

Customer Data Management Single Source of Truth

Trading Community Architecture
Data Quality Management
Customer Data Hub
Fusion Middleware

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- The Need for Customer Data
- TCA
- Customer Data Management
- Customer Data Hub
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Multiple Data Sources

Department

- Service
- Sales
- Web Site
- Financials
- Marketing

Common Source

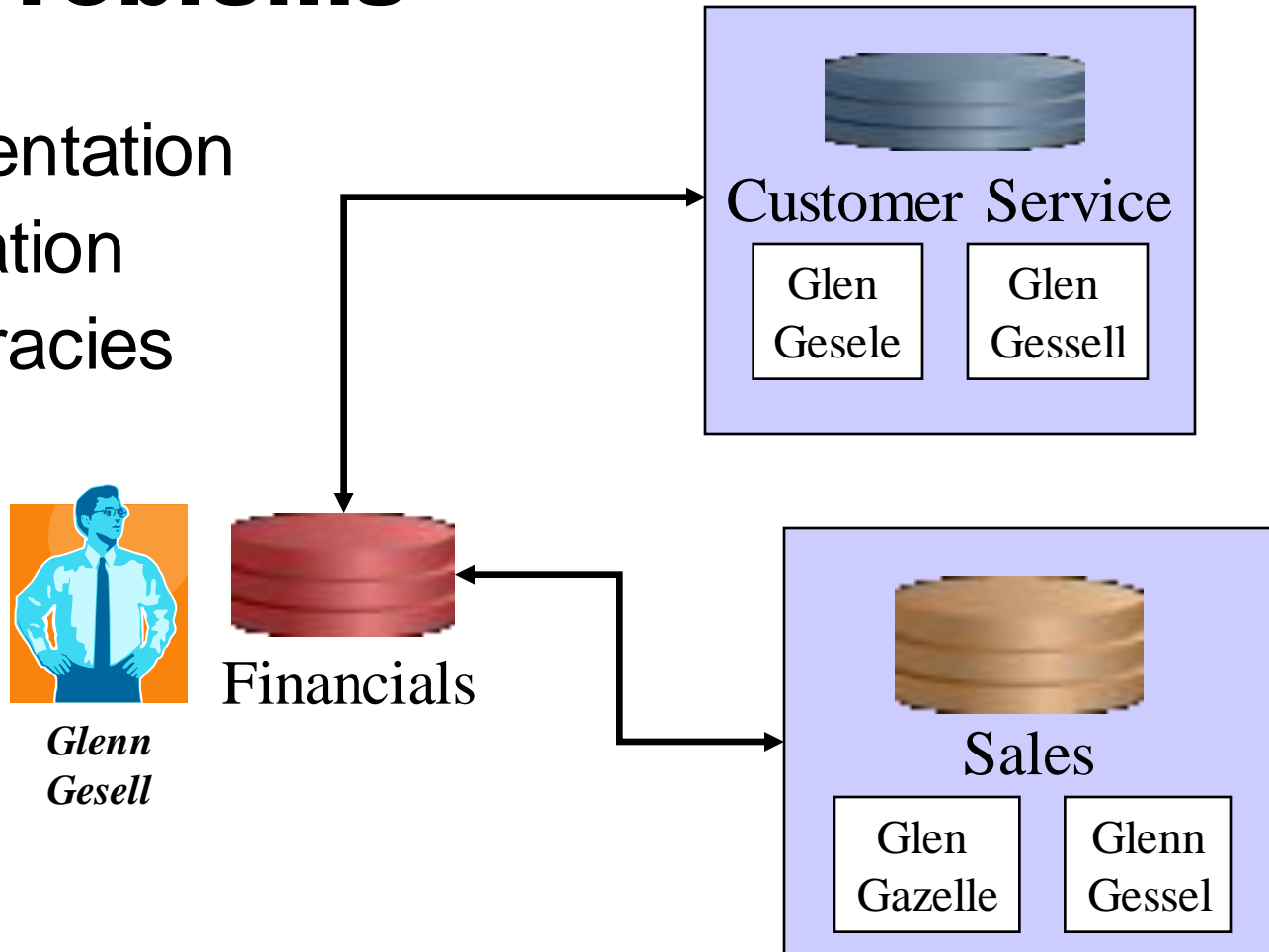
Installed Base
Contacts
Customer login
Payments/Receivables
Demographics

Business Problems

- Don't know enough about our customers
- High volume of data, low confidence in data
 - Fragmentation, duplication, inaccuracies
- High expense to maintain multiple data masters
- Ongoing business initiatives add to the problem
 - Acquisitions, new lines of business, new system implementations, etc.

Data Problems

- Fragmentation
- Duplication
- Inaccuracies

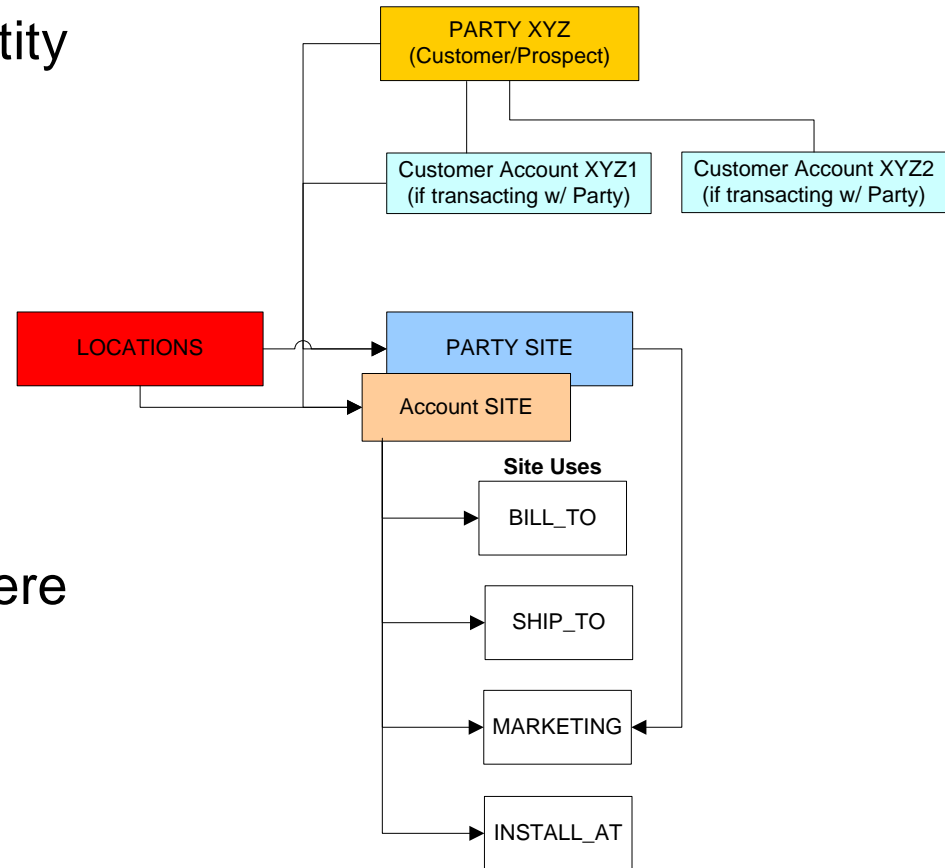


Trading Community Architecture

- TCA is not an Oracle Applications module
- Underlying data model to support entry and management of entities (i.e. parties) that you interact with.
 - Companies
 - Individuals
 - Brokers
 - Agents
 - Resellers
- Stores relationships between entities
- Very flexible, very robust

TCA

- Party: A single, global, entity that exists independently from its business relationships with you
- Customer Account: The characteristics of the business relationship between you and your customers
- Locations: Addresses where your customers reside and/or conduct business

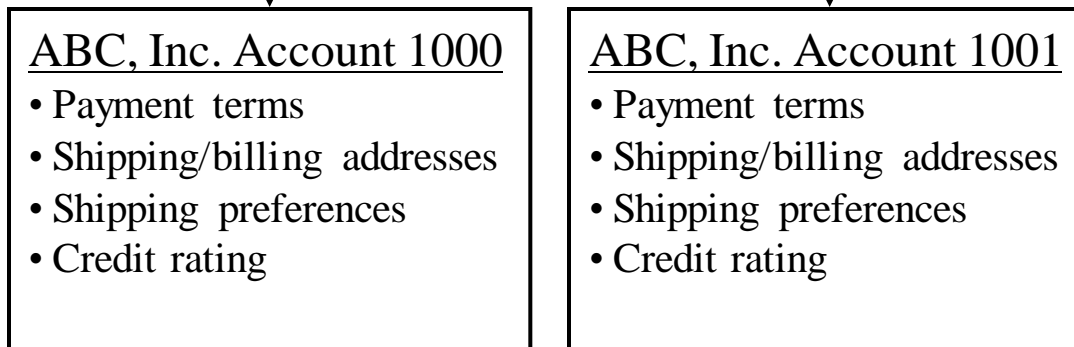


TCA Example



ABC, Inc. Party Attributes

- Name
- Address
- Taxpayer ID
- Classifications
- DUNS Number



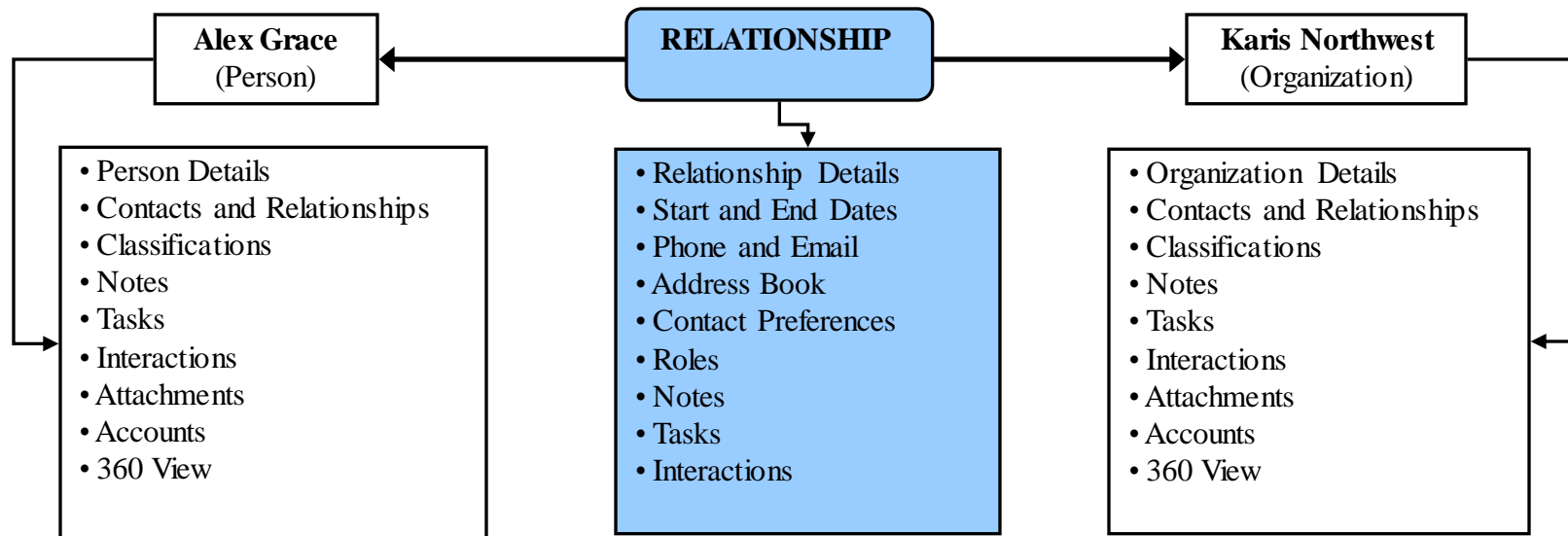
ABC, Inc. Account 1000

- Payment terms
- Shipping/billing addresses
- Shipping preferences
- Credit rating

ABC, Inc. Account 1001

- Payment terms
- Shipping/billing addresses
- Shipping preferences
- Credit rating

Relationships



Examples of Relationship Types

Karis Northwest ~ *Subsidiary of* ~ Karis Enterprises, Inc.

Karis Northwest ~ *Partner of* ~ Fisher, Inc.

Karis Northwest ~ *Competitor of* ~ AG Corporation

Andrew Stoughton ~ *Employee of* ~ Karis Northwest

Michael Arnold ~ Reseller for Alex Grace

Michael Arnold ~ Reseller for ~ Karis Northwest

Oracle Tools for CDM

- Unified Customer Model – Single View of Customer across Applications
- Consolidation
 - Bulk Load APIs
 - Extensible Data Model (TCA)
 - HTML User Interfaces
 - Customer Data Hub (CDH)
- Cleansing
 - Data Quality Mgmt (DQM) tools
 - Extensive duplicate identification functions
- Coordination
 - Customer Data Hub

CDM Application Components

- Customers Online
- Data Quality Management (part of Customer Data Librarian)
- Customer Data Hub

Customers Online

- View, update, or create any information within the TCA data model
 - Create customers both online and through batch import
 - Assign profiles
 - Addresses
 - Relationships
 - Classifications
- Merge Duplicates
- 360 View of enterprise transactions
 - Real-time query displays transactions for a given party
 - Data model supports queries from any external system(s)

Overview

[Profile](#)

[Classifications](#)

[Addresses](#)

[Contact Points](#)

[Relationships](#)

[Accounts](#)

[Transactions](#)

[Notes](#)

[Tasks](#)

[Attachments](#)

[Interactions](#)

[Source Systems](#)

Data Quality Management

- Web-based application to manage all aspects of customer data quality
- Duplicate Identification and Resolution Tools
 - Perform proactive searches for duplicate records
 - Manage the merge process in a step-by-step flow
 - Accept default merge choices for a one-click merge or perform detailed, attribute level analysis
- Import Management
 - Manage all Import Requests from a single Import Queue
 - Accept or reject import requests
 - Determine duplicate identification and address validation settings for bulk loads
 - Generate “What if” analysis prior to import
 - View post-import statistics
- Party Purge
 - Physically delete unwanted records to reduce data volume and/or to comply with data removal requirements (e.g., rented lists, do not contact, etc.)

DQM – Transformations

- Approximately 40 seeded transformations
- Custom transformations can be defined
- Used to correct or modify input values for queries
- Transformation values stored in staging tables – must be loaded via the DQM Staging Program
- Common transformations include:

Transformation	Purpose
CLEANSE	Correct vowel usage and typing errors
CLEANSSED WORD REPLACE	Clean and replace words in names and addresses
CLUSTER	Correct spelling errors at the end of a word
EXACT	Catch formatting errors

DQM – Word Replacements

- Over 3000 seeded word replacements in English
- Additional replacement and foreign language can be added as needed

Word Replacements

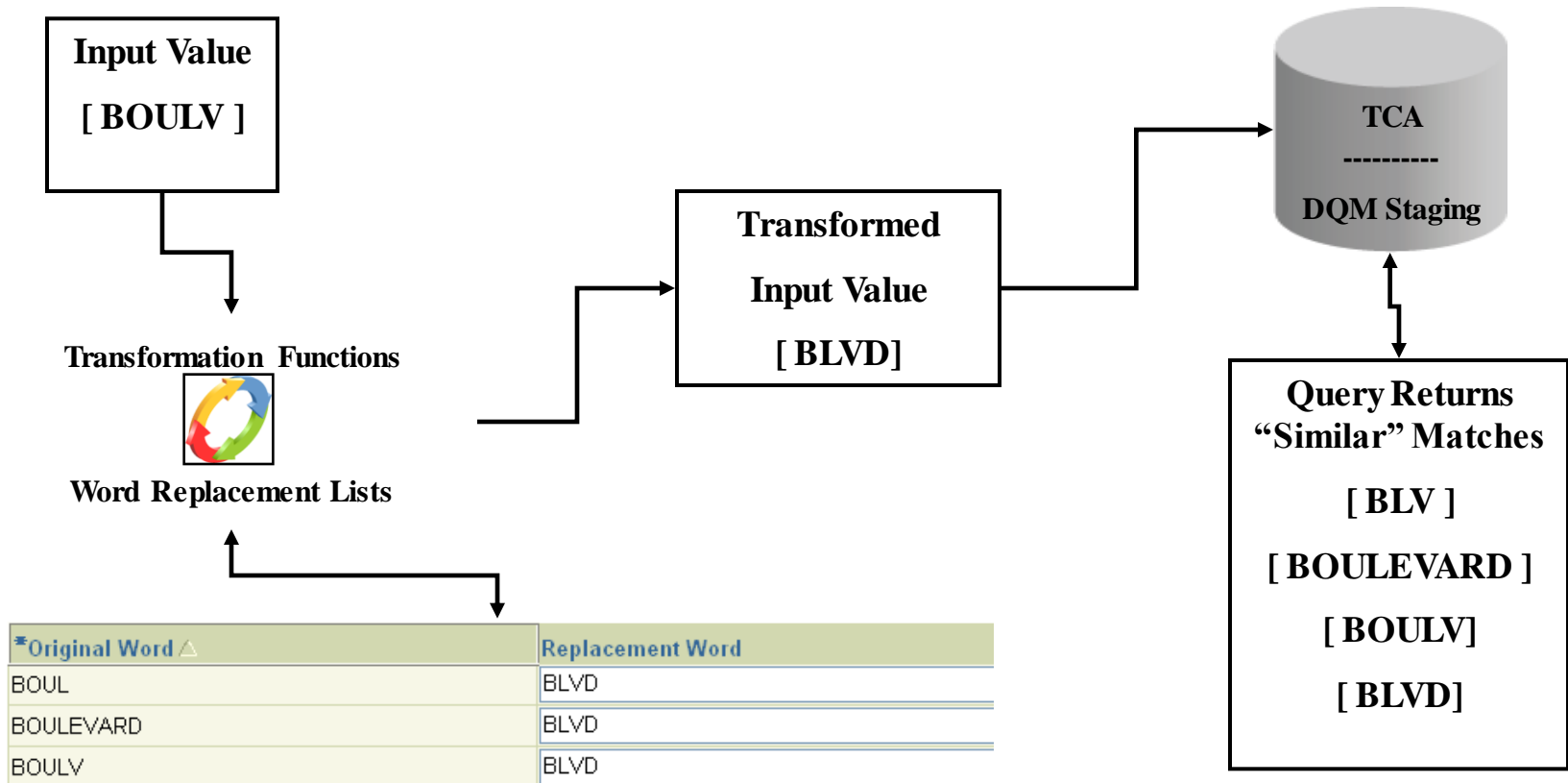
Search

◀ Previous 10 21-30 ▼ Next 10 ▶

*Original Word ▲	Replacement Word
BOTTOM	BTM
BOUL	BLVD
BOULEVARD	BLVD
BOULV	BLVD
BOX	PO
BRANCH	BR
BRDGE	BRG
BRIDGE	BRG
BROOK	BRK
BROOKS	BRK

◀ Previous 10 21-30 ▼ Next 10 ▶

DQM Example – Word Replacement

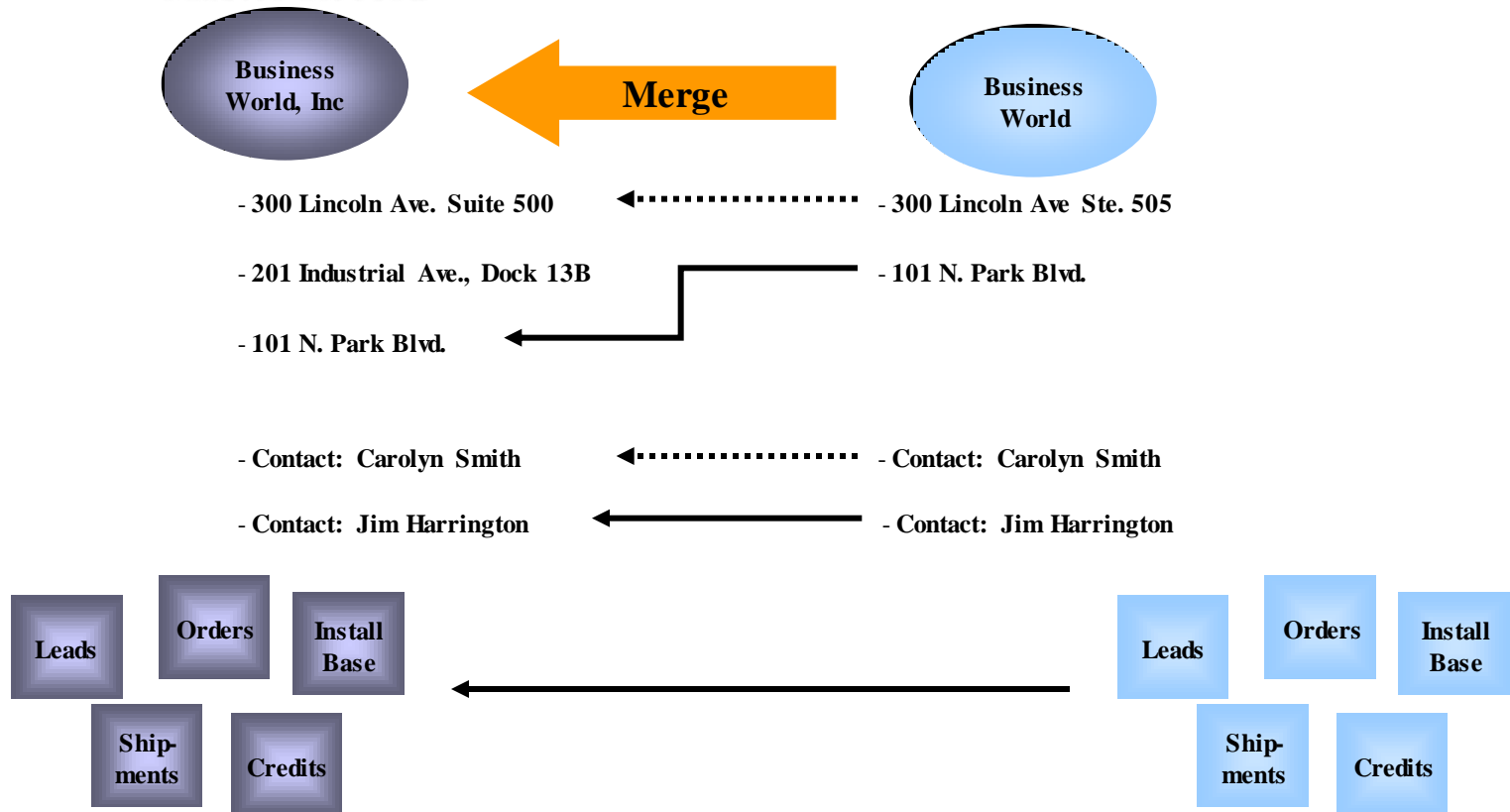


DQM – Party Merge

- Party and Account Merge
 - Resolve duplicate records using following entities
 - Parties
 - Party Sites
 - Contacts
 - Contact Points
 - Manual Merge vs. Automated Merge (Automerge)
 - All related records are automatically re-pointed to the surviving party
 - Account Merge can be independent of Party Merge

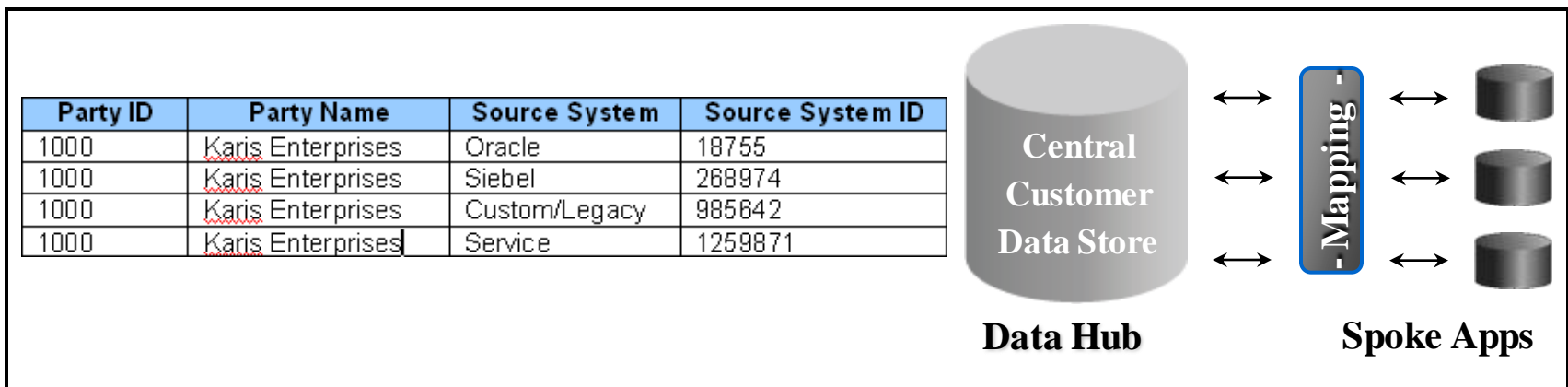
DQM – Party Merge

Master Record



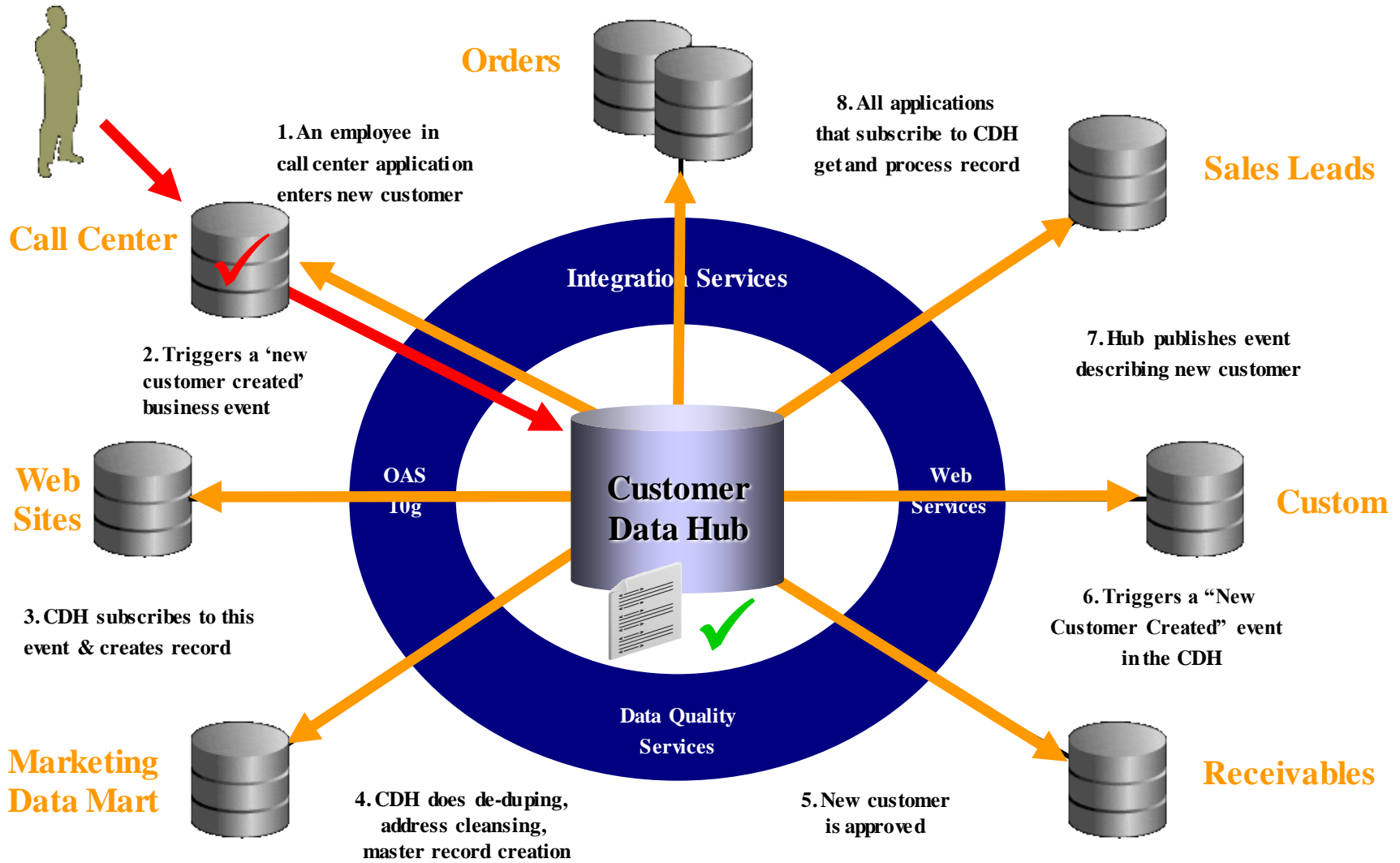
Customer Data Hub

- Centralized data repository for customer data
- Utilized to support Oracle EBS and external systems
- Data can be entered via Oracle EBS or bulk loaded
- Entire customer records, or individual attributes can be sourced from external systems
- Source System Management controls how attributes/records are fed to/from the Hub

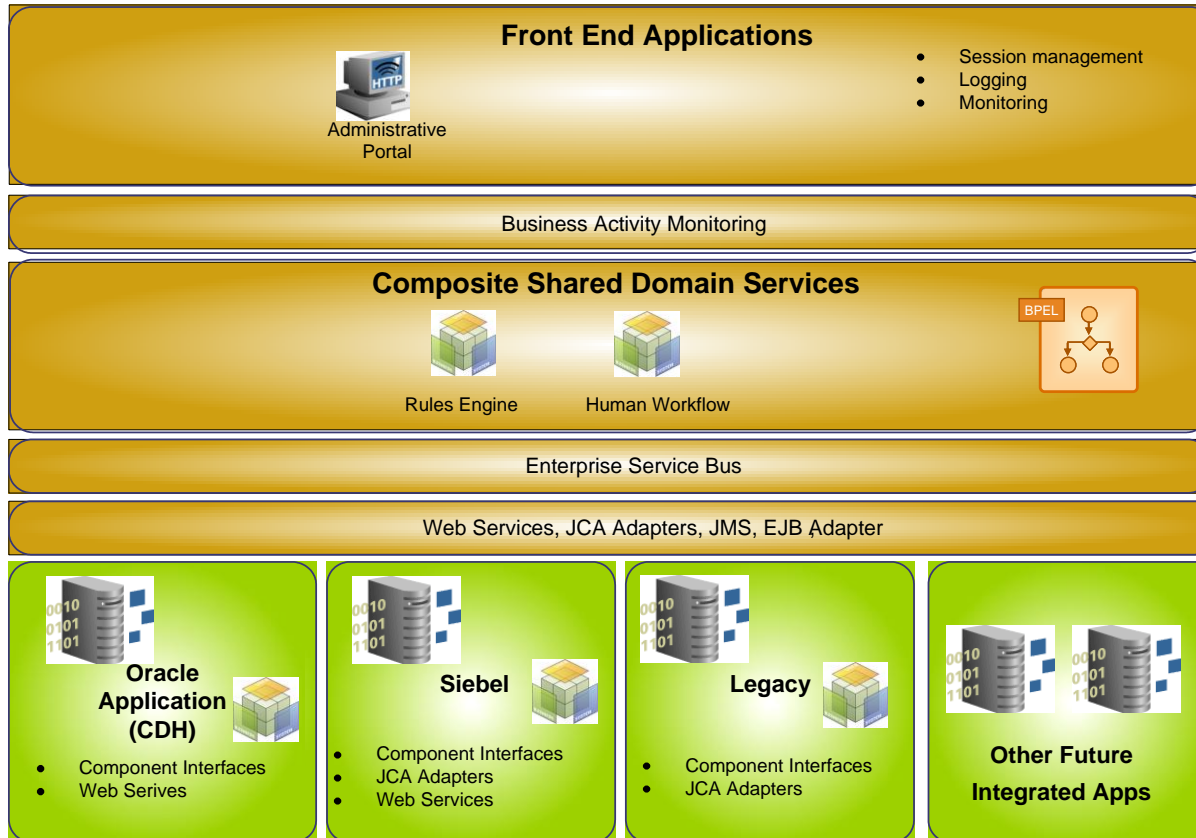


Customer Data Hub

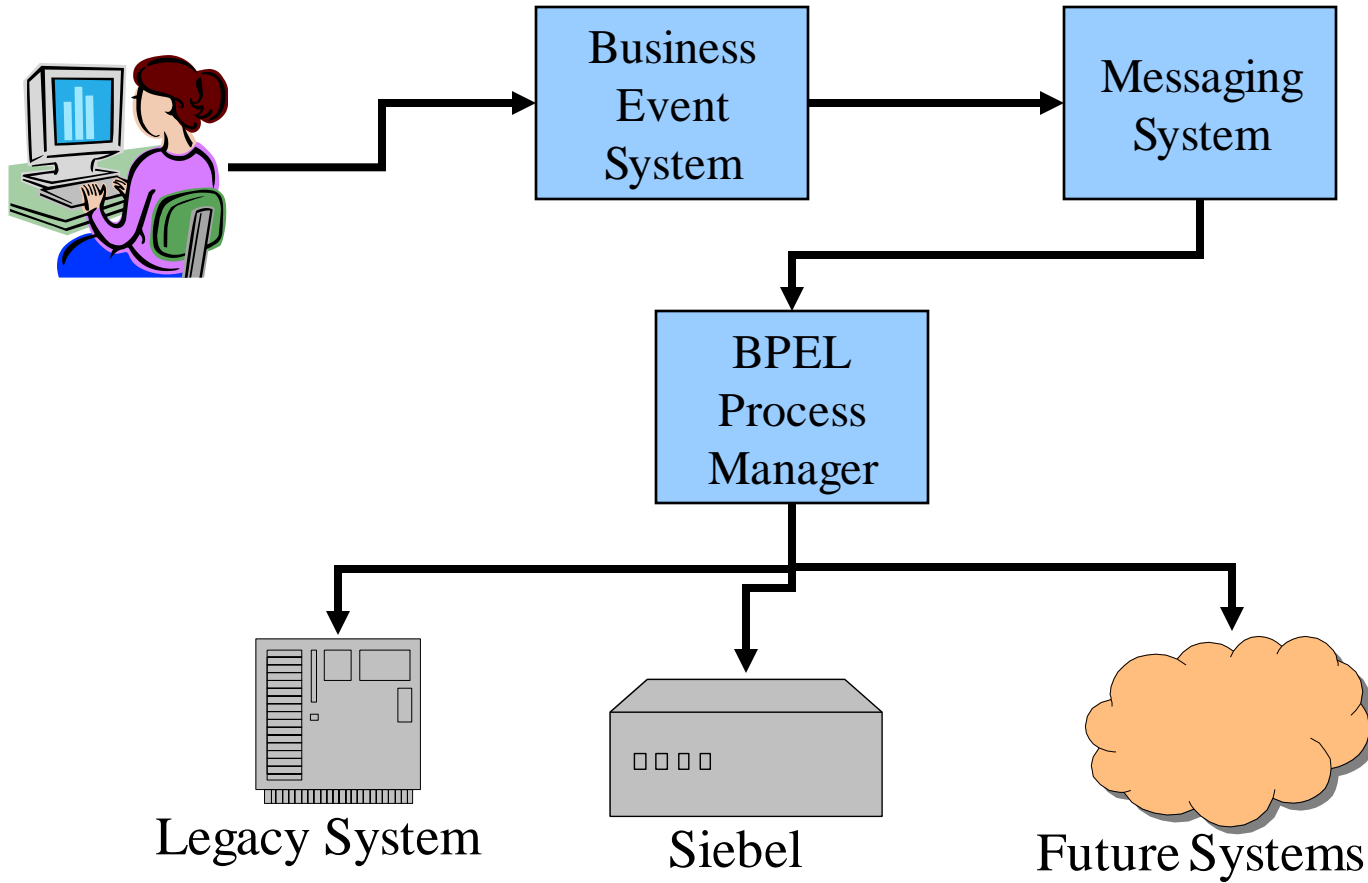
- Embedded Integration Services
 - 60+ Public PL/SQL & Java APIs
 - 60+ Standards-based Web Services
 - 80+ Business Event System Callouts
- Flexible Data Maintenance
 - Make updates in the Hub or spoke applications
- Middleware Agnostic
 - Use Oracle's Fusion Middleware or any other middleware application



Fusion Middleware - Components



Integration Process Overview



Business Event System

- Part of Oracle Event-Driven Architecture Suite (EDA Suite), provides the capabilities to easily create, process, analyze, and manage events with limited coding.
- Is a service component of Oracle Workflow
- Interested Agents “Subscribe” to the Business Events
- When an event occurs, the BES delivers event notifications to the Subscribed Agents.

BES Terminology

- Event: Allows an application to signal that something of importance has happened
- Subscription: An application or system registers interest in an event
- System: A local or external environment
- Communication Agent: A means to transport event information

E-Business Suite Events

- 11.5.10 has approximately 1000 seeded Business Events
- Users can subscribe to these events
- Users can create their own events
- View available events using the Workflow Event Manager responsibility

Messaging System

- Messaging Systems enable distributed applications to communicate with each other through reliable medium
- ORACLE Enterprise Messaging System (OEMS) uses a common interface JMS to access Oracle (Advance Queuing) and non Oracle messaging/queuing system (Tibco, WebSphereMQ, Sonic MQ)
- JMS is an interface, it requires an implementation to do the actual work (Oracle JMS is based on Oracle Advanced Queuing)

Oracle Advance Queuing (AQ)

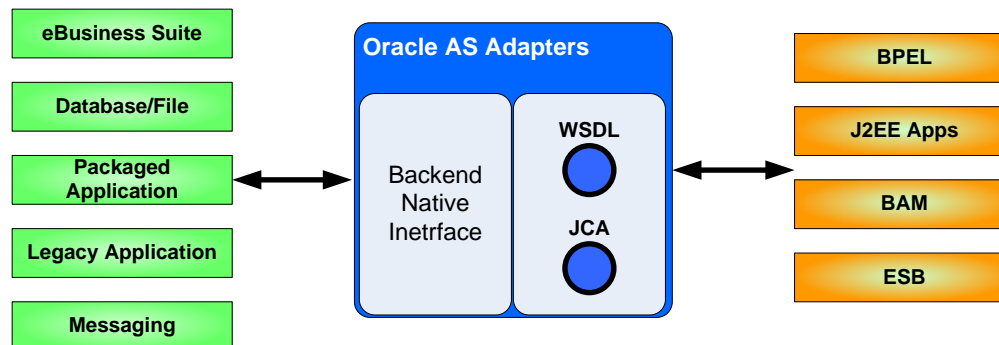
- AQ provides the message management functionality of the oracle database and provide asynchronous communication needed for application integration.
- AQ supports persistency, retention, & structured data types
- AQ supports Point-to-Point or publish-subscribe messaging
- AQ can be accessed from PL/SQL, Java, C

BPEL Process Manager

- Business Process Execution Language (BPEL).
- Part of the Oracle Fusion Middleware family of products,
- Enables enterprises to orchestrate disparate applications and Web services into business processes.
- Based on Industry standards which have been widely adopted by customers and leading vendors
- Reduces development time and costs—Together with SOA, it provides a modular way for IT departments to deploy new solutions, decrease maintenance costs, and quickly adapt to new business requirements
- Uses WSDL (Web Service Description Language). WSDL is an XML language that contains information about the interface, semantics and administration of a call to a Web service.

Oracle Adapters

- Oracle Application Server (AS) adapters are part of the Oracle Fusion Middleware family of products
- They provides standard based connectivity to integrate Oracle Application Server products with underlying application
- They provide bidirectional integration (e.g. Adapter for AQ supports both De-queue & En-queue operations)
- They comply with JCA (Java Connectivity Architecture) and expose the underlying application functionalities through Web Services



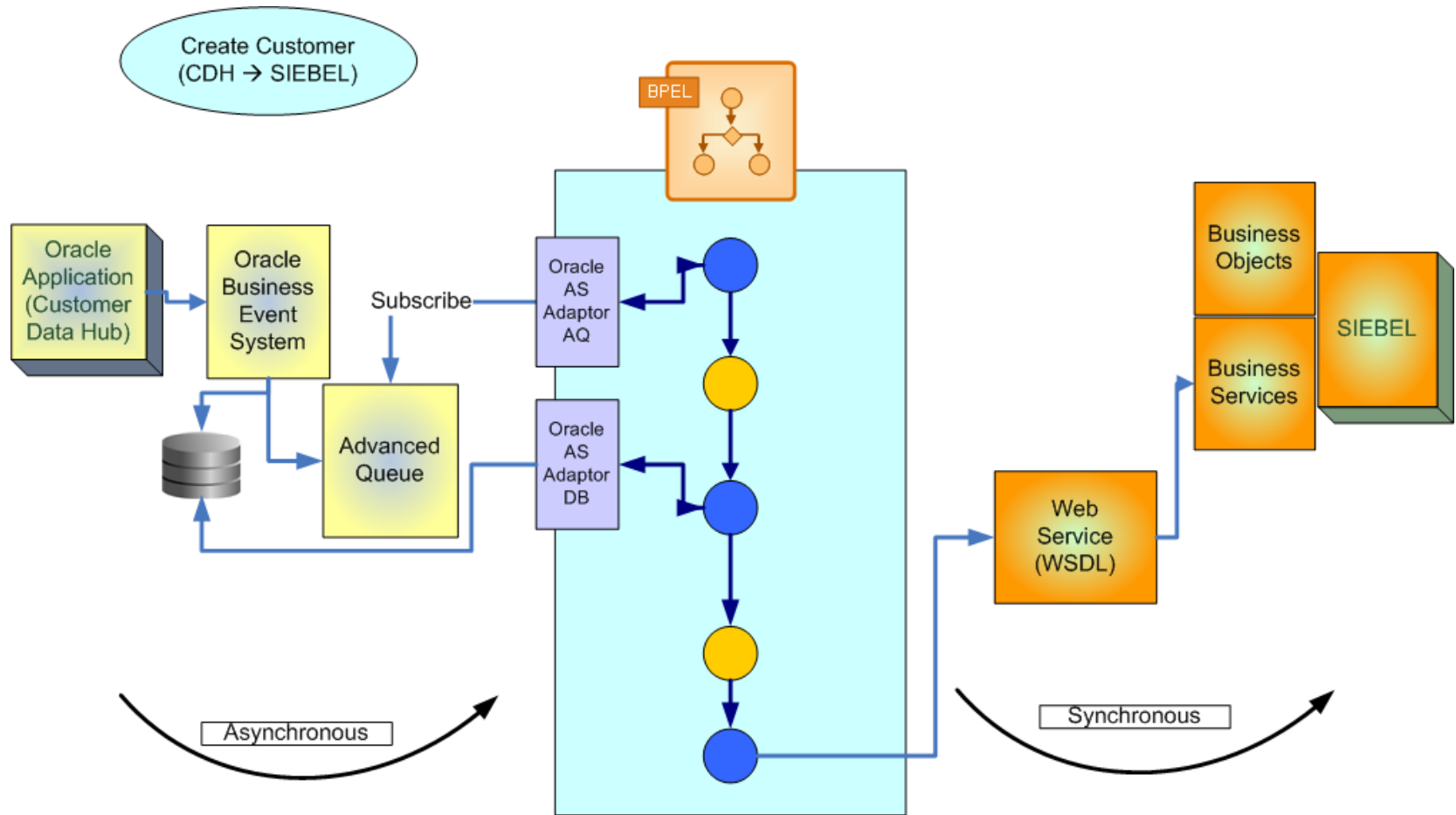
Custom Adapters

- Custom adapters can be developed within the same framework
- Utilize middleware to expose underlying packaged or legacy application functionality as a Web Service
 - Create Web Services using API provided by the packaged or legacy application
 - e.g. Use Java API for AS400 provided by IBM Toolbox for Java to create Web Services
 - Available application adapters that are based on JCA and Web Services standards

Oracle Fusion Middleware at Work

- Oracle AS adaptor for AQ will be configured to listen/subscribe to a particular eBusiness Suite event
- BPEL process starts when the particular event occurs,
- BPEL process retrieves key information associated with the event
- BPEL process invokes a Web Service (configured through Oracle AS Adapter for DB) to retrieve the entire message payload
- BPEL process invokes a Web Service (configure through Oracle AS Adaptor for Siebel) to send relative information/fields to Seibel (e.g. a new customer address)

Solution



Questions?

Acknowledgements

- Screen shots taken from Oracle Vision instance
- Oracle product details sourced in part from Oracle documentation