Oracle Database Cloud Service
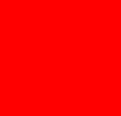
Marc Sewtz | Senior Software Development Manager | Oracle Application Express
Oracle America Inc.

The following is intended to outline Oracle's general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions.
The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

Cloud Computing

Characteristics

- **Ubiquity**
- **Elasticity**
- **No acquisition cost**
- **Low ongoing costs**
- **Simplicity**

ORACLE

PUBLIC CLOUD

ORACLE

Oracle Strategy

ORACLE®
PUBLIC CLOUD

Applications
Middleware
Database
Operating System
Virtual Machine
Servers
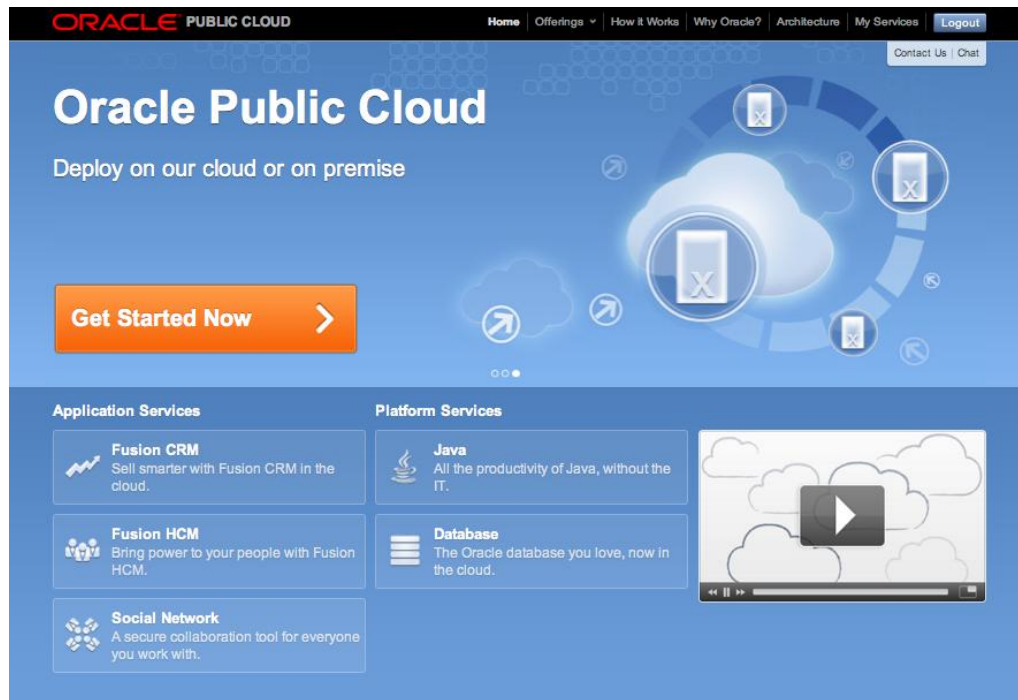**Storage**

Complete Stack

- Best-of-breed
- Open
- Vertical Integration
- Extreme Performance
- Engineered Systems

Complete Customer Choice

- On-premise
- Private Cloud
- Public Cloud
- Hybrid Cloud

ORACLE®

Oracle Public Cloud (cloud.oracle.com)
Application and Platform Services

- Public Cloud
  - Self Service
  - Monthly Subscription
  - Simple Pricing
- Services
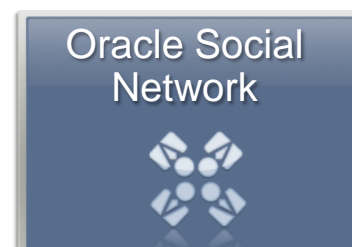 - Applications (SaaS)
  - Platform (PaaS)

Oracle Public Cloud

An Enterprise Cloud for your Business

ORACLE
PUBLIC CLOUD

Oracle Fusion CRM

Sell smarter with Fusion CRM in the cloud

Oracle Fusion HCM

Bring power to your people with Fusion HCM in the cloud

Oracle Social Network

A secure collaboration tool for everyone you work with
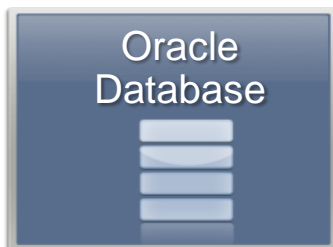
Oracle Database

The Oracle Database you love, now in the cloud

Oracle Java

All the productivity of Java, without the IT

ORACLE

Oracle Public Cloud
Shared Infrastructure Services

ORACLE
PUBLIC CLOUD

Security & Identity

Integration

Enterprise Repository

Enterprise Manager

Virus Scanning & White List

High Availability, Backup & Recovery

Cloud Support in IDEs

ORACLE

Database Cloud Service
Overview

- #1 database; in the cloud

- Rapid provisioning

- Simple pricing

- Easy to use and manage

- Access using Java,
  RESTful Web Services and Oracle Application Express

- Rapid cloud-based application development

- Packaged business productivity applications

Database Cloud Service

Key Value Propositions

Flexible Deployment
On-premise or in the cloud

Ease of Use
Simple Pricing,
Self Service Provisioning

Managed Service
HA, Secure, Scalable

Runtime Access
Oracle Application Express,
REST, Java

Identity Management
Comprehensive & integrated

Standards
Full Oracle SQL support

Service Console
Common & integrated

ORACLE
PUBLIC CLOUD

ORACLE

Database Cloud Service
Licensing

- 3 levels of capacity
  - Pricing model based on size & data transfer
  - Month-by-month charges
  - Includes full Oracle Support

- Free 30-day trials

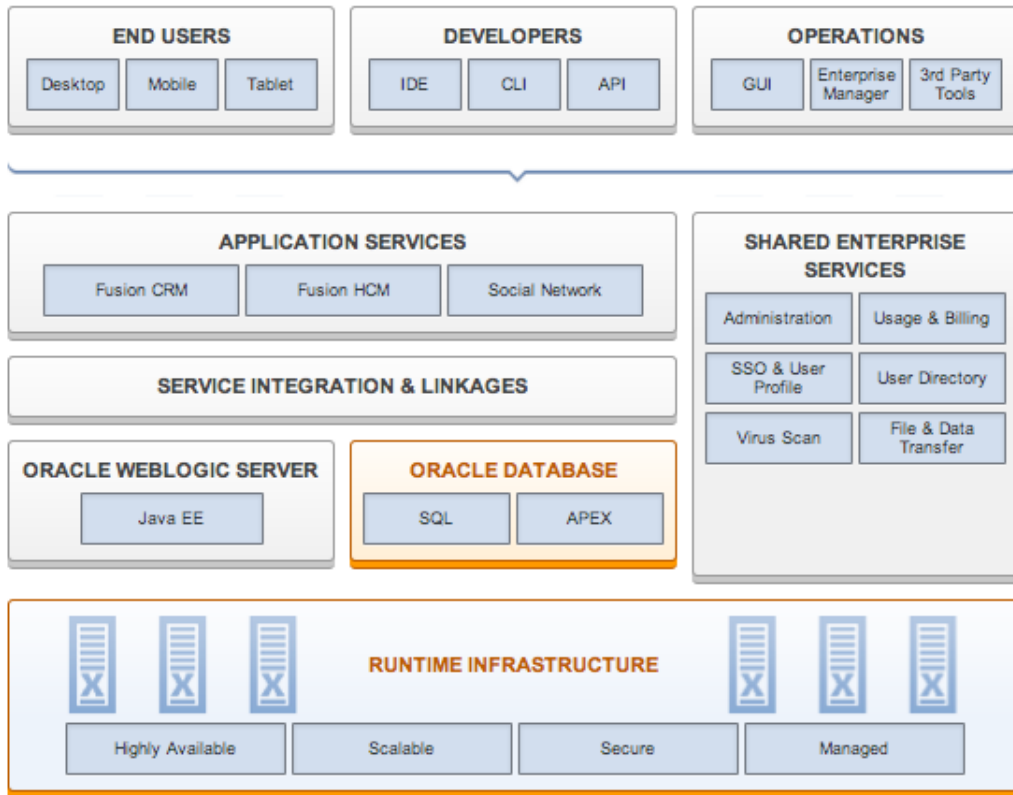- Complete flexibility for cloud and on-premise development and deployment

ORACLE

PUBLIC CLOUD

ORACLE

Database Cloud Service

Use Cases

- **Development**
  - APEX
  - Java (through Java Cloud Service)
  - Dynamic languages (with RESTful Web services)
- **Testing**
  - Bulk load tool included
- **Deployment**
- **Experimentation and training**

Oracle Database Cloud Service

- Database
  - Oracle 11g Release 2 EE
  - Highly Available
  - Secure
  - Managed Service

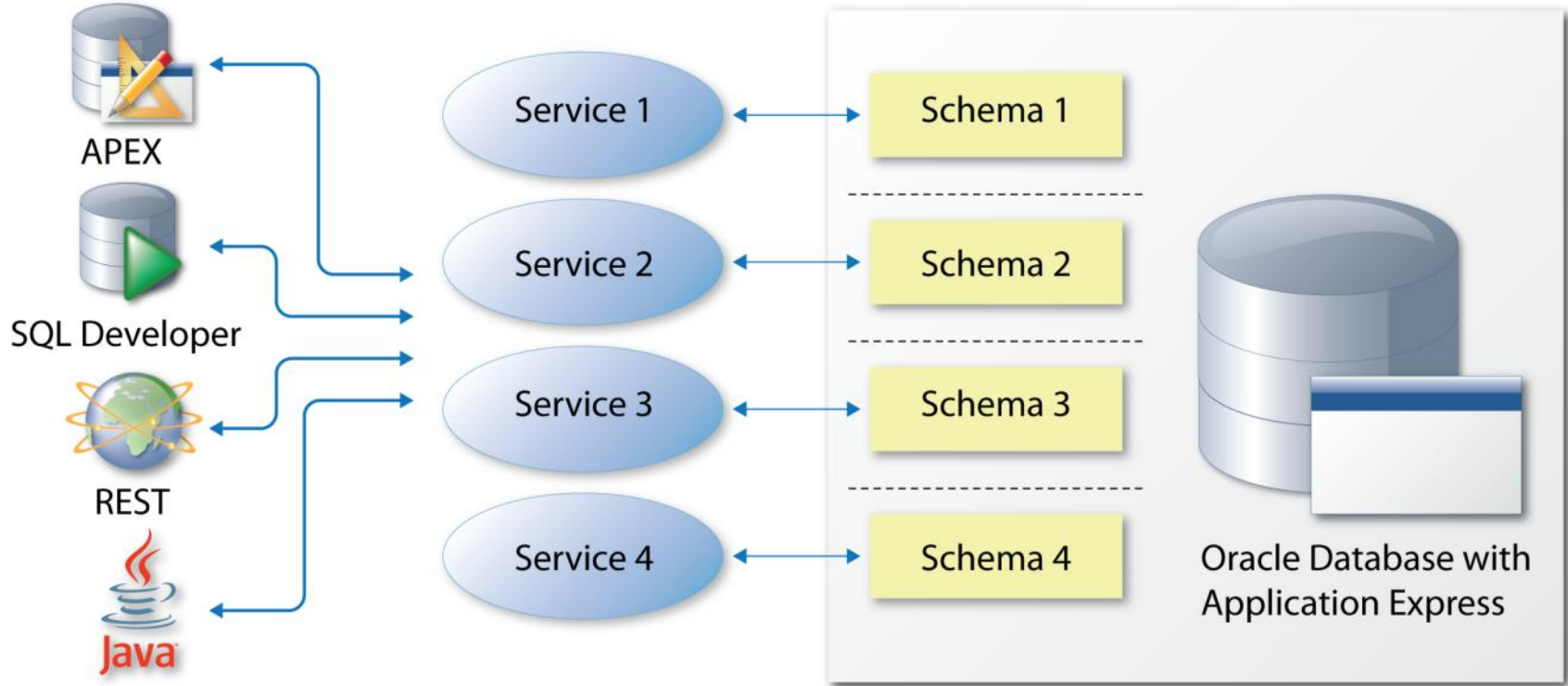- Data Access Methods
  - SQL & PL/SQL
  - Java Service
  - Oracle Application Express Apps
  - RESTful Web Services
  - Data Pump

- Developer Interfaces
  - Application Express Builder
  - Application Express SQL Workshop
  - SQL Developer

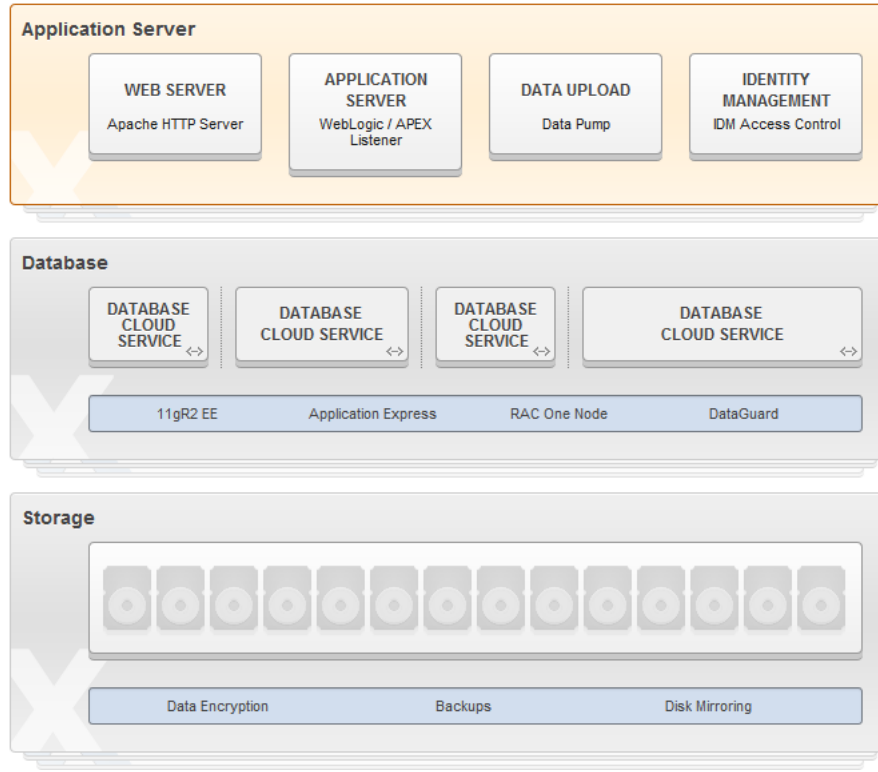ORACLE

Database Cloud Service

Schema Isolation

Database Cloud Service

Architecture

Database Cloud Service

Architecture

- ## Application Server
  - **Web Server:** HTTPS requests through Apache, directed to the Oracle WebLogic Application Servers for processing.
  - **Application Server:** WebLogic and APEX Listener handle requests for RESTful Web Services and APEX applications
  - **Data Upload:** Data Pump files can contain data and database object definitions, including stored procedures and triggers.
  - **Identity Management:** User credentials managed by Oracle Identify Management (IdM). Java and APEX applications can use IdM for authentication services.

Database Cloud Service
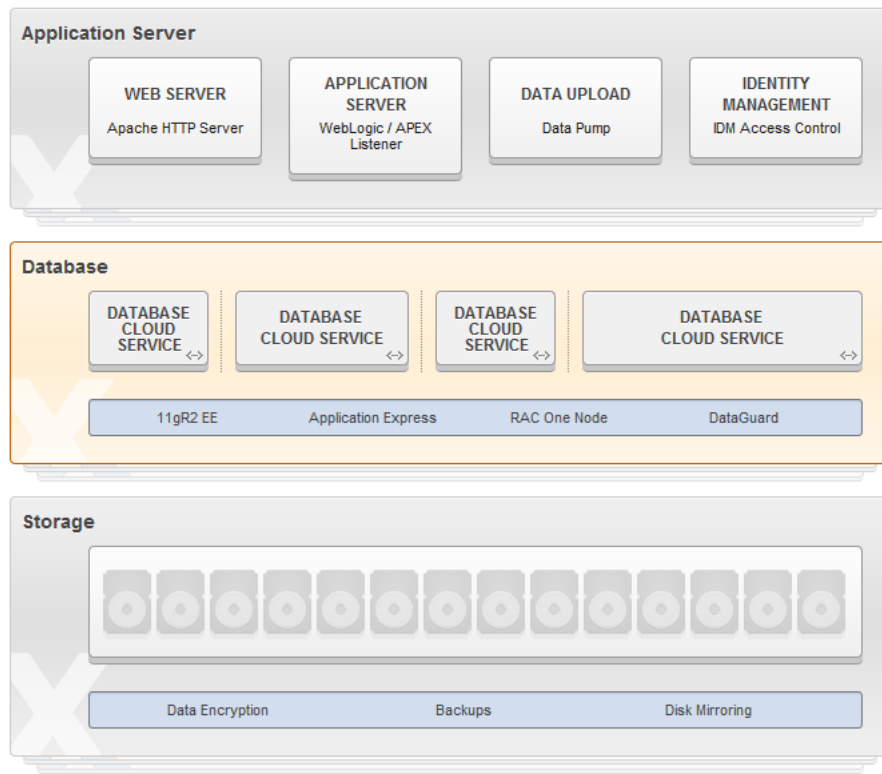
Architecture

Database Cloud Service

Architecture

- **Database**
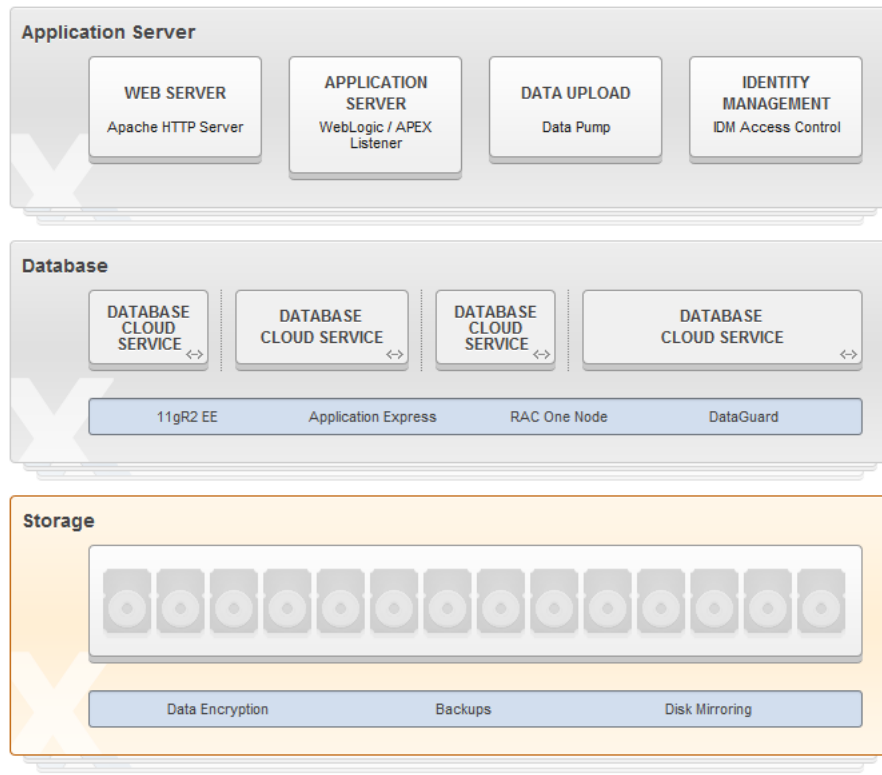 - Each Database Cloud Service uses a single Oracle database schema with expandable tablespace
  - The Oracle schema provides full isolation for each individual Database Cloud Service
  - Unlimited tables, rows, and columns spanning the full range of data types

Database Cloud Service

Architecture

Application Server

WEB SERVER	APPLICATION SERVER	DATA UPLOAD	IDENTITY MANAGEMENT
Apache HTTP Server	WebLogic / APEX Listener	Data Pump	IDM Access Control

Database

DATABASE CLOUD SERVICE ←→	DATABASE CLOUD SERVICE ←→	DATABASE CLOUD SERVICE ←→	DATABASE CLOUD SERVICE ←→

11gR2 EE	Application Express	RAC One Node	DataGuard

Storage

Data Encryption	Backups	Disk Mirroring

Database Cloud Service

Architecture

- **Storage**
  - Oracle Automatic Storage Management
    - Stripes data across multiple disks, for performance
    - Mirrors data for protection
    - Data is available online even if disks fails
  - Data is encrypted on disk and when backed up.
  - Regular backups are included as part of the service
  - Protection without management overhead

Database Cloud Service

Key Features

- **Components**
  - Database access through RESTful Web Services
    - Full power of SQL and PL/SQL
  - Application development and deployment with Oracle Application Express
  - Packaged business productivity applications
  - Tools and Utilities

Database Cloud Service

Key Features

- **RESTful Web services**
  - Interaction with data sources through the use of URIs
  - Standard method for accessing data in the Cloud
  - Wizards available to create services which implement any SQL statement or PL/SQL procedure
  - Data returned in JSON format by default
  - Additional formats available through use of PL/SQL

Database Cloud Service

Key Features

- **Oracle Application Express (APEX)**
  - Rapid Application Development (RAD)
  - Declaratively build Web 2.0 applications
  - Browser based for Development, Deployment and Use
  - Applications can be easily run on any Oracle platform: from the Oracle Database Cloud Service to in-house data centers to the Oracle Database XE installed on a laptop.

Database Cloud Service

Key Features

- **Packaged business productivity applications**
  - Service includes set of Business Productivity Applications
  - Installable with only a few clicks using a browser based interface
  - Production-ready applications include Project Management, Shared Calendars, Checklists, etc
  - Support for third-party applications, sharing same infrastructure and user pool

Database Cloud Service

Key Features

- **Productivity Apps**
  - Project Tracker
  - Checklist Manager
  - Customer Tracker
  - Group Calendar
  - Product Features
  - Bug Tracker
  - Asset Manager
  - Document Library
  - Survey Builder

- **Sample Code**
  - Mobile Sample App
  - Interactive Reports
  - Calendars
  - Charts
  - Data Loading
  - Dynamic Actions
  - Master-Detail Forms
  - Tabular Forms
  - Error Handling

ORACLE PUBLIC CLOUD

ORACLE

Database Cloud Service

Key Features

- **Tools and Utilities**
  - Tools for monitoring and management of available services
  - Manage users with Oracle's Identity Management solution
  - Browsers-based SQL Workshop to manage database objects, run SQL and SQL Scripts, develop PL/SQL code
  - SQL Developer to interact with data and perform data import/export via Oracle Data Pump

ORACLE
PUBLIC CLOUD

ORACLE

Database Cloud Service

Characteristics

- **Ubiquity**: access through any browser or platform
- **Elasticity**: several sizes, simple storage and transfer metrics
- **No acquisition cost**: no initial cost to sign up
- **Low ongoing costs**: a single subscription cost, includes standard maintenance and Oracle Support
- **Simplicity**: provision service in minutes, simple administration and monitoring interfaces

ORACLE®

D E M O N S T R A T I O N

Oracle Database Cloud Service

ORACLE®

Database Cloud Service

Key Benefits

- **Simplicity**
  - Simple to use and administer, simple to develop, simple pricing
- **Portability**
  - Easy to move to any platform that supports the Oracle database
- **Enterprise Strength**
  - Built on Oracle technology
- **Productivity**
  - Use IT resources more effectively

ORACLE

ORACLE
PUBLIC CLOUD