rd party integration tools
 - Eliminate corporate silos



Avaki Business Use Case

Business Goal

Business visibility

Challenges

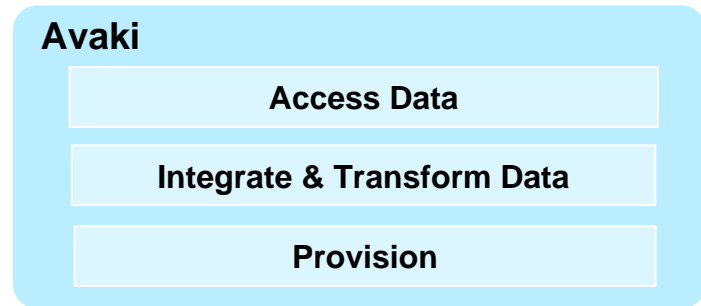
- Populate sales reporting system *daily*
- Access sales data in *numerous data sources*
- *Large & varied* data sets
- *Avoid impact* on operational systems

Avaki Solution

- Real-time access to data
- Access to multiple data sources
- Caching architecture protects operational systems
- 600% performance improvement

Timely and more accurate sales analysis, without impacting operational systems

Daily Sales Dashboard



Account



Sales/Order



Product Segment



Product Segment

Business Goal

Cross-sell customers while managing risk

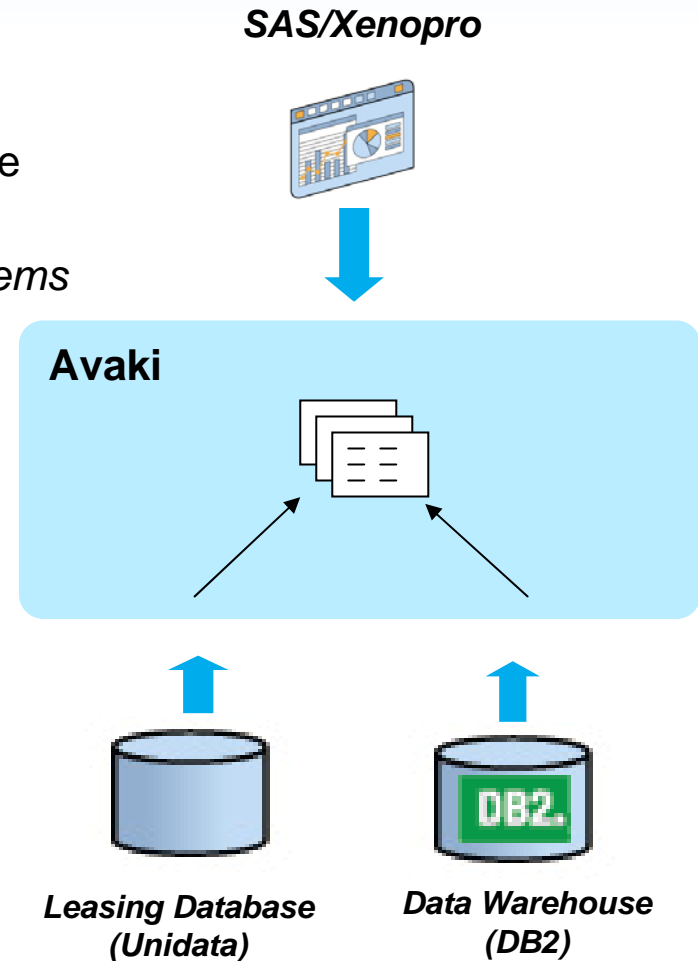
Challenges

- Access *real-time* data to analyze & score customers
- Access customer data in *disparate systems*
- *Data formats vary* across systems

Avaki Solution

- Real-time access to data
- Transform & present in application-specific format
- Re-use integration logic on future projects

Significantly reduced cost and complexity of data integration – performed in real-time



Business Goal

Improve customer support; up-sell customer

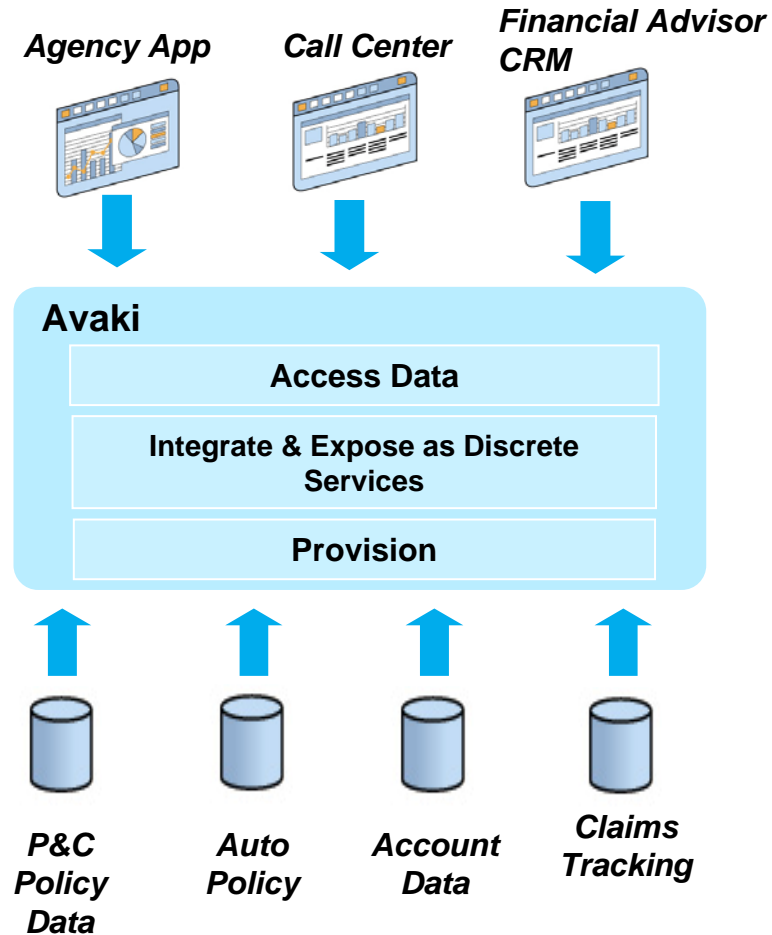
Challenges

- Access customer data in *numerous data sources*
- *Geographically distributed systems*
- Lack of a *single view of the customer*
- *Redundant data connections to applications*

Avaki Solution

- Real-time access to data
- Access to multiple data sources
- Simplified deployment eases maintenance
- Easily accessible, reusable single customer views

Superior customer support and marketing for customers across product lines



Better use of enterprise-wide data leads to a more effective and responsive company

- Access integrated data from multiple sources in “real time”
 - Fresh data
 - One version of the “truth”
- No replication and ODS/data mart
- Much less infrastructure & deployment costs
- More flexibility
 - Data changes
 - Integration & data re-use