Accelerate Data Loading for Big Data Analytics

Attunity Click-2-Load for HP Vertica

Menachem Brouk, Regional Director - EMEA
Agenda

» Attunity update

» Solutions for:

1. Big Data Analytics
2. Live Reporting
3. Migration
4. Modernization
5. Mobile Integration

» Summary, Q&A,
Our Mission

Make Data Available Where and When Needed
improving Business Intelligence, Operations & Processes

Real-time information availability
where & when needed

Focused on data and content,
databases and files

For enterprise, big data, and
cloud environments

Global NASDAQ:ATTU 120+ Employees
2000+ Customers

Trusted by leading companies worldwide and half of the Fortune 100

<table>
<thead>
<tr>
<th>Financial Services</th>
<th>Manufacturing / Industrials</th>
<th>Health Care</th>
<th>Government</th>
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<td>Toyota</td>
<td>AVON</td>
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Partner of Choice to Technology Leaders

Trusted by leading global partners

Strategic Partners

OEM Partners

Technology Partners

System Integrator & Consulting Partners

Go-to-Market Partners
Attunity is a Strategic HP Partner

» Working with HP since the 90’s

» Supports data on all HP platforms (BCS + ISS)

» CI Ready

» System Integration & Distribution Agreement with HP

» Focused on growth areas such as Big Data (HP HAVEn/Vertica)
Attunity Customers on HP NonStop (sample)

Many customers cross industries and geographies

**Financial Services**
- SUNGARD
- RAYMOND JAMES
- fiserv.
- BARCLAYS CAPITAL
- Morgan Keegan
- FHLBanks

**Healthcare**
- GE Healthcare
- Henry Ford Health System
- The Nebraska Medical Center

**Manufacturing/Supply Chain**
- Chevron
- Allegheny Ludlum
- OneSteel
- Catalyst
- Nippon Express

**Other**
- US Foods
- Greyhound
- Sprint
- Target
Agenda

» Attunity update

» Solutions for:

1. Big Data Analytics
2. Live Reporting
3. Migration
4. Modernization
5. Mobile Integration

» Summary, Q&A,
### Delivering Data for Big Data Analytics

#### Where Data Resides

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<th>Example Sources</th>
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<td><strong>APPLICATIONS</strong></td>
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<td>CRM</td>
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<td>Content Management</td>
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<td>HR Systems</td>
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<td><strong>OTHER</strong></td>
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<tr>
<td>Sensors</td>
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<tr>
<td>Web Logs</td>
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</table>

**AND MORE...**

#### Where Data Needs To Be

- **Data Warehouse**
- **BI/Analytics Server**
- **Hadoop / HDFS**
- **Cloud**

**ATTUNITY**

- Any Data
- Any Time
- Any Where

**HIGH PERFORMANCE**

- Lower Total Cost
- Quick Time to Value

**APPLICATIONS**

- CRM
- ERP
- Content Management
- HR Systems

**OTHER**

- Sensors
- Web Logs

**AND MORE...**

**C-Level / Management**

**Line of Business**

**Analyst**

**ANALYTICS**

**VALUE**
Application Integration
Common Pains with Traditional ETL

- Takes too long
- Costs too much
- Lack of developer resources
- Not real-time
- Hard to maintain
Accelerate Data Loading

- Quick setup with end-to-end automation
- Fast loading with optimized integration
- High throughput with Turbo-Stream CDC
The Better Way To Get Data Into HP Vertica


- Easy, no development, no complexity
- Fully automated, end to end
- Fast, high performance integration
- Real-time CDC
- Significantly lower cost
Attunity Click-2-Load for HP Vertica

Complete, Heterogeneous Data Loading/Replication.
Automating Schema Generation, Full Load, and Change Data Capture (CDC)

Click-2-Load.
Drag. Drop. Done.

Zero Footprint Architecture.
Nothing to install on source database server for Oracle and SQL Server

Turbo-Stream CDC and Optimizations for loading HP Vertica
High performance, low-latency, low-impact, and scalability

Monitoring and Control.
Complete Confidence at a Glance.
Attunity Click-2-Load for HP Vertica

Web-based Designer and Management Console

In Memory Stream Processing

Replication Server

- Bulk Reader
- Transform
- Filter
- Stream Loader
- Bulk Loader

HP Vertica Optimized Integration

Persistent Store

Source Database

Transaction Log

Data / Metadata

- Oracle
- SQL Server
- DB2
- DB2 for iSeries
- DB2 for z/OS
- Sybase
- HP NonStop SQL
- ODBC
Attunity Click-2-Load for HP Vertica

TurboStream CDC

In Memory Stream Processing

TurboStream CDC

Transactional CDC
Transactions applied in real-time, in order

High-Volume CDC
Consolidation of change records to minimize transactions applied to target

SQL

SQL 'COPY LOCAL'

CDC

Staging Table

Vertica Database
Batch tuning

Apply batched changes in intervals:

- Longer than (seconds):
  - 1

- But less than (seconds):
  - 30

Force apply a batch when processing memory exceeds (MB):

- 500

Limit the number of changes applied per change processing statement to:

- 0
Click-2-Load with end-to-end Automation
Agenda

» Attunity update

» Solutions for:
  1. Big Data Analytics
  2. Live Reporting
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» Summary, Q&A,
Enabling Live Reporting on NonStop Data

**ATTUNITY FEDERATE**
Virtual views, joining data across sources

**ATTUNITY CONNECT**
Direct, SQL-based real-time access

**ATTUNITY REPLICATE**
Replicate a sub-set of data for query offloading

HP NonStop

Excel, Crystal Reports, Business Objects, Cognos, Tableau, JasperSoft, QlikView, ...

Oracle
Enscribe
NonStop SQL

SQL Server (or other RDBMS)
Customer: Nebraska Medical Center
Live Reporting with HP NonStop Data

Attunity ODBC

Direct SQL access
Federated views

Attunity CONNECT Attunity FEDERATE

GE Healthcare
Centricity Enterprise

HP NonStop Itanium

Hundreds of files & tables

Enscribe SQL/MP
Agenda

» Attunity update

» Solutions for:
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» Summary, Q&A
Migration Solutions for HP NonStop

- ATTUNITY CDC
- ATTUNITY CONNECT

- Migrate VSAM, IMS, DB2

- ATTUNITY REPLICATE

- Migrate RMS, Rdb, Oracle

- HP NonStop
Agenda

» Attunity update

» Solutions for HP NonStop:

1. Big Data Analytics
2. Live Reporting
3. Migration

4. Modernization

5. Mobile Integration

» Summary, Q&A
Enable Modernization and SOA
Extend across technologies and platforms

Build composite apps in modern dev tools
Integrate NonStop using modern SOA & EDA tools

Develop new apps in OSS using Java, C++
Enable 3rd party apps to run on OSS

Make NonStop data accessible via SQL & XML
Wrap Pathway as reusable services
**Comprehensive NonStop Connectivity**

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Customer: US Foods
Build SOA across HP Nonstop and IBM Mainframe

Virtual SOA layer
Common and uniform access

HP NonStop
- Enscribe
- SQL/MP

Federated views
Direct SQL access

IBM Mainframe
- VSAM
- DB2

Federated views
Direct SQL access
Customer: Shenzhen Stock Exchange
Modernize trading applications with .NET & Java

» Improve broker & investor productivity with modern apps
» Rapid development while data is reliably managed on NonStop

Windows

VB.NET
Java Apps

ADO.NET
JDBC

HP NonStop

Guardian

Relational schema
SQL data access

Hierarchical metadata
Native connectivity

Enscribe
(stock data)
Agenda

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» Solutions for :

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» Summary, Q&A,
Enable Mobile Apps and Integration
Leverage middleware to enable seamless access

Web Services

OSS
Java

Windows, UNIX, Linux
Java .NET

HP NonStop (Guardian)

ATTUNITY CONNECT ATTUNITY FEDERATE

Enscribe SQL/MP Pathway Services

Build applications that service mobile applications (native or web)

Make NonStop data accessible via SQL & XML

Wrap Pathway as reusable services
Agenda

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» Solutions for:
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» Summary, Q&A,
Trusted Partner and Solution

- HP Partner for many years, with reseller agreement in place
- Used by many NonStop customers (e.g. US Foods, Raymond James)
- Global, NASDAQ traded, 120 people, 2000 customers worldwide

Enable many solutions customers are looking for:

- Big Data Analytics
- Live Reporting
- Migration
- Modernization
- Mobile Integration
Thank You