Journey to the center of the cloud
a pragmatic dialogue...

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Sales Consulting Director

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Cloud Architect
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Cloud at Customer
How do You Get the Benefits of Public Cloud Without Moving Data to a Public Cloud?
Cloud at Customer is Not a Private Cloud

<table>
<thead>
<tr>
<th>Cloud at Customer</th>
<th>Private Cloud</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscription-Based, Consumption-based Pricing</td>
<td>NO</td>
</tr>
<tr>
<td>Public Cloud Services Behind Your Firewall</td>
<td>NO</td>
</tr>
<tr>
<td>Compatibility with public Oracle Cloud</td>
<td>NO</td>
</tr>
<tr>
<td>Fully Managed Cloud by Oracle</td>
<td>NO</td>
</tr>
</tbody>
</table>
Cloud at Customer

Public Cloud

On-Premises Data Center

Same Cloud, Your Choice of Location

Oracle Cloud at Customer

Exadata Cloud at Customer

Big Data Cloud at Customer

SaaS

PaaS

IaaS

Comprehensively Managed by Oracle

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Platform as a Service
# Cloud: Platform-as-a-Service

<table>
<thead>
<tr>
<th>Content</th>
<th>Collaboration</th>
<th>Blockchain</th>
<th>IOT</th>
<th>AI &amp; ML</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Content" /></td>
<td><img src="image2" alt="Collaboration" /></td>
<td><img src="image3" alt="Blockchain" /></td>
<td><img src="image4" alt="IOT" /></td>
<td><img src="image5" alt="AI &amp; ML" /></td>
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</tbody>
</table>

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<tr>
<th>Monitoring</th>
<th>Management</th>
<th>Big Data</th>
<th>Streaming</th>
<th>Analytics</th>
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</thead>
<tbody>
<tr>
<td><img src="image6" alt="Monitoring" /></td>
<td><img src="image7" alt="Management" /></td>
<td><img src="image8" alt="Big Data" /></td>
<td><img src="image9" alt="Streaming" /></td>
<td><img src="image10" alt="Analytics" /></td>
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<tr>
<th>Data Integration</th>
<th>Service Integration</th>
<th>API Management</th>
<th>CASB &amp; Security</th>
<th>Virtual Assistant</th>
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</thead>
<tbody>
<tr>
<td><img src="image11" alt="Data Integration" /></td>
<td><img src="image12" alt="Service Integration" /></td>
<td><img src="image13" alt="API Management" /></td>
<td><img src="image14" alt="CASB &amp; Security" /></td>
<td><img src="image15" alt="Virtual Assistant" /></td>
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<tr>
<th>Data Management</th>
<th>Data Catalog</th>
<th>Application Development</th>
<th>Container Native &amp; ServerLess</th>
<th>Visual Dev.</th>
</tr>
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<tbody>
<tr>
<td><img src="image16" alt="Data Management" /></td>
<td><img src="image17" alt="Data Catalog" /></td>
<td><img src="image18" alt="Application Development" /></td>
<td><img src="image19" alt="Container Native &amp; ServerLess" /></td>
<td><img src="image20" alt="Visual Dev." /></td>
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</tbody>
</table>
Developement
## Evolution of Development and Deployment

<table>
<thead>
<tr>
<th>Development Process</th>
<th>Application Architecture</th>
<th>Deployment and Packaging</th>
<th>Application Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>~ 1980</td>
<td>Waterfall</td>
<td>Monolithic</td>
<td>Physical Server</td>
</tr>
<tr>
<td>~ 1990</td>
<td>Agile</td>
<td>N-Tier</td>
<td>Virtual Servers</td>
</tr>
<tr>
<td>~ 2000</td>
<td></td>
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</tr>
<tr>
<td>~ 2010</td>
<td>DevOps</td>
<td>Microservices</td>
<td>Containers</td>
</tr>
<tr>
<td>Now</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Oracle Cloud Platform: Application Development Services
Unique in Blending Traditional, Cloud Native and Low Code with End to End PaaS
Oracle Cloud Infrastructure and Kubernetes

Roll Your Own, Pre-Built Installer, Managed Service, Tools for Cloud@Customer
Working with OKE and OCIR on OCI

Oracle Managed

Customer Managed

Oracle Cloud Infrastructure

OCI Registry

OCI Container Engine for Kubernetes

Cluster Management

HA - 3 Masters/etcd across 3 ADs

OKE Dashboard in OCI Console

Customer’s OCI Account/Tenancy

VM based Clusters and Nodes

Bare Metal Clusters and Nodes

Encryption for Data in Transit (SSL) and at Rest
Transformational Technologies
A Simple Example of How Machine Learning Works

Do-it-yourself machine learning can be very difficult and expensive

Oracle strategy: make machine learning easy to put to work
AI, ML? Manage and Analyze All Your Data First

- **Architecturally, Many Options and Flexibility**

  - Boil down the Data Lake

  - **Big Data SQL / R**

  - **Object Store**
    - **NoSQL**
    - **ORACLE**
    - **kafka**

  - **SQL / R**

  - **Oracle Machine Learning**

  - **Data Miner**

  - **SQL Developer**

  - **R Studio**
The Journey to Autonomous Database

Steps to create a database

- 1980: 70 steps
- 1995: 48 steps
- 2007: 30 steps
- 2014: 15 steps
- 2018: 4 steps

Culmination of 40 years of automation
Into a fully managed, autonomous service
Eliminates manual labor tasks
Key Use Cases for Autonomous Data Warehouse Cloud

Connect and Integrate
- Varying data types
- Structured Data
- Unstructured Data

Store and Process
- Data marts / warehouses
- Sandboxes for data scientists
- Data lakes

Analyze and Visualize
- Quick and actionable business insights
- Focus on algorithms, not infrastructure
- Data available from structured and unstructured sources
Autonomous Completes the Journey

- Start new app dev project in minutes

Complete Infrastructure Automation + Complete Database Automation + Automated Data Center Operations and Machine Learning = ORACLE AUTONOMOUS DATABASE

World’s First Fully Autonomous Database: Load Data and Run queries
Real Transformational Power Arises from Combinations

- Sensing the physical world
- Machine Learning
- Internet of Things
- Blockchain

- Reasoning over data and making decisions
- Recording events and transactions in a secure and unalterable manner