



utoug training days
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utah oracle users group

Preview: Oracle Autonomous Database

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Safe Harbor Statement

The following is intended to outline our 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, timing and price of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation. Fees apply for new Database product offerings.

Larry Ellison Unveils the Autonomous Future on March 27

Register to watch live →



Top Actions



Try Cloud Free



Get Training



Trials and Downloads



Get Support



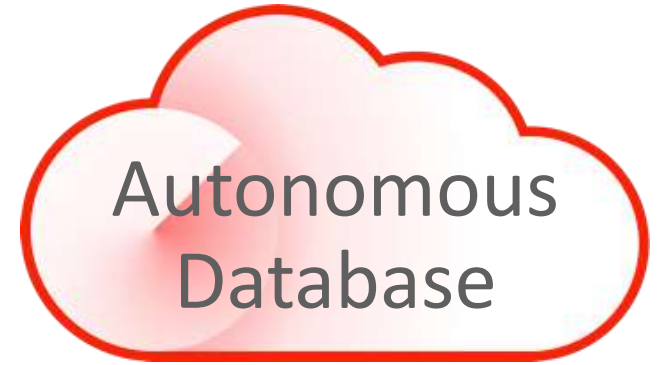
Develop on Oracle

More

Agenda

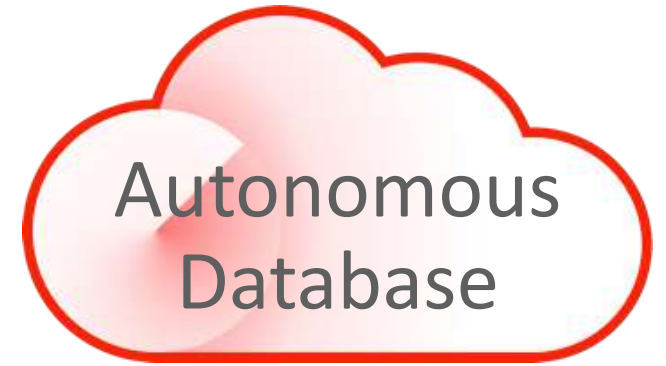
- 1 Oracle Autonomous Database
- 2 Demo

Oracle's **Vision** for Autonomous Database



- **Self-Driving**
 - User defines service levels, database makes them happen
- **Self-Securing**
 - Protection from both external attacks and malicious internal users
- **Self-Repairing**
 - Automated protection from all downtime

Ingredients of an Autonomous Database



- **Oracle Database 18c**
 - Dozens of automated database features
- +
- **Oracle Cloud infrastructure**
 - Single, standard platform as focus for self-driving automation
- +
- **Oracle Autonomous Database Cloud tooling**
 - Automation for optimal configuration for each workload

One Autonomous Database – Optimized by Use Case

2017

**Data
Warehousing**

2018

**Enterprise
OLTP,
Mixed
Workloads**

Now

**Departments,
Developers**

Oracle Autonomous Database

Autonomous Data Warehouse Cloud

- **Easy**
 - Fully-managed, pre-configured and optimized for DW workloads
 - **Simply load data and run**
 - No need to define indexes, create partitions, etc.
- **Fast**
 - Based on Exadata technology
- **Elastic**
 - Instant scaling of compute or storage with no downtime



Journey to Autonomous Database

- Oracle has been developing sophisticated **database automation** for decades

Oracle Database 9i, 10g

- Automatic Storage Management (ASM)
- Automatic Memory Management
- Automatic DB Diagnostic Monitor (ADDM)
- Automatic Workload Repository (AWR)
- Automatic Undo tablespaces
- Automatic Segment Space Management
- Automatic Statistics Gathering
- Automatic Standby Management (Broker)
- Automatic Query Rewrite

Oracle Database 11g, 12c

- Automatic SQL Tuning
- Automatic Workload Replay
- Automatic Capture of SQL Monitor
- Automatic Data Optimization
- Automatic Storage Indexes
- Automatic Columnar Cache
- Automatic Diagnostic Framework
- Automatic Refresh of Database Cloning
- Autonomous Health Framework

Automated –vs– Autonomous

Automated

- **Customer** must decide when/why to push buttons

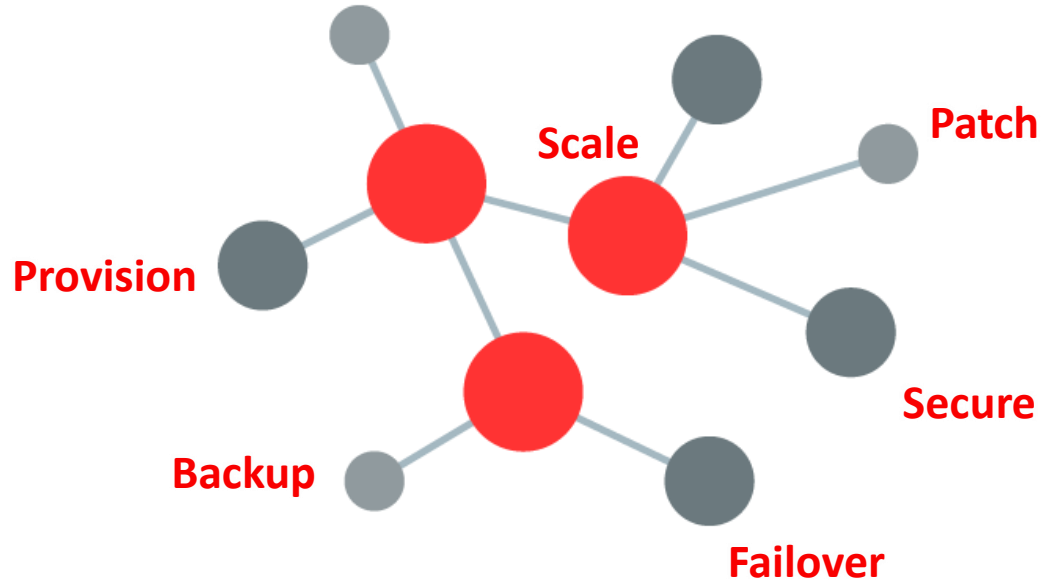


- **Customer** is on the hook when something goes wrong

Automated –vs– Autonomous

Autonomous

- **Customer** sets policies
- **Oracle** automates customer policy based on Machine Learning
- **Oracle** is on the hook when something goes wrong



Payoff is huge - eliminate generic tasks, reduce labor, reduce costs, reduce errors, while increasing security and availability

Autonomous Database Cloud

Key Differentiators – Lowest TCO, Easy, Fast and Elastic without downtime

- Unmatched price performance
 - Spend less time, pay less money, Exadata qualities in a service
- Autonomous operations via ML & policy controls
- Provision based on SLA, from basic to mission critical
 - Achieve an up time SLA of 99.995% including planned operations
- Exadata performance characteristics
- Zero downtime scaling of compute and storage



Getting Started with Autonomous Data Warehouse Cloud

- Provisioning requires only 5 simple questions:
 - Database name?
 - Which data center?
 - How many CPU's?
 - How many TB's?
 - Admin password?
- New service created in <30 seconds (regardless of size)
 - Ready to connect via sqlnet

ORACLE CLOUD My Services

Autonomous Data Warehouse Cloud
Create Service

Cancel Service Confirm Next

Service
Provide basic service instance information.

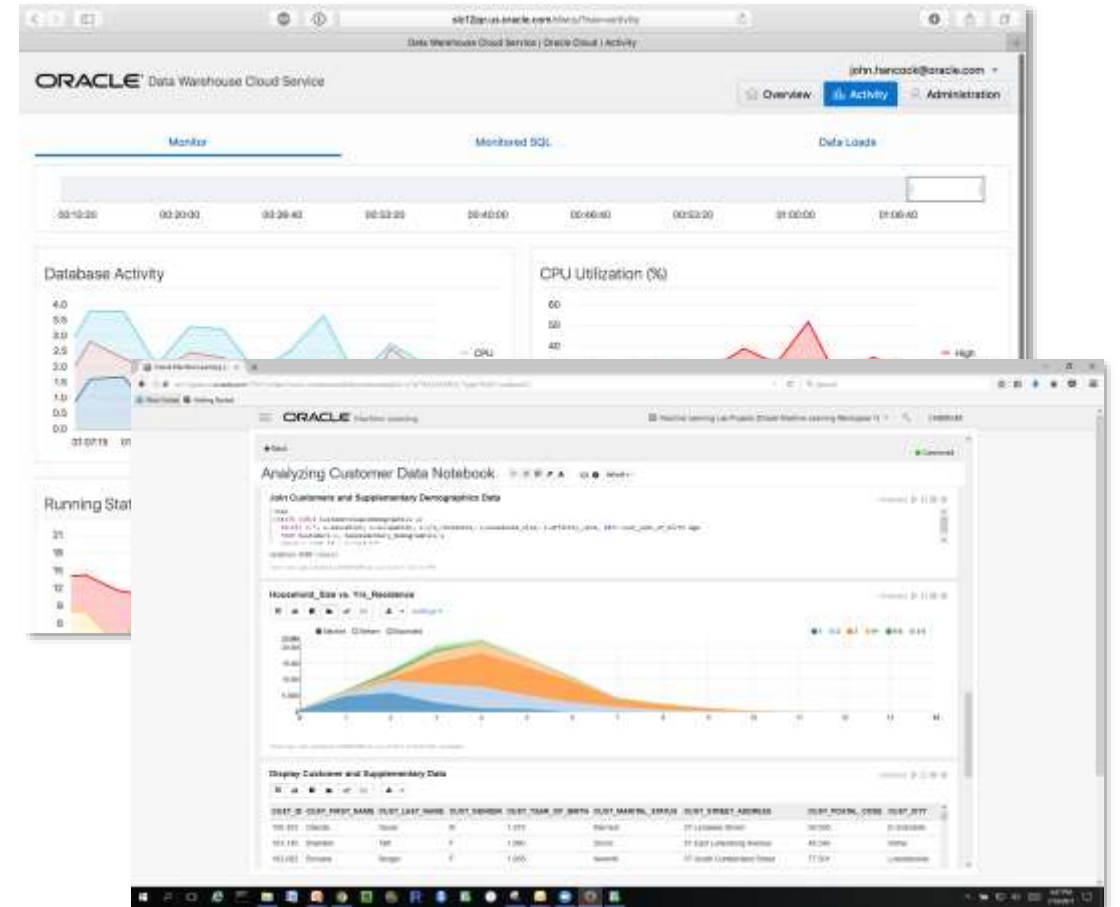
Details	Configuration
* Database Name	* Region
Description	* CPU Core Count (OCPU)
Notification Email	* Storage Capacity (TB)
	* Administrator Password
	* Confirm Administrator Password
	Object Store URL
	Object Store Username
	Object Store Password

What is not needed for Autonomous DW?

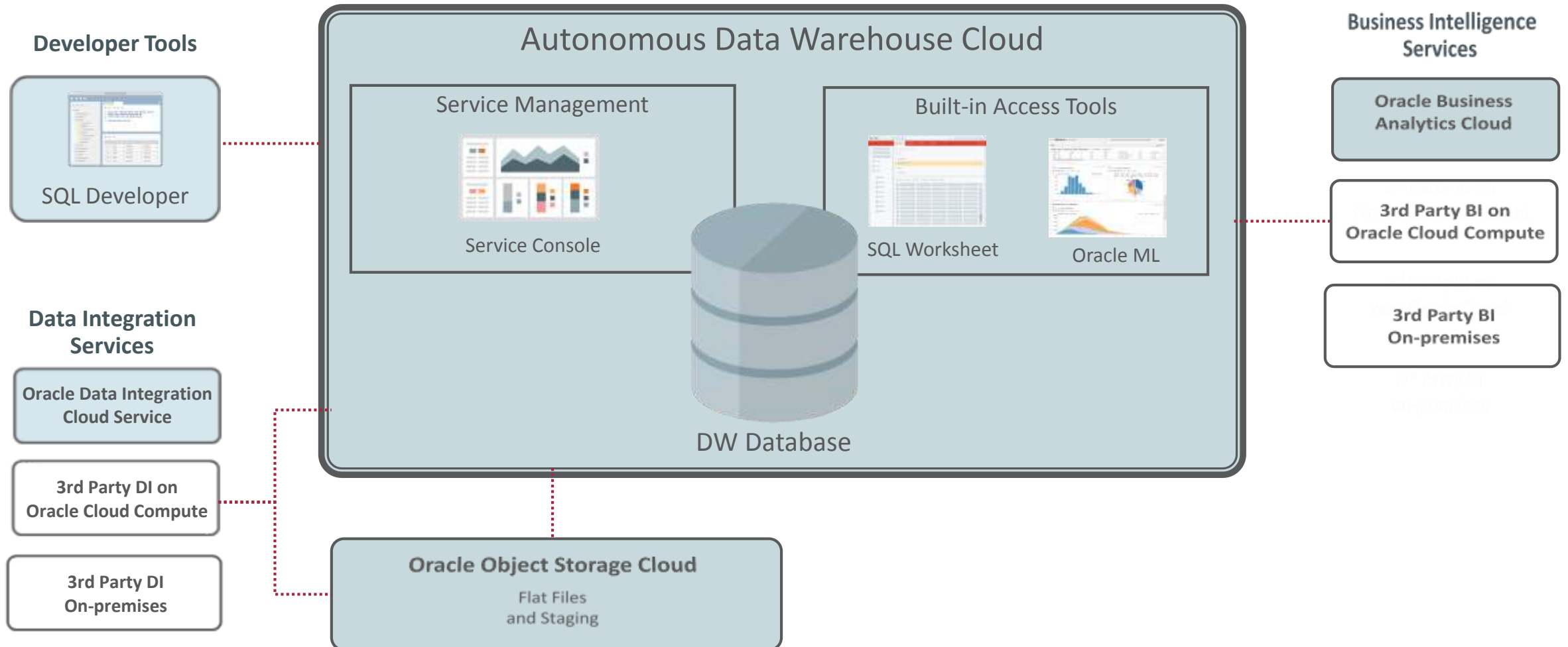
- No decisions for:
 - Details of the database software
 - Configuration of hardware
 - Characteristics of the database
 - Architecture for backups and availability
- All of this (and more) is automatically configured

Automated Tuning

- “Load and go”
 - Define tables, load data, run queries
 - No tuning
 - No special database expertise required
 - Good performance out of the box
- Query using any business analytics tool or cloud service
 - Built-in SQL notebook also included



Autonomous Data Warehouse Cloud: Architecture



Agenda

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To wrap up ...

- For more information on Autonomous Data Warehouse
 - <https://www.oracle.com/corporate/tomorrow/autonomous-database.html>
 - <http://www.oracle.com/us/products/database/autonomous-dw-cloud-ipaper-3938921.pdf>
 - <https://www.oracle.com/database/autonomous-database/guaranteed.html>
 - <https://www.oracle.com/database/autonomous-database/feature.html>
 - <https://www.oracle.com/database/autonomous-database/demo-series.html>



Integrated Cloud

Applications & Platform Services

ORACLE®