

Inovação com dados em nuvem

Faça uma análise de sentimentos sem
pagar nada por isso!

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08.06.2021



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1. Considerações iniciais e pré requisitos

A técnica demonstrada aqui no presente documento é apenas uma das que pode ser utilizada para criar um pipeline de dados. É possível utilizar outras técnicas dependendo do seu caso de uso. Para deixar o passo a passo de uma maneira única, padronizamos as telas em inglês.

Recursos usados:

OCI (all free tier)

- Banco de dados autonomous (adw)
 - APEX
 - ADW
 - OML

Local

- Navegador

Tópicos não cobertos:

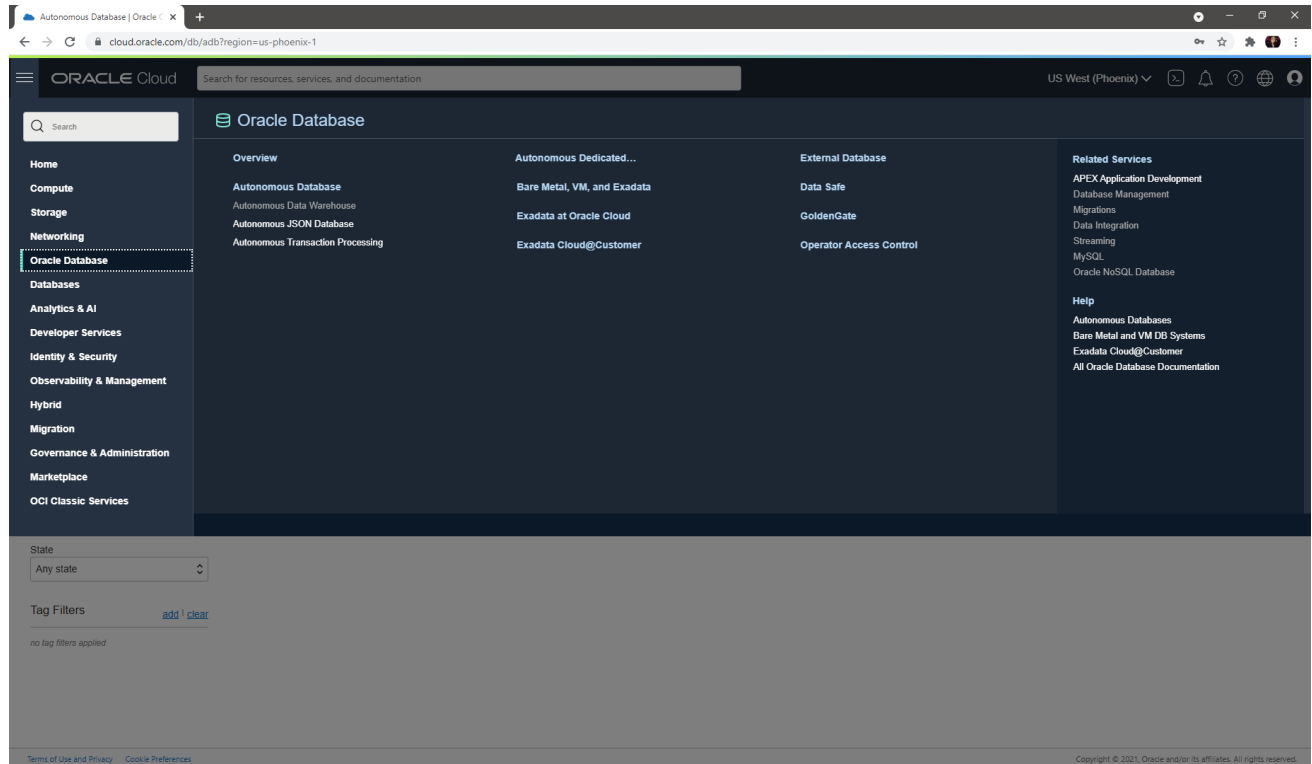
Configuração da máquina adicional para criação de funções

- Temos por pressuposto que você possui acesso a cloud não cobriremos o tópico de fundação e boas práticas na cloud como criação de compartments, etc.

2. Provisionar os recursos

2.1. Após fazer o login com sucesso no OCI

Visite o menu e localize a opção oracle database -> autonomous transaction processing



2.2. Banco de dados Autonomous

Nossos dados serão armazenados será construído em cima do autonomous database. Navegue no menu direito até autonomous database e clique em criar autonomous transaction processing.

Em autonomous database clique em “create autonomous transaction processing”:

Oracle Cloud Infrastructure

cloud.oracle.com/db/adw/create?region=us-phoenix-1

ORACLE Cloud Search for resources, services, and documentation

US West (Phoenix) Help

Create Autonomous Database

Provide basic information for the Autonomous Database

Compartment
data

Display name
alp

Database name
alp

Choose a workload type

Data Warehouse
Built for decision support and data warehouse workloads. Fast queries over large volumes of data.

Transaction Processing
Built for transactional workloads. High concurrency for short-running queries and transactions. ✓

JSON
Built for JSON-centric application development. Developer-friendly document APIs and native JSON storage.

APEX
Built for Oracle APEX application development. Creation and deployment of low-code applications, with database included.

Choose a deployment type

Shared Infrastructure
Run Autonomous Database on shared Exadata infrastructure. ✓

Dedicated Infrastructure
Run Autonomous Database on dedicated Exadata infrastructure.

Configure the database

Always Free ⓘ
☒ Show only Always Free configuration options

Create Autonomous Database Cancel

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Oracle Cloud Infrastructure

cloud.oracle.com/db/adw/create?region=us-phoenix-1

ORACLE Cloud Search for resources, services, and documentation

US West (Phoenix) Help

Create Autonomous Database

Always Free ⓘ
☒ Show only Always Free configuration options

ⓘ If your Always Free Autonomous Database has no activity for 7 consecutive days, the database will be automatically stopped. Your data will be preserved, and you can restart the database to continue using it. If the database remains stopped for 3 months, it will be reclaimed. [Learn more](#)

Choose database version
21c

ⓘ Free Tier Autonomous Databases using Oracle Database 21c cannot currently be upgraded to paid instances.

CPU count Read-Only
1

Storage (TB) Read-Only
0.02

Auto scaling
☐ Allows system to use up to three times the provisioned number of cores as the workload increases. [Learn more](#)

Create administrator credentials ⓘ

Username Read-Only
ADMIN

Password

Confirm password

Create Autonomous Database Cancel

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Oracle Cloud Infrastructure

cloud.oracle.com/db/adw/create?region=us-phoenix-1

ORACLE Cloud

Search for resources, services, and documentation

US West (Phoenix)

Create Autonomous Database

Help

Password

Confirm password

Choose network access

Access Type

Secure access from everywhere
Restrict access to specified IP addresses and VCNs. ✓

Private endpoint access only
Restrict access to a private endpoint within an OCI VCN.

The virtual cloud network option is not available for OCI Free Tier accounts.

☐ Configure access control rules ⓘ

Choose a license type

Bring Your Own License (BYOL)
Bring my organization's Oracle Database software licenses to the Database service.
[Learn more](#)

License Included
Subscribe to new Oracle Database software licenses and the Database service. ✓

Provide up to 10 maintenance contacts

Add Contact

Show Advanced Options

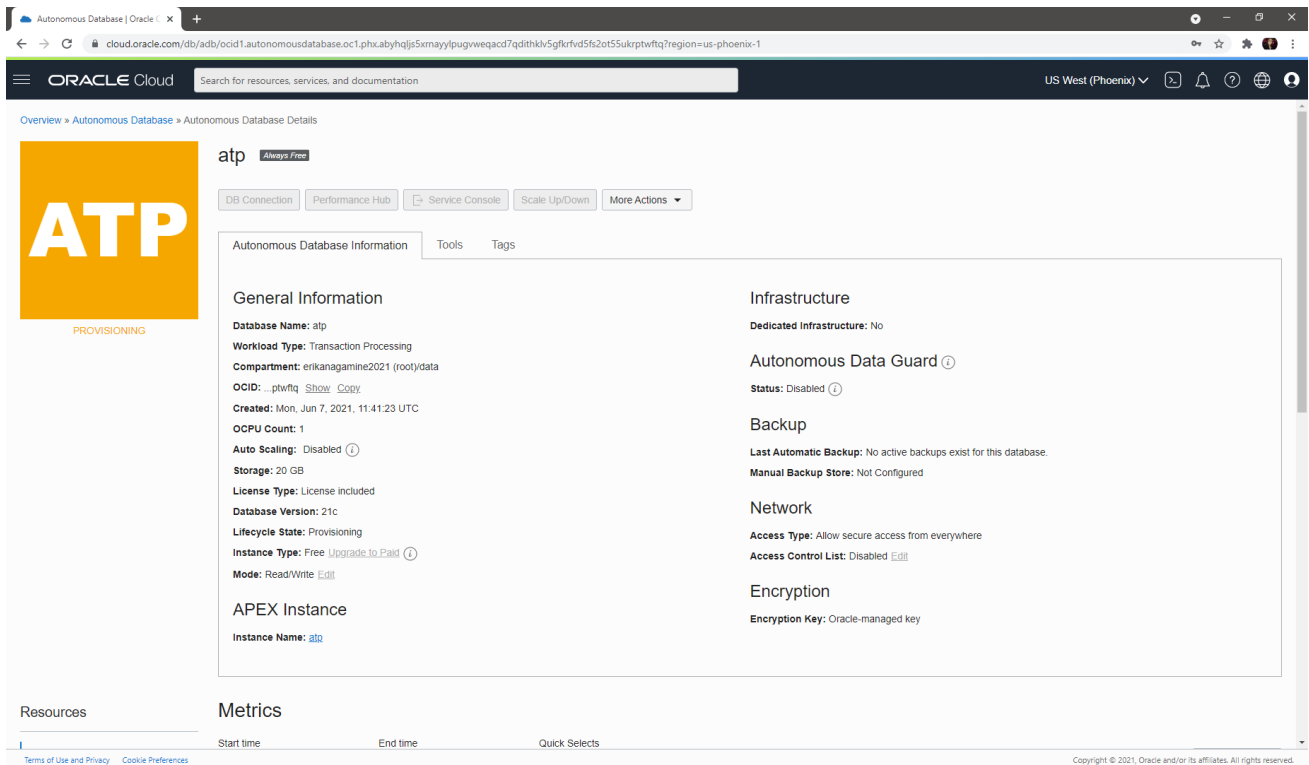
Create Autonomous Database Cancel

Terms of Use and Privacy Cookie Preferences

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Preencha com as seguintes informações (note que é possível provisionar o autonomous como Always free:

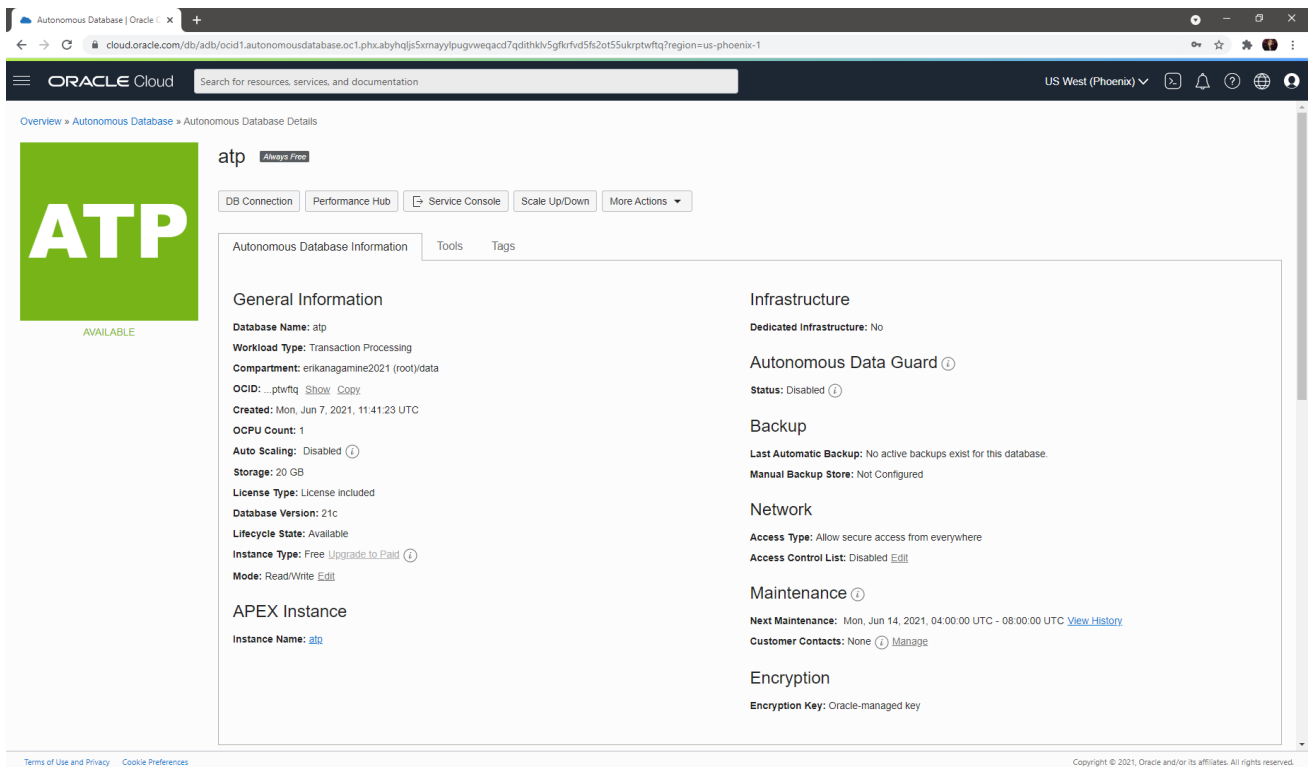
- Compartment: se você criou um compartment, selecione o responsável:
- Display name: atp
- Database name: atp
- Database version: 21c
- Workload type: transaction processing
- User password: coloque uma de sua escolha
- License type: Byol (se você selecionou a opção Always free do autonomous mantenha como License Included)



The screenshot shows the Oracle Cloud console for an Autonomous Database (ATP) instance named 'atp'. The instance is in the 'Provisioning' state, indicated by an orange 'ATP' logo and the word 'PROVISIONING' below it. The console displays various tabs and sections:

- General Information:**
 - Database Name: atp
 - Workload Type: Transaction Processing
 - Compartment: erikanagamine2021 (root)/data
 - OCID: ...ptwftq [Show](#) [Copy](#)
 - Created: Mon, Jun 7, 2021, 11:41:23 UTC
 - OCPU Count: 1
 - Auto Scaling: Disabled [ⓘ](#)
 - Storage: 20 GB
 - License Type: License included
 - Database Version: 21c
 - Lifecycle State: Provisioning
 - Instance Type: Free [Upgrade to Paid](#) [ⓘ](#)
 - Mode: Read/Write [Edit](#)
- Infrastructure:**
 - Dedicated Infrastructure: No
- Autonomous Data Guard:**
 - Status: Disabled [ⓘ](#)
- Backup:**
 - Last Automatic Backup: No active backups exist for this database.
 - Manual Backup Store: Not Configured
- Network:**
 - Access Type: Allow secure access from everywhere
 - Access Control List: Disabled [Edit](#)
- Encryption:**
 - Encryption Key: Oracle-managed key
- APEX Instance:**
 - Instance Name: [atp](#)

At the bottom, there are sections for 'Resources' and 'Metrics'.



The screenshot shows the Oracle Cloud console for the same Autonomous Database (ATP) instance named 'atp'. The instance is now in the 'Available' state, indicated by a green 'ATP' logo and the word 'AVAILABLE' below it. The console displays various tabs and sections:

- General Information:**
 - Database Name: atp
 - Workload Type: Transaction Processing
 - Compartment: erikanagamine2021 (root)/data
 - OCID: ...ptwftq [Show](#) [Copy](#)
 - Created: Mon, Jun 7, 2021, 11:41:23 UTC
 - OCPU Count: 1
 - Auto Scaling: Disabled [ⓘ](#)
 - Storage: 20 GB
 - License Type: License included
 - Database Version: 21c
 - Lifecycle State: Available
 - Instance Type: Free [Upgrade to Paid](#) [ⓘ](#)
 - Mode: Read/Write [Edit](#)
- Infrastructure:**
 - Dedicated Infrastructure: No
- Autonomous Data Guard:**
 - Status: Disabled [ⓘ](#)
- Backup:**
 - Last Automatic Backup: No active backups exist for this database.
 - Manual Backup Store: Not Configured
- Network:**
 - Access Type: Allow secure access from everywhere
 - Access Control List: Disabled [Edit](#)
- Maintenance:**
 - Next Maintenance: Mon, Jun 14, 2021, 04:00:00 UTC - 08:00:00 UTC [View History](#)
 - Customer Contacts: None [ⓘ](#) [Manage](#)
- Encryption:**
 - Encryption Key: Oracle-managed key
- APEX Instance:**
 - Instance Name: [atp](#)

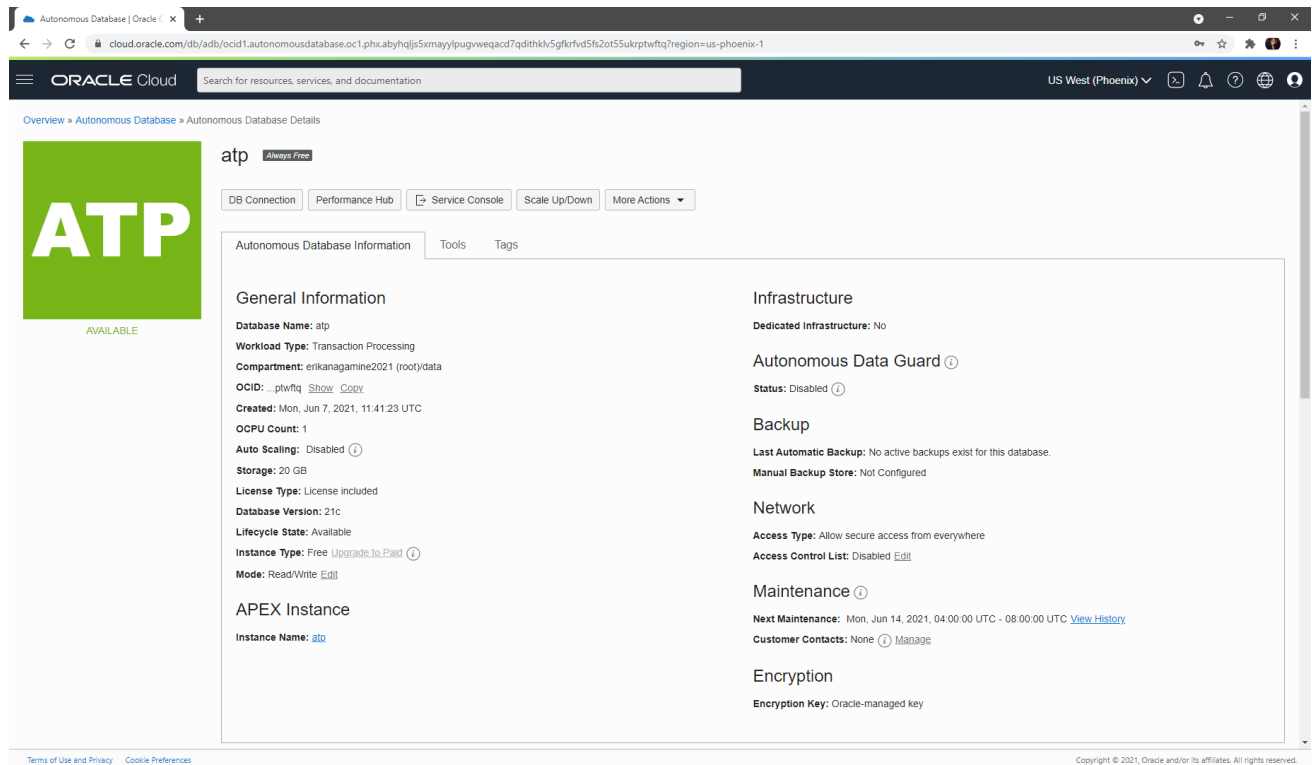
At the bottom, there are sections for 'Terms of Use and Privacy' and 'Cookie Preferences'.

3. Configurando seu ambiente

Agora que o stack está provisionado, vamos integrar os recursos.

3.1. Criando nosso site no Apex

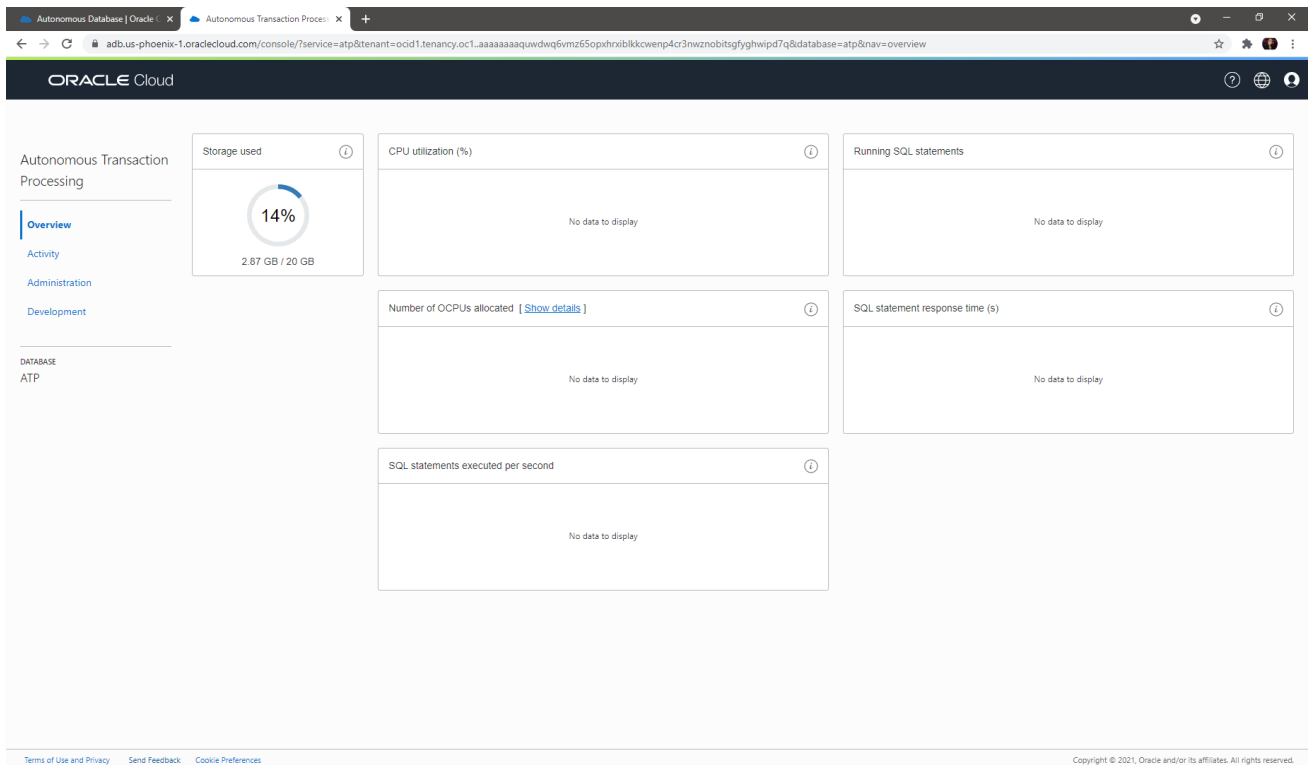
O primeiro passo é criar nosso site. Vamos fazer isso tudo através do APEX já provisionado. Vamos pegar a informação necessária para este step, vá no autonomous criado e clique em service console:



The screenshot displays the Oracle Cloud console interface for an Autonomous Database (ATP) instance. The top navigation bar shows the Oracle Cloud logo and a search bar. The main content area is titled "atp" and includes a "Service Console" button. The "Autonomous Database Information" tab is active, showing details such as Database Name, Workload Type, Compartment, OCID, Created date, OCPU Count, Auto Scaling, Storage, License Type, Database Version, Lifecycle State, Instance Type, and Mode. The "APEX Instance" section shows the Instance Name. The right sidebar contains sections for Infrastructure, Autonomous Data Guard, Backup, Network, Maintenance, and Encryption.

General Information	Infrastructure
Database Name: atp	Dedicated Infrastructure: No
Workload Type: Transaction Processing	Autonomous Data Guard: Status: Disabled
Compartment: erikanagamine2021 (root)/data	Backup: Last Automatic Backup: No active backups exist for this database. Manual Backup Store: Not Configured
OCID: ...ptwfrq Show Copy	Network: Access Type: Allow secure access from everywhere. Access Control List: Disabled
Created: Mon, Jun 7, 2021, 11:41:23 UTC	Maintenance: Next Maintenance: Mon, Jun 14, 2021, 04:00:00 UTC - 08:00:00 UTC View History
OCPU Count: 1	Encryption: Encryption Key: Oracle-managed key
Auto Scaling: Disabled	
Storage: 20 GB	
License Type: License included	
Database Version: 21c	
Lifecycle State: Available	
Instance Type: Free Upgrade to Paid	
Mode: Read/Write Edit	

Dentro da service console, navegue em development:



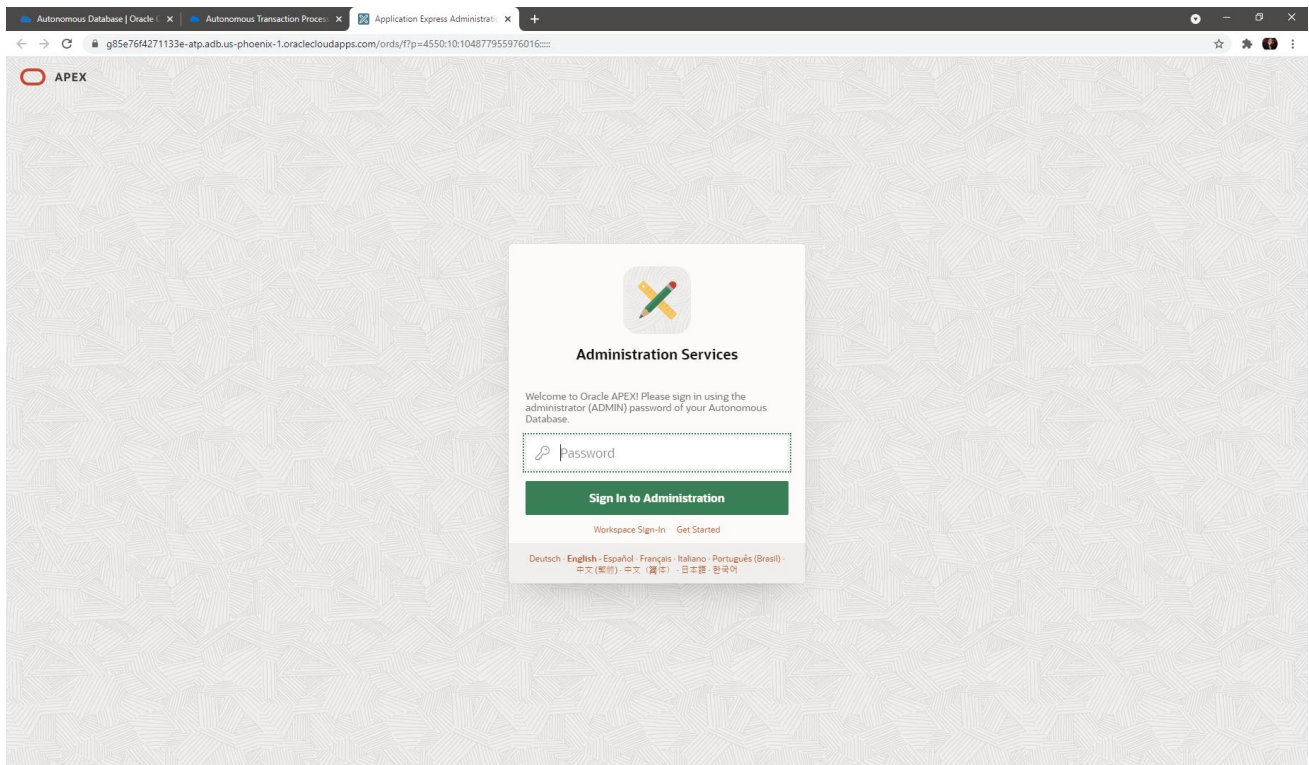
Dentro de development, clique em Apex:

The screenshot shows the Oracle Cloud console for the same ATP instance, but with the "Development" tab selected in the left sidebar. The main content area displays several development resources:

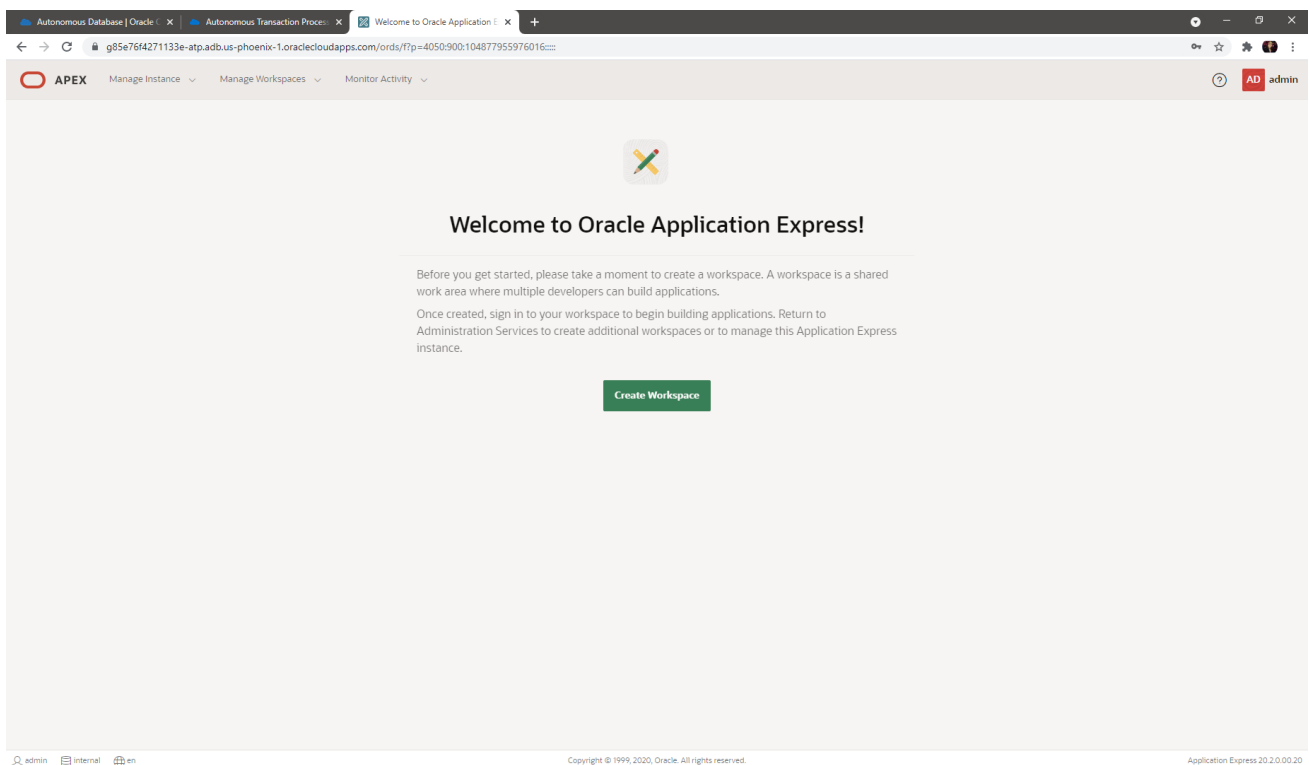
- Download Oracle Instant Client:** A link to download the Oracle Instant Client, which is a free, light-weight set of tools, libraries and SDKs for building and connecting applications.
- Download SODA Drivers:** A link to download SODA Drivers, which are a set of APIs for using collections of JSON documents stored in Oracle Database.
- Oracle APEX:** A link to Oracle APEX, a low code application development framework for building and deploying world-class data centric applications.
- Database Actions:** A link to Database Actions, which allows users to load, explore, transform, model, and catalog their data.
- Oracle Machine Learning Notebooks:** A link to Oracle Machine Learning (OML) Notebooks, which are a collaborative, Apache Zeppelin-based user interface for data scientists and broader SQL users of Autonomous Database.
- RESTful Services and SODA:** A link to RESTful Services and SODA, which provides HTTPS interfaces for working with the contents of your Oracle Database in one or more REST enabled schemas.

At the bottom of the page, there are links for "Terms of Use and Privacy", "Send Feedback", and "Cookie Preferences", along with a copyright notice: "Copyright © 2021, Oracle and/or its affiliates. All rights reserved."

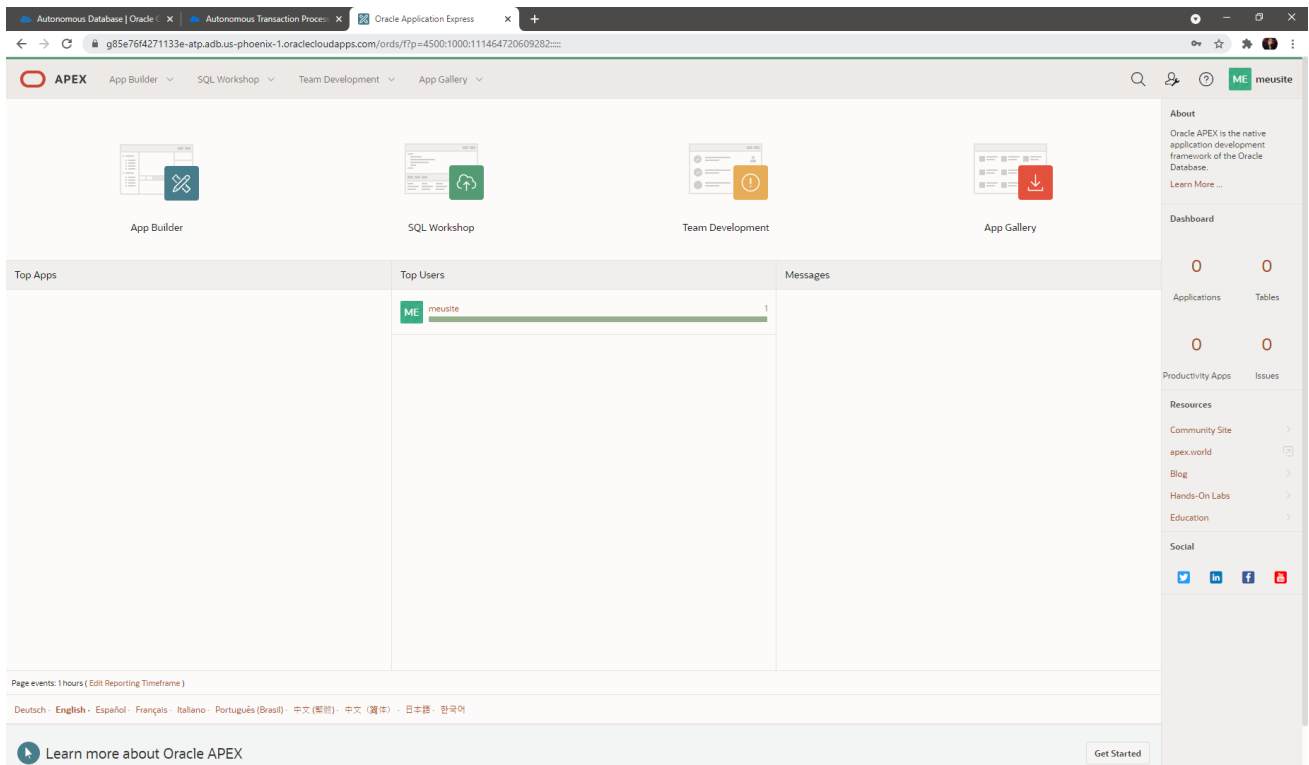
Em apex, digite a senha do admin que você estabeleceu na criação do autonomous:



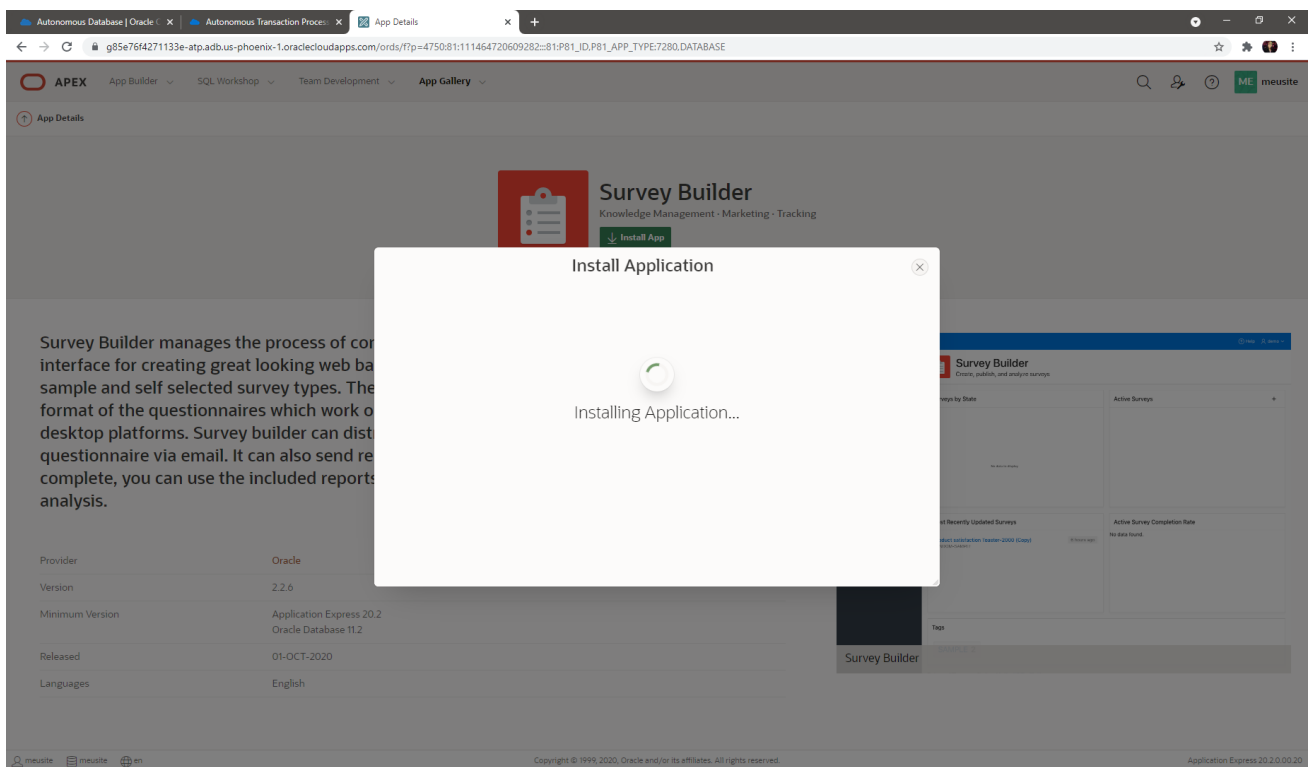
Vamos criar um workspace. O workspace servirá para criarmos toda nossa página:



Crie um workspace chamado meu site:



Clique em app gallery e instale a aplicação survey builder:



Configure sua aplicação:

Autonomous Database | Oracle
Autonomous Transaction Process
App Details
Getting Started

g85e76f4271133e-atp.adb.us-phoenix-1.oraclecloudapps.com/ords/r/meusite/100/getting-started?clear=RP&session=110343941754688&cs=3yUd36VqYF-6AK6EYH_8F0nQBHIQUALPEqf8FZzGydsf0VPZe_es4JAm9gJgZi4818W2GUALTBrt...

Survey Builder
Help
meusite

Welcome to Survey Builder

Please take a moment to complete this first time setup.

1

Access Control

Access Control enables you to control the level of access users have to the application. Your user account is automatically configured as an Administrator.

Access Control Level

- ☒ Reader access for any authenticated user
- ☐ Contributor access for any authenticated user
- ☐ Restricted to users defined in access control list

2

Users

meusite

Administrator

[Add User](#)

3

Sample Data

Loading Sample Data will enable you to explore the functionality of the app with pre-populated sample data.

☒ Yes - Load Sample Data

☐ No - Do Not Load Sample Data

5

Default Email Address

Define the email address that this application will use to send emails to end-users and survey takers.

Autonomous Database | Oracle
Autonomous Transaction Process
App Details
Survey Builder

g85e76f4271133e-atp.adb.us-phoenix-1.oraclecloudapps.com/ords/r/meusite/100/home?clear=RP&session=110343941754688&success_msg=QWNjZXNlENvbnRyb2wgaGFzIGJlZW4gZW50Ym90YyY8o_YKZlIGJlZW4gYWVWZ...

Survey Builder
Access Control has been enabled, defined users have been added, and application settings have been successfully updated.

Home
Surveys
Reports
Settings

Survey Builder

Create, publish, and analyze surveys

Surveys by State

Active Surveys

+

Most Recently Updated Surveys

Product satisfaction Toaster-2000 (Copy)	Now
RANDOM-SAMPLE	

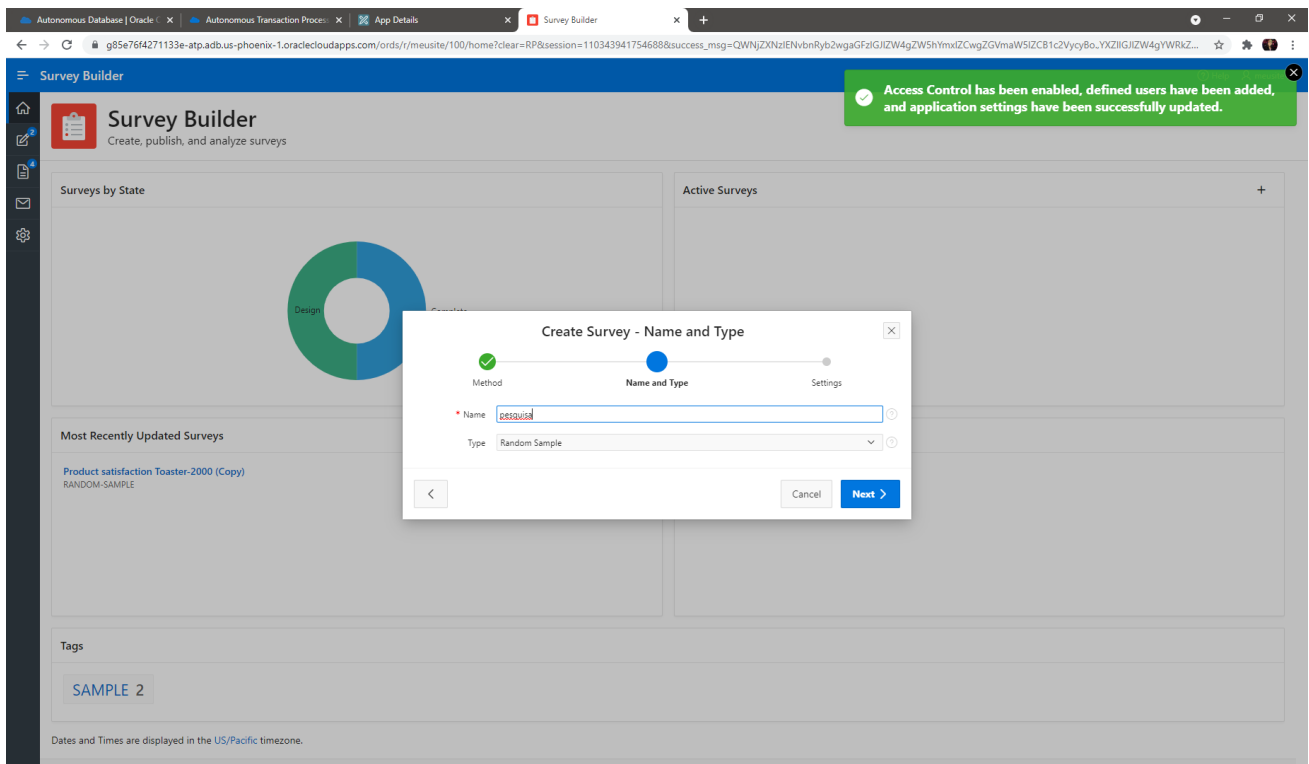
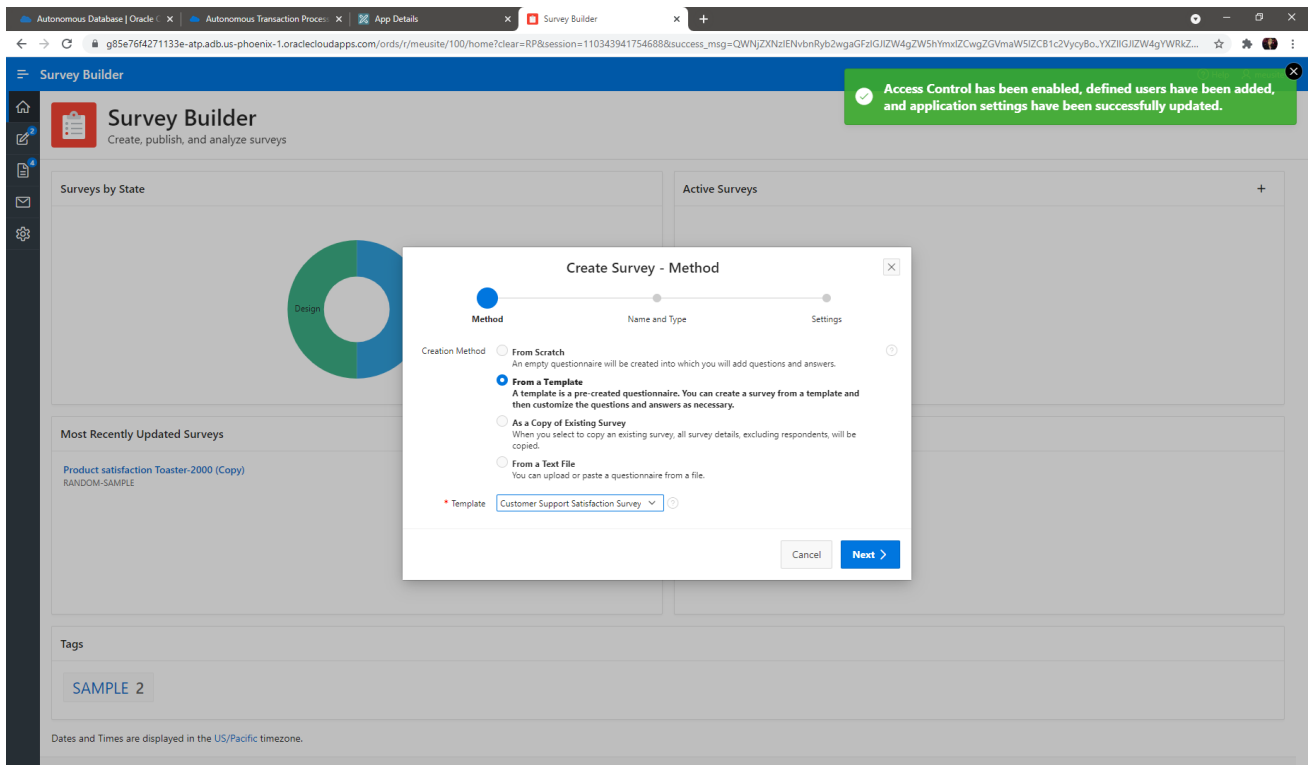
Active Survey Completion Rate

No data found.

Tags

SAMPLE 2

Dates and Times are displayed in the US/Pacific timezone.



Access Control has been enabled, defined users have been added, and application settings have been successfully updated.

Create Survey - Settings

Method Name and Type Settings

Questionnaire Title: Customer Support Satisfaction Survey

Estimated Minutes To Complete: 5

Questionnaire Language: English

Sample Size: Intended Recipients

Target Completion Date: 6/21/2021

Target Completion Percent: 1-100 %

Auto Complete: Yes, complete survey when targets are reached

Tags: Enter comma separated tags here

Cancel Create Survey

Após criar, clique em survey:

Unique ID	Survey Name	Questionnaire Title	Type	State	Sample Size	Target Date	Target Percent	Start Date	Completed Date	Percent Complete
AAAA	Product satisfaction Toaster-2000	Toaster-2000 Survey	Random Sample	Complete	15	19-JUN-2021	-	24-MAY-2021	18-JUN-2021	33%
AAAD	Product satisfaction Toaster-2000 (Copy)	Toaster-2000 Survey	Random Sample	Design	15	-	-	-	-	-
AAAF	pesquisa	Customer Support Satisfaction Survey	Random Sample	Design	-	21-JUN-2021	-	-	-	-

1 - 3

Crie uma pergunta sobre o produto:

The screenshot shows the 'Survey Builder' interface. A 'Question' dialog box is open, allowing the user to configure a new question. The dialog box includes the following fields:

- Question: Tell us your experience with our product
- Question ID: 12
- Type: Text
- Required: Yes (selected)
- Minimum: 1
- Maximum: 4000
- Category: Attribute
- Priority: High
- Exclude: No (selected)
- Skip When: Questions (selected), Value
- Tags: Enter comma separated tags here

The background shows a survey titled 'pesquisa' with various questions and answer options. The survey is titled 'Customer Support Satisfaction Survey' and includes questions such as 'How quickly was your question answered or the problem resolved?' and 'Overall how satisfied are you with your customer service experience?'.

Mova para cima e clique em preview:

The screenshot shows the 'Questionnaire' view of the survey. The survey is titled 'pesquisa' and includes the following questions:

- Tell us your experience with our product (12)
- How long did you have to wait before a customer service representative assisted you?
- The customer service representative listened well and understood my questions.
- The customer service representative was polite.

The survey is titled 'Customer Support Satisfaction Survey' and includes various answer options for each question. The 'Preview' button is visible in the top right corner.

Sua pesquisa está pronta! Agora vamos inserir algumas informações de exemplo:

Customer Support Satisfaction Survey - Google Chrome

g85e76f4271133e-atp.adb.us-phoenix-1.oraclecloudapps.com/ords/r/meusite/100/qp?...

Customer Support Satisfaction Survey

Please help us continue to provide excellent customer support by telling us about your recent experience with our support team.

1. Tell us your experience with our product

2. How long did you have to wait before a customer service representative assisted you?

☐ More than 30 minutes

☐ More than 20 minutes

☐ More than 10 minutes

☐ About 5 minutes

☐ Not long at all

How strongly do you agree with the following statements?

3. The customer service representative listened well and understood my questions.

☐ Strongly agree

☐ Agree

☐ Undecided

☐ Disagree

☐ Strongly disagree

4. The customer service representative was polite.

☐ Strongly agree

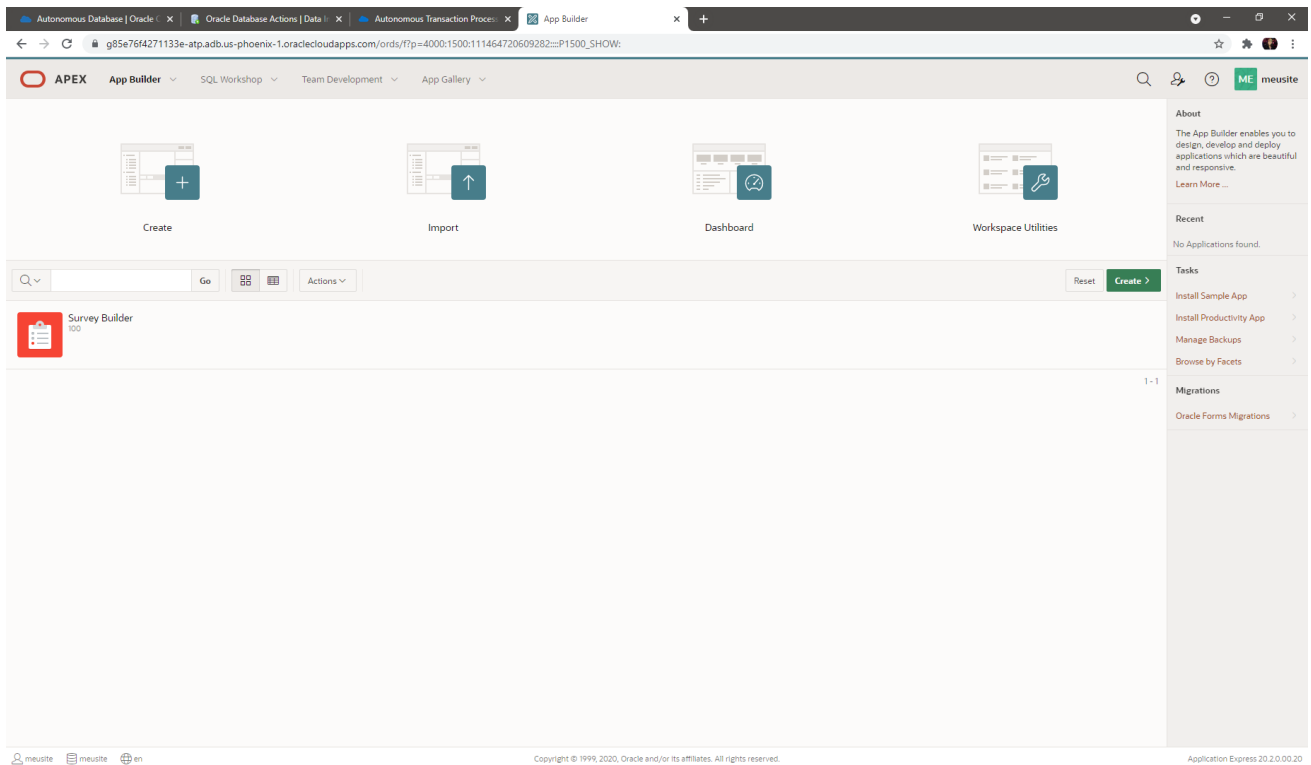
☐ Agree

☐ Undecided

☐ Disagree

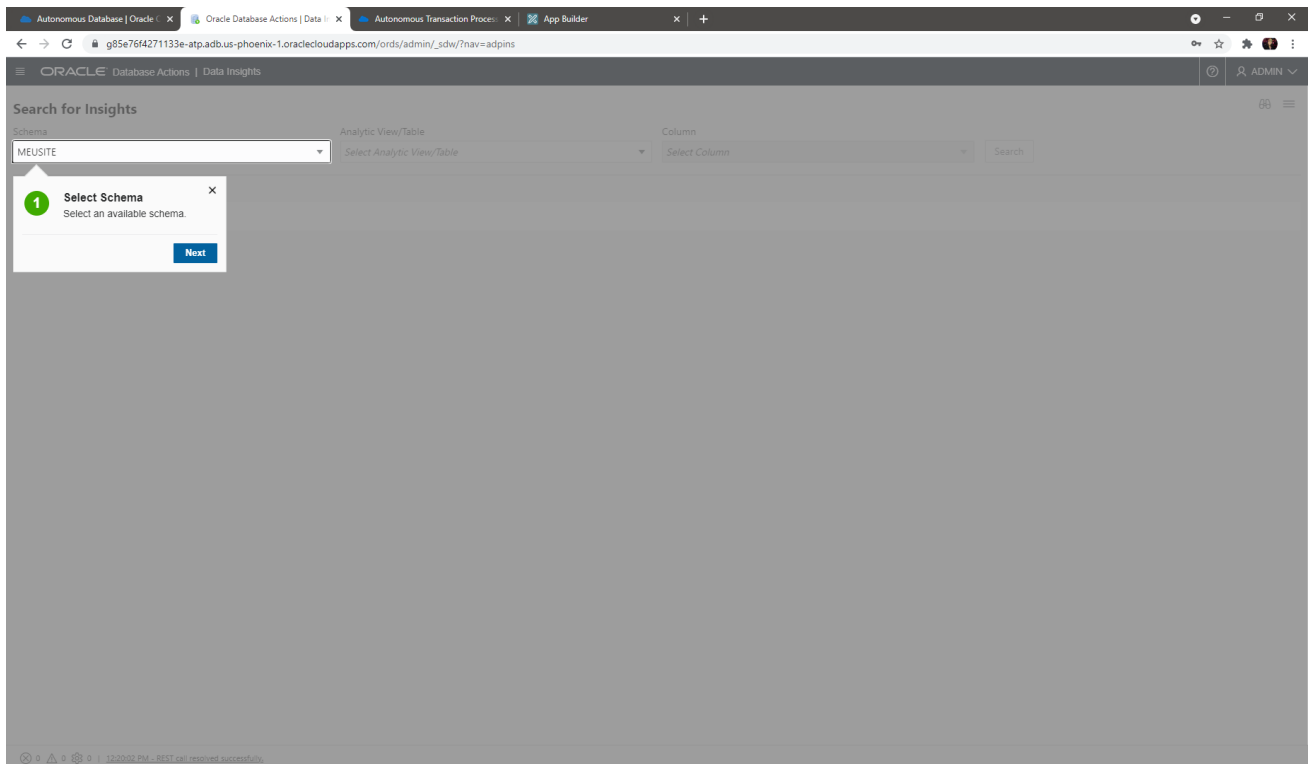
☐ Strongly disagree

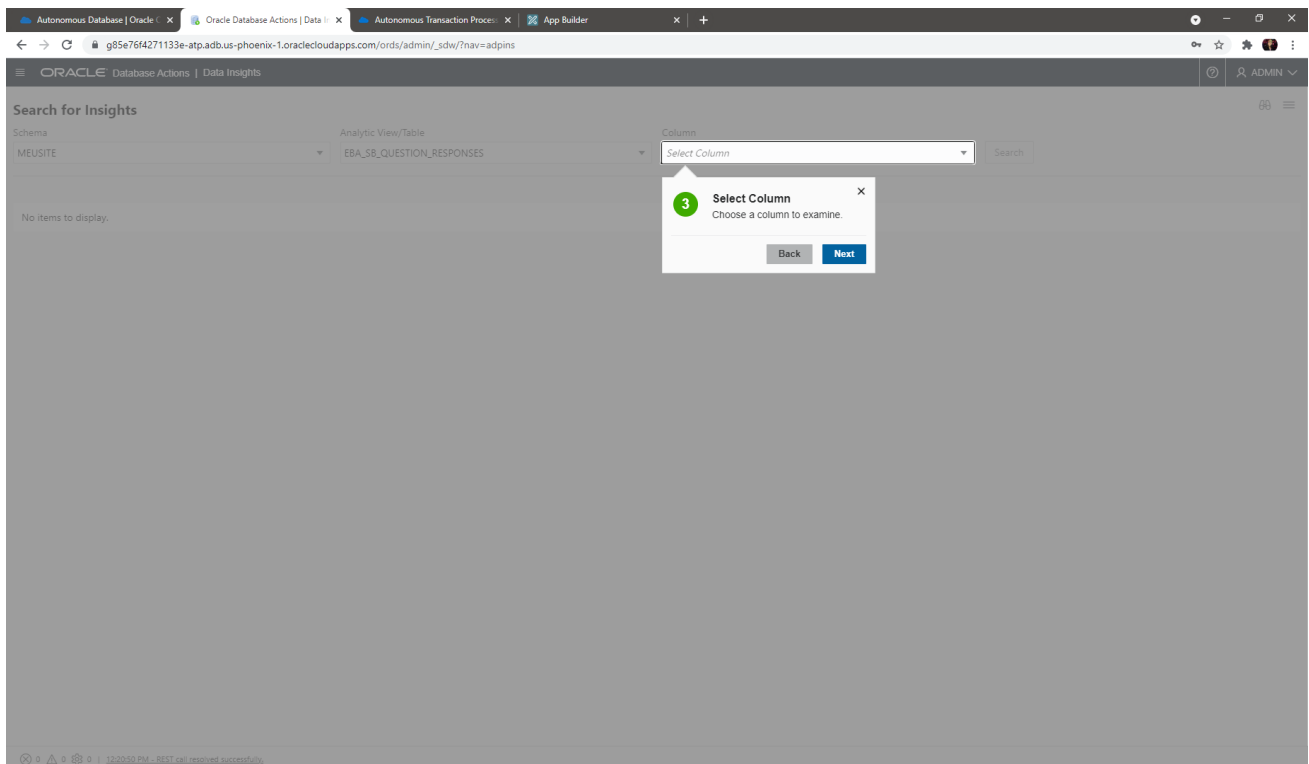
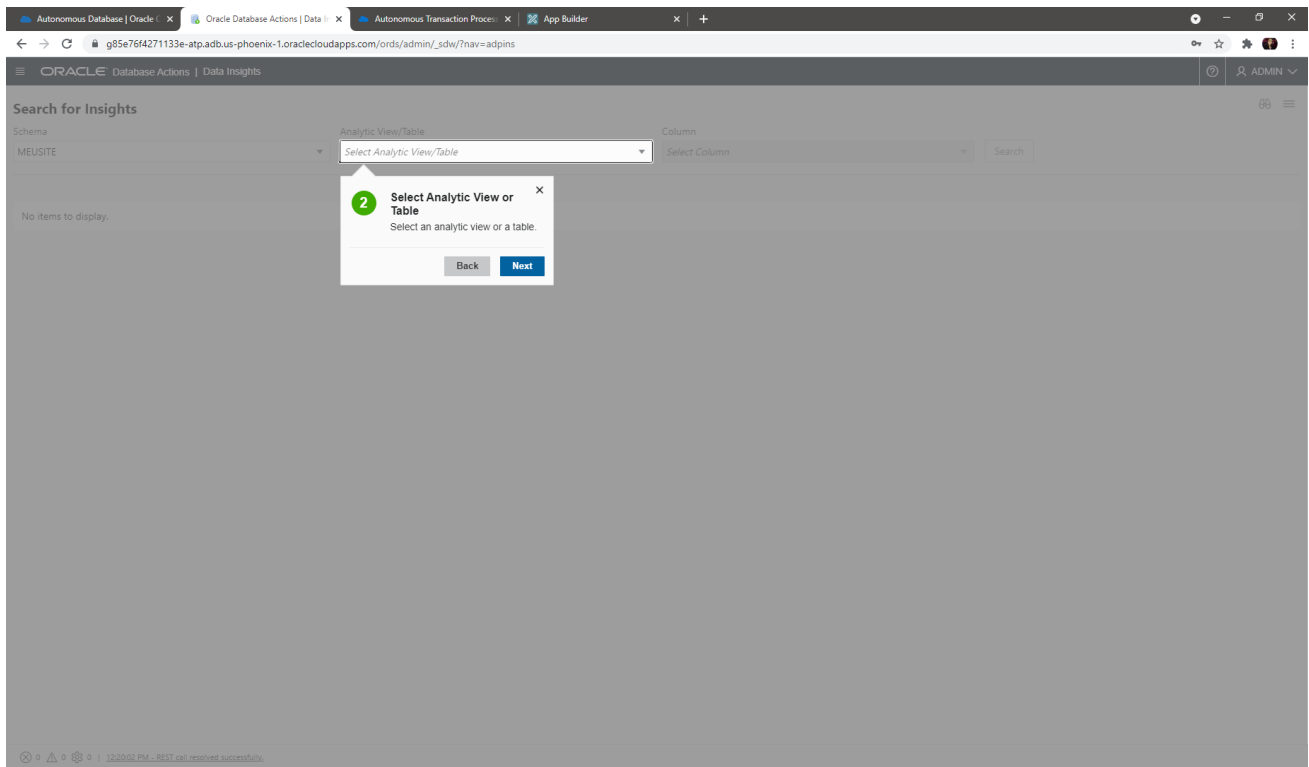
5. The customer service representative was helpful.

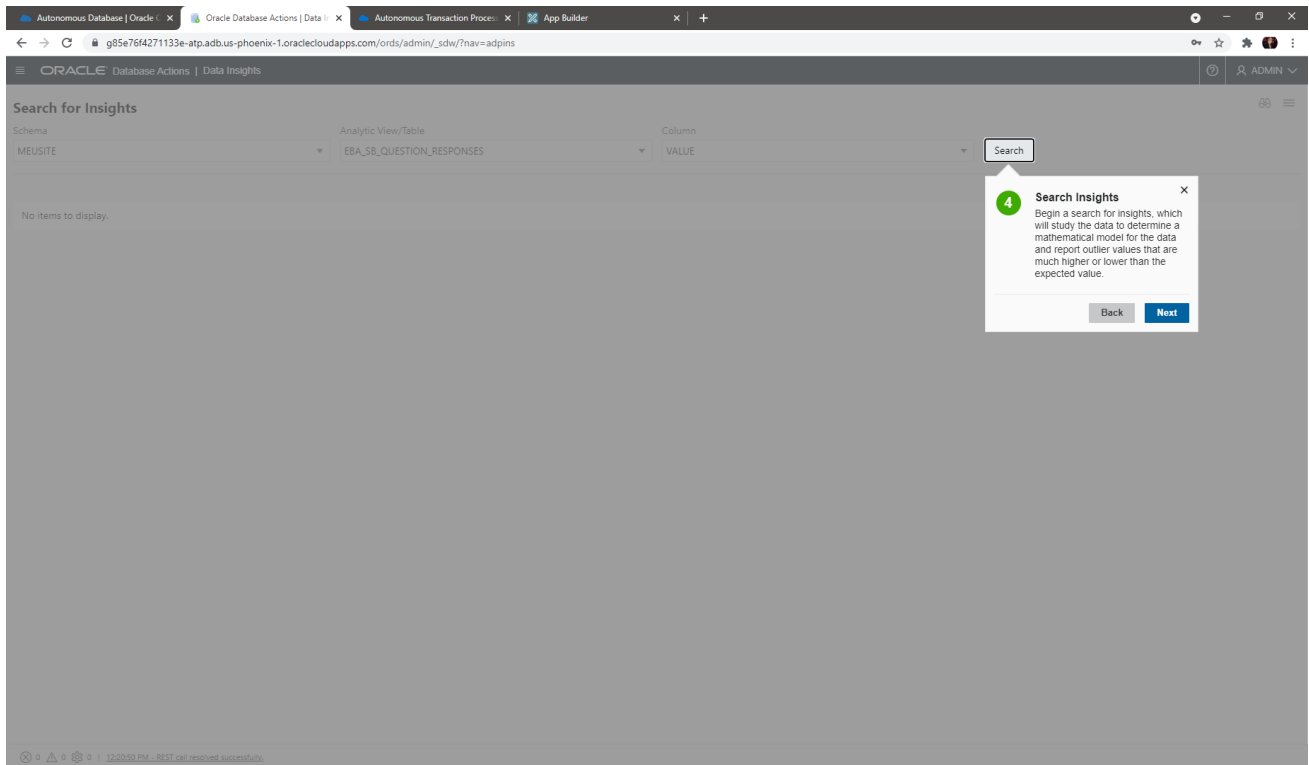
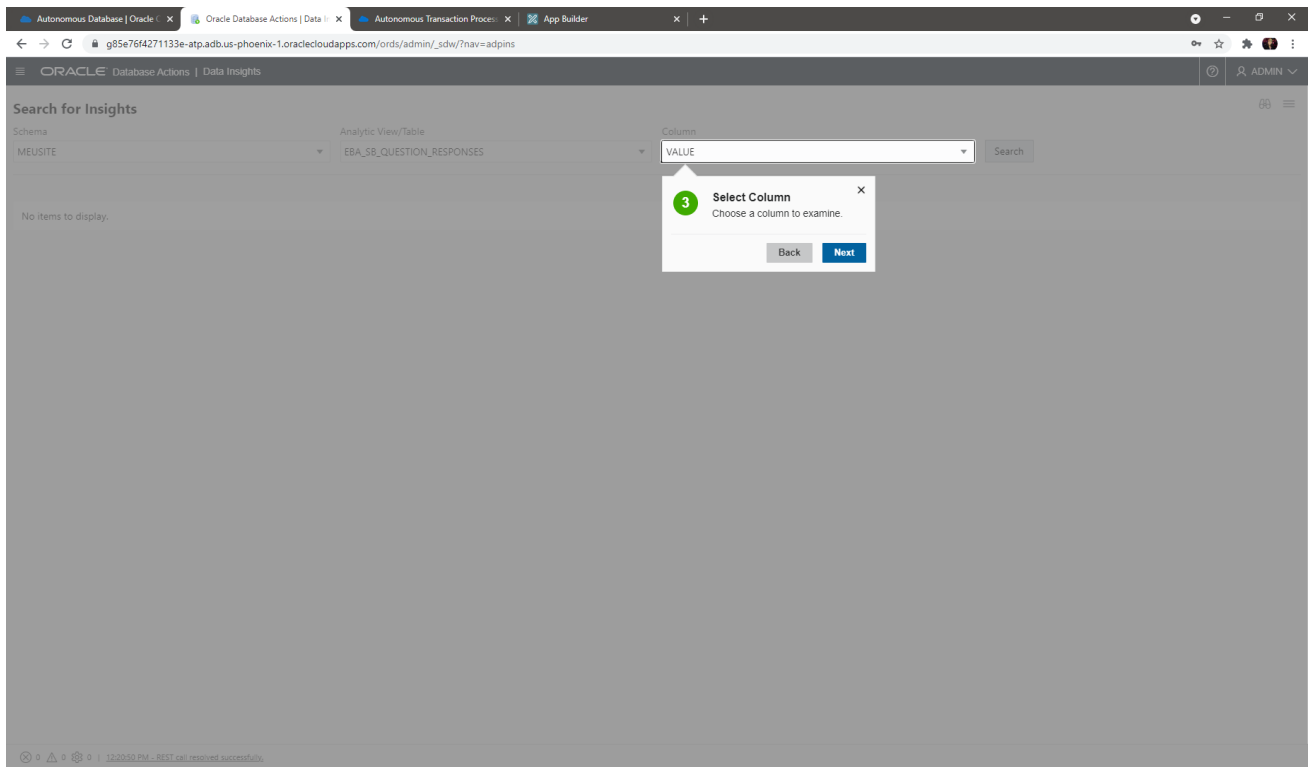


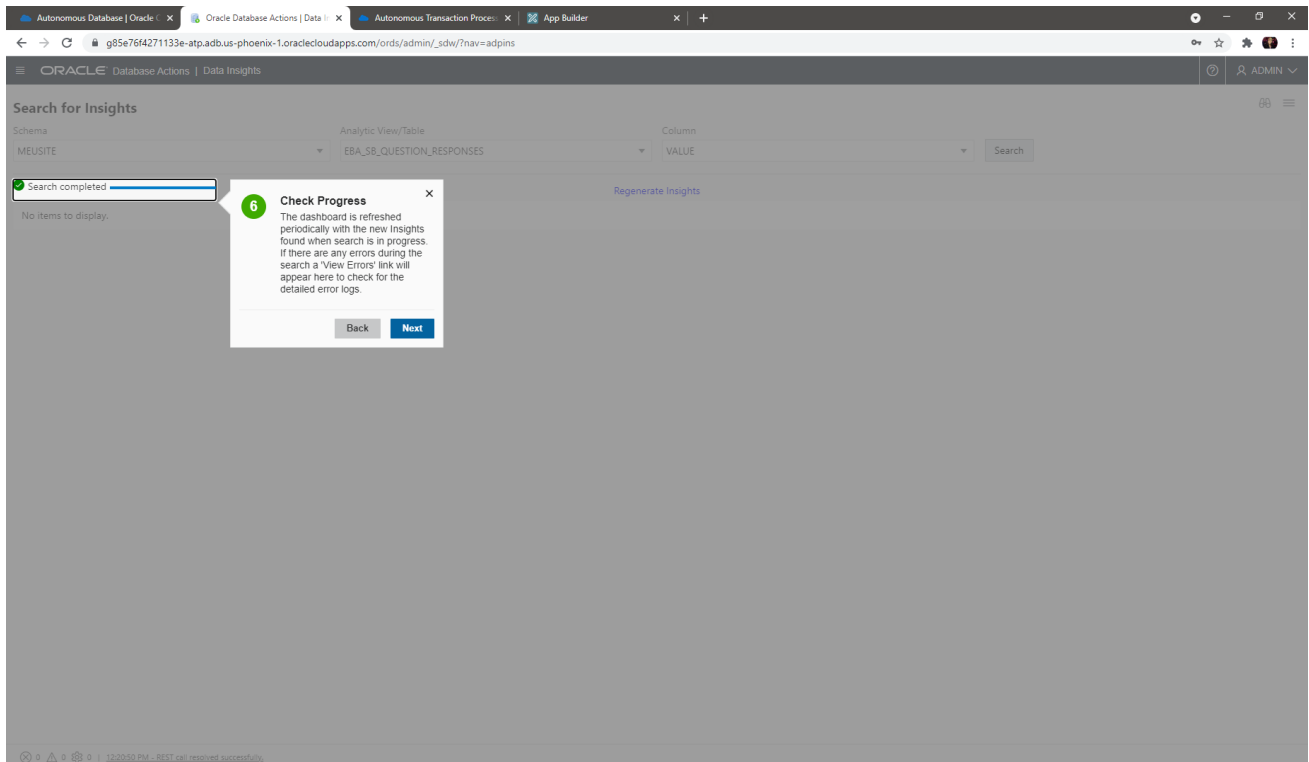
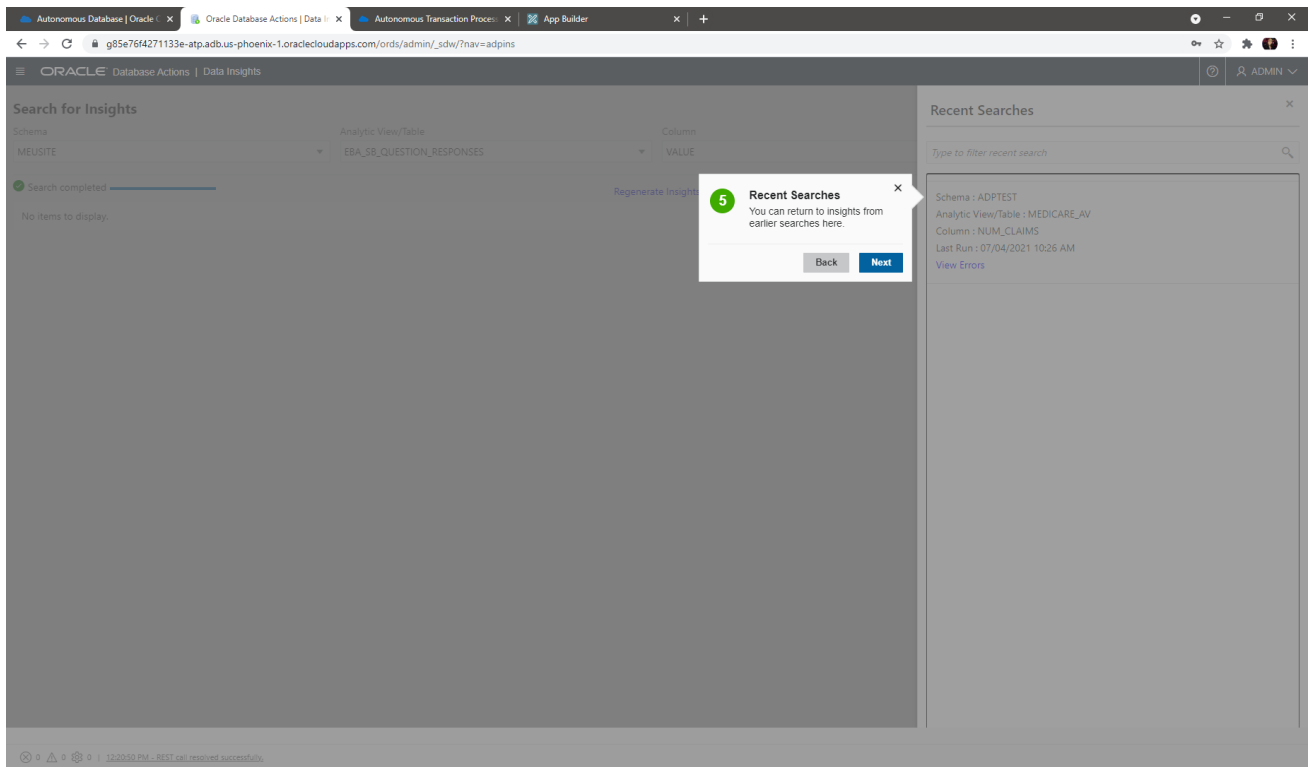
3.2. Fazendo análise exploratoria

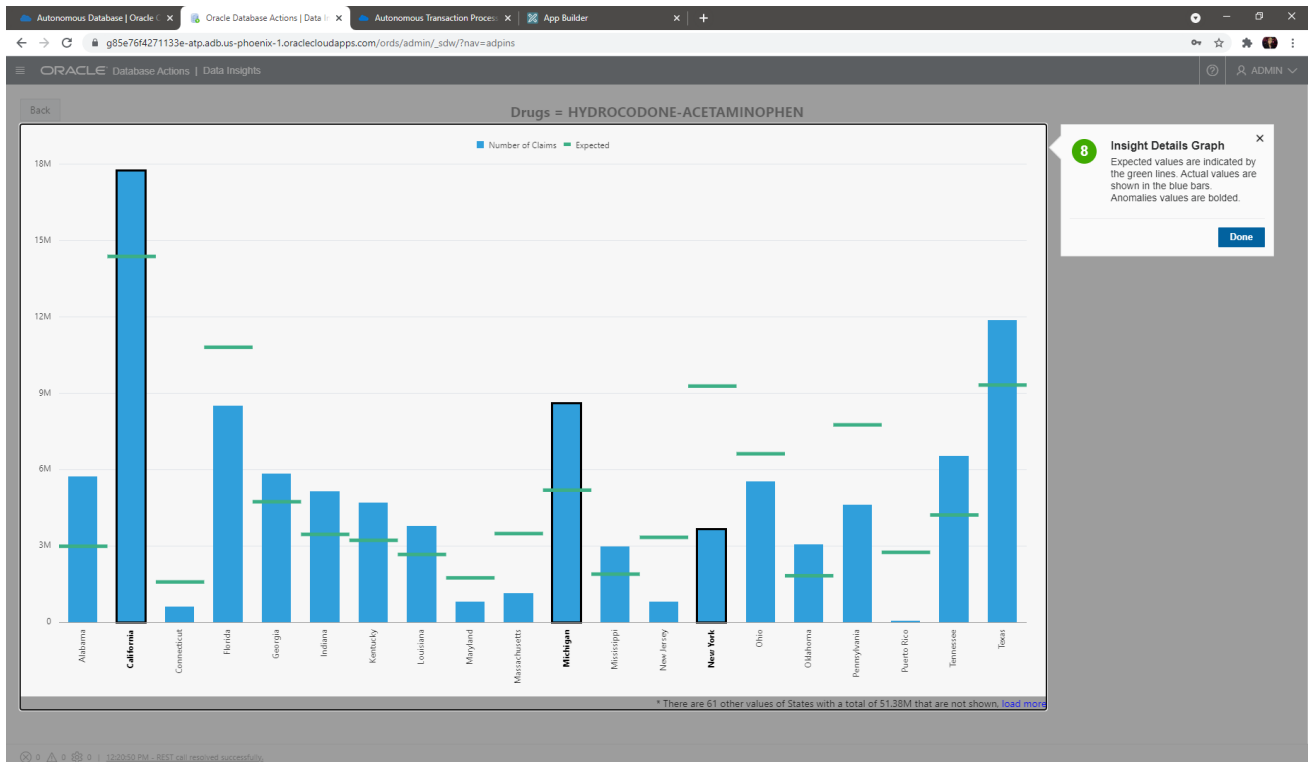
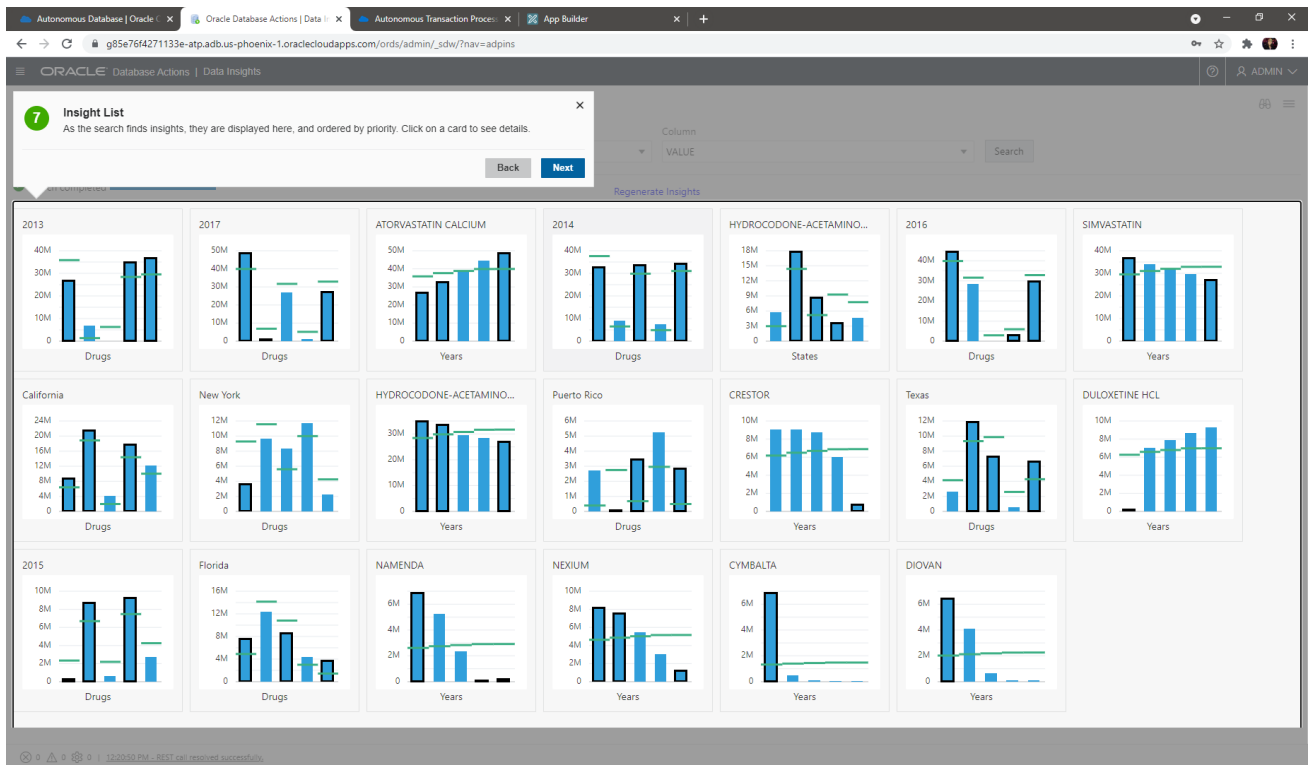
Vamos agora explorar nosso site de pesquisas com o data insights:

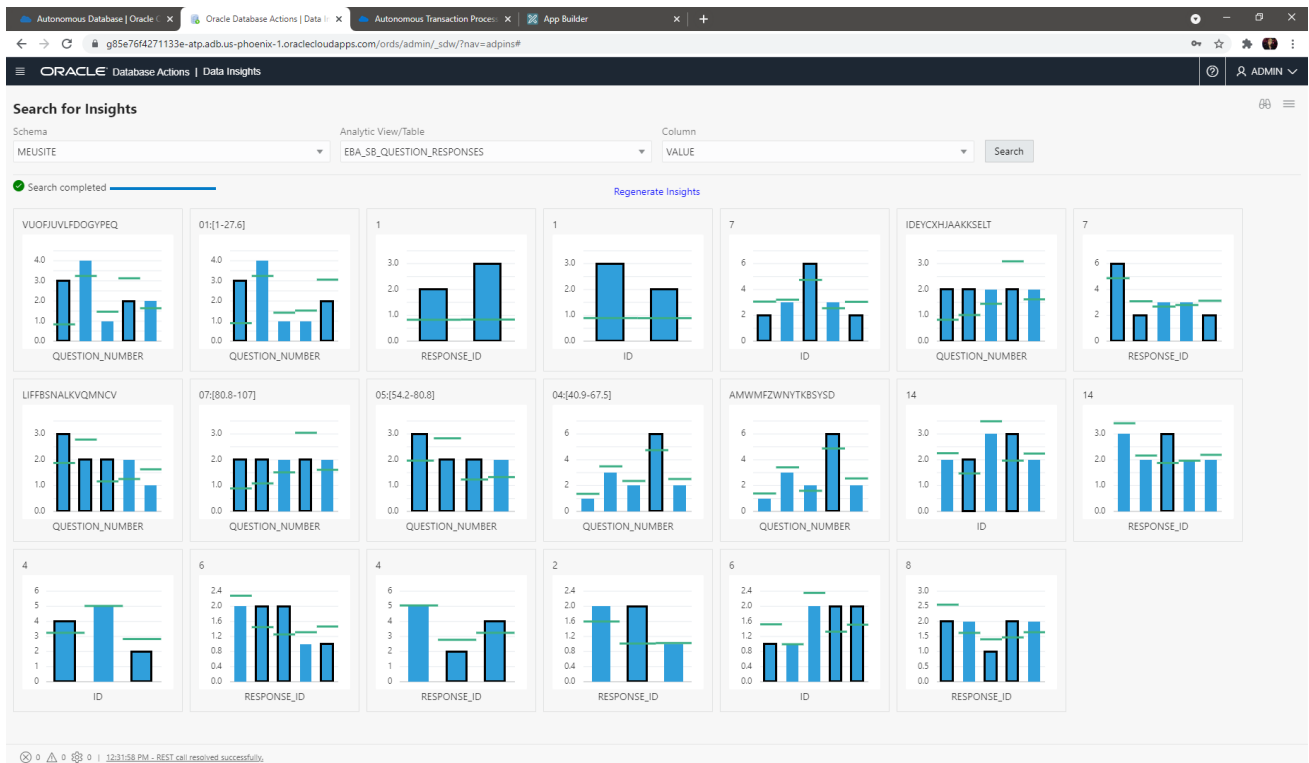




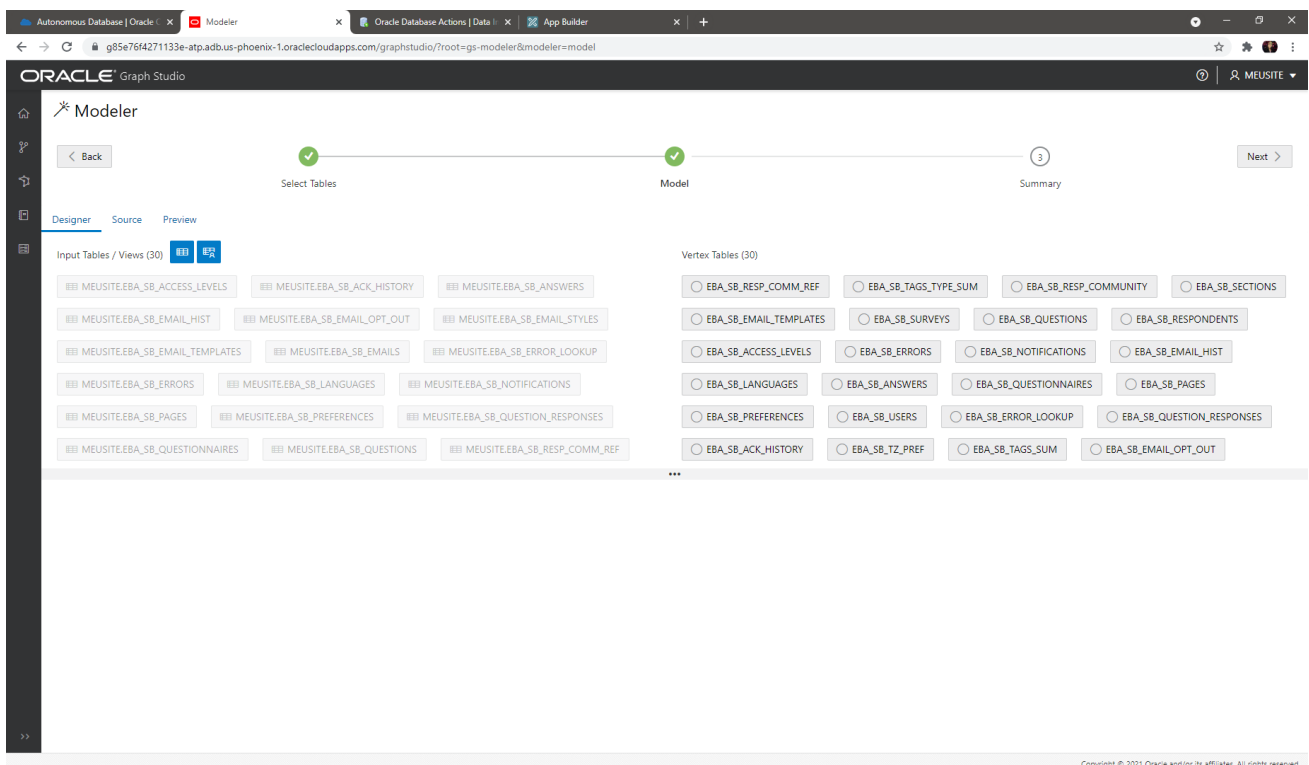


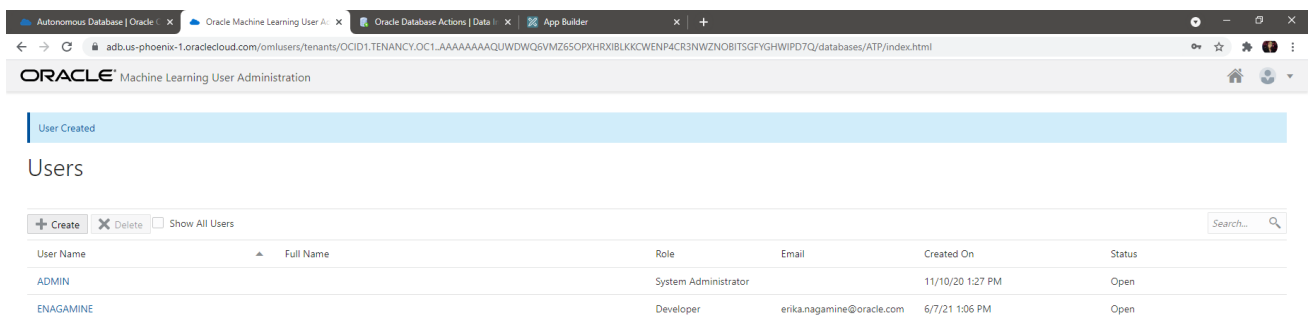
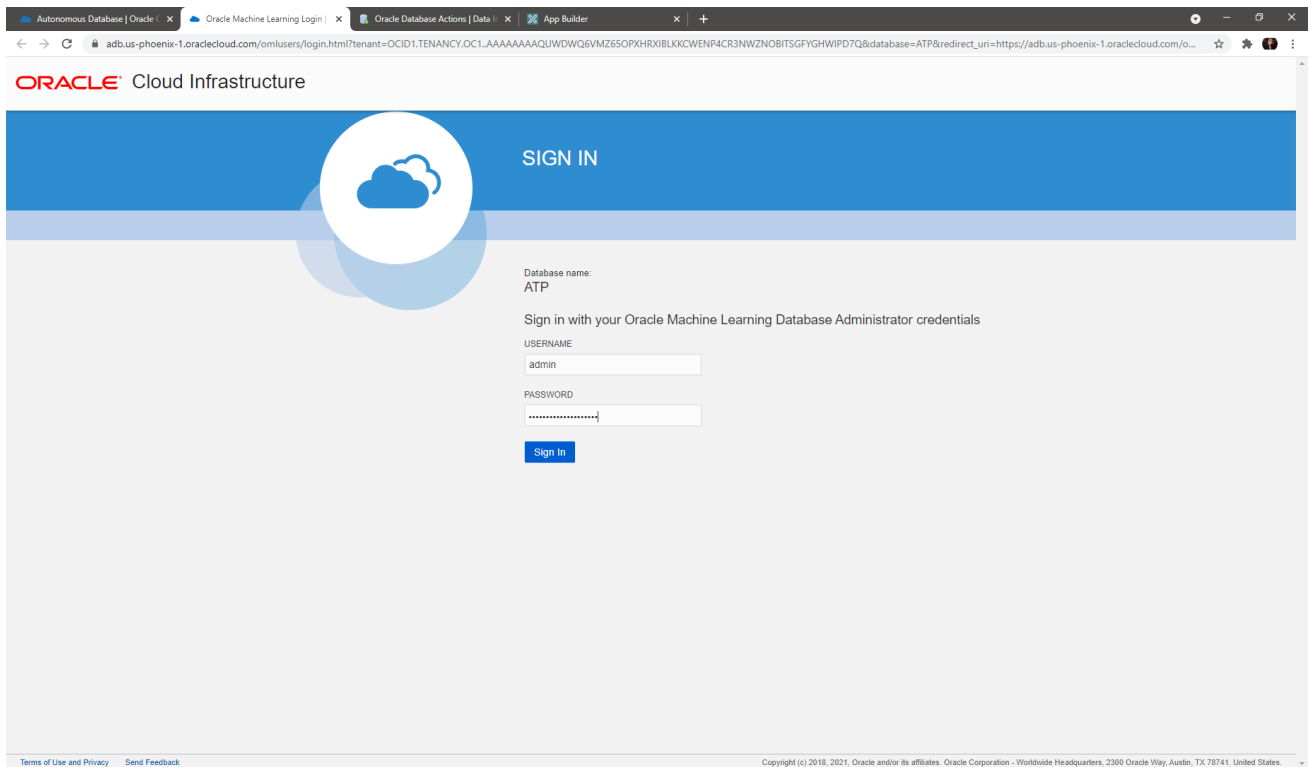




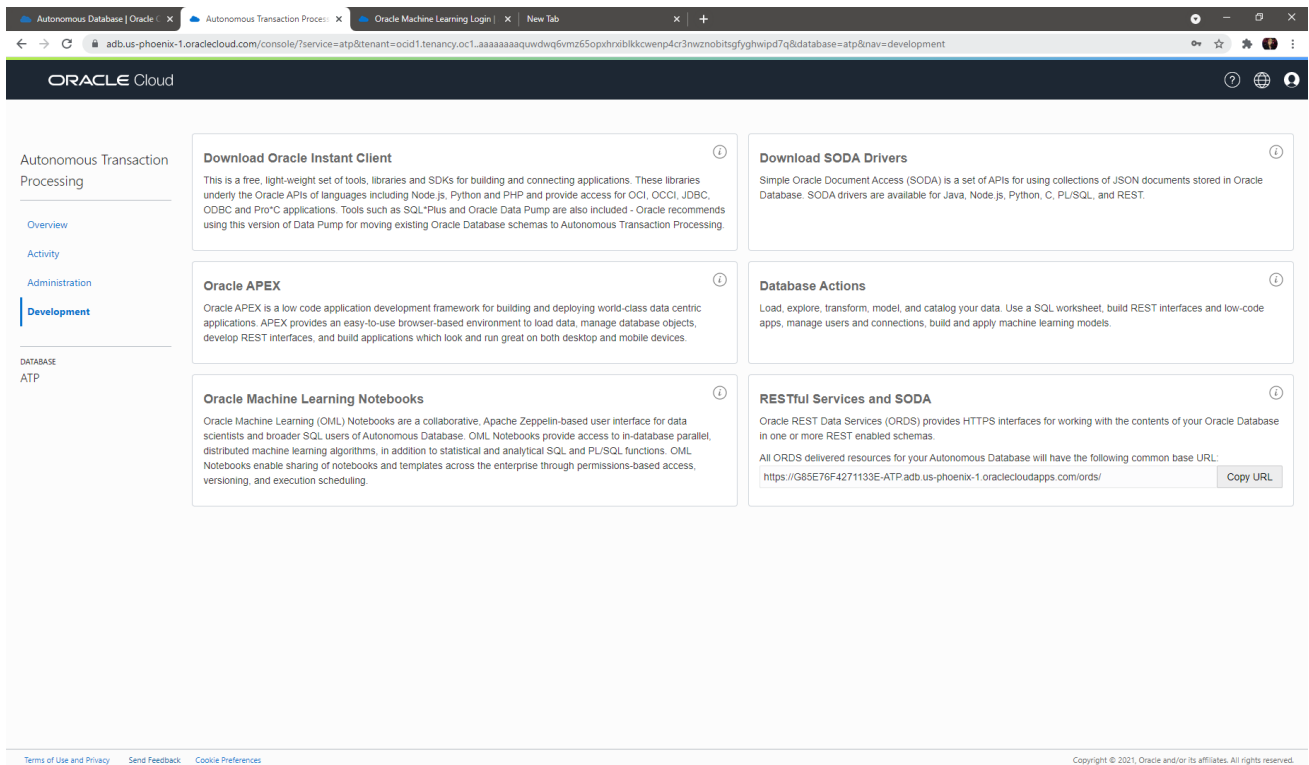


Você também pode usar o graphs:

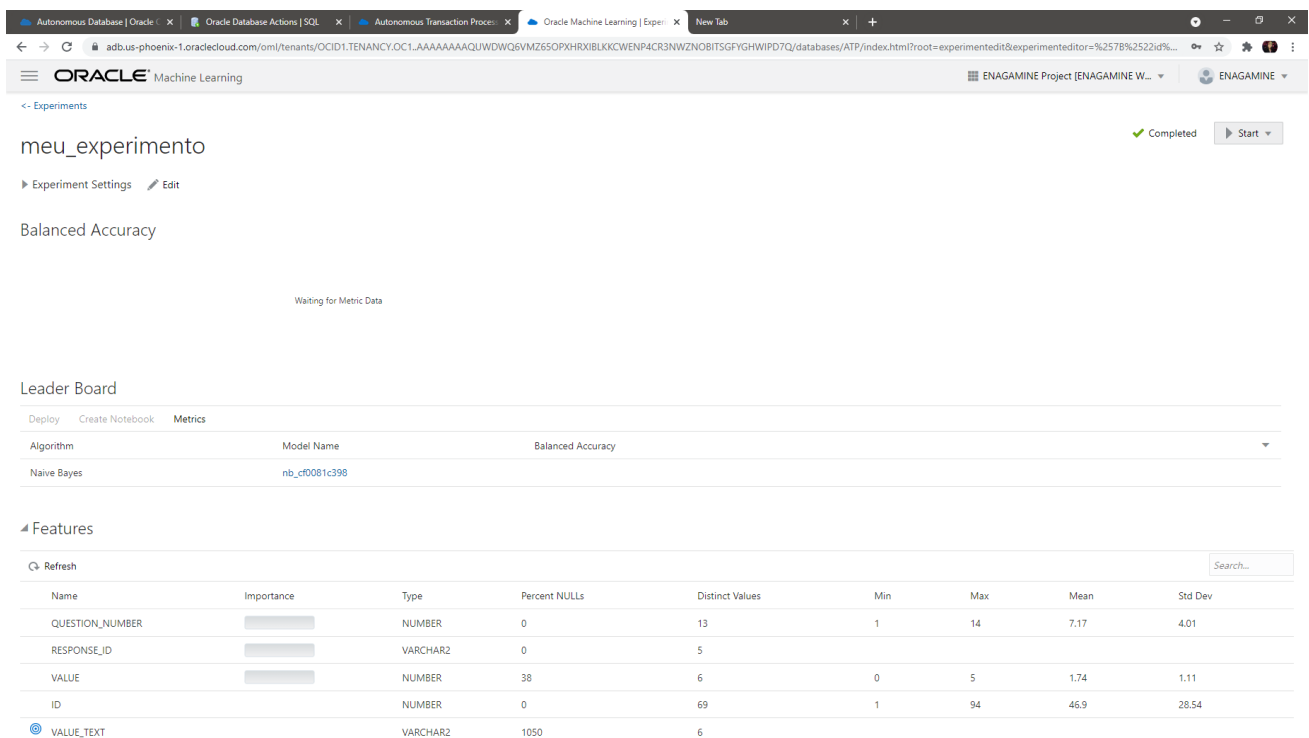




Após criar vá em service console, Oracle Machine Learning notebooks:



Após acessar, você poderá criar um modelo com AutoML:



Uma outra forma de criar seu modelo é usando OML Notebooks com OML+Python. Para isso, clique em notebook:

How Do I?

- Use AutoML**: How to create AutoML Experiments
- Get Started**: Get started with Oracle Machine Learning
- Create Notebooks**: How to create a notebook
- Create Jobs**: How to create a job
- Manage Permissions**: How to manage collaborative permissions in workspaces
- Try It**: Follow along with a hands on workshop

Quick Actions

- AutoML**: Create and run AutoML Experiments
- Scratchpad**: Run Scratchpad
- Notebooks**: The place for data discovery and analytics
- Jobs**: Schedule notebooks to run at certain times
- Examples**: Check out some examples

Recent Activities

- today**
- ENAGAMINE **updated** Minha analise com AutoML notebook in ENAGAMINE Project [ENAGAMINE Workspace] 6/7/21 4:08 PM
- ENAGAMINE **created** Minha analise com AutoML notebook in ENAGAMINE Project [ENAGAMINE Workspace] 6/7/21 3:07 PM
- ENAGAMINE **updated** meu_experimento experiment in ENAGAMINE Project [ENAGAMINE Workspace]

Recent Notebooks

- Minha analise com AutoML

Recent Experiments

- meu_experimento

Clique em create:

Notebooks

[Edit](#)
[+ Create](#)
[Duplicate](#)
[Save as Template](#)
[Delete](#)
[Import](#)
[Export](#)
[Version](#)

Name	Comment	Last Update	Updated By	Connection Group
Minha analise com AutoML		6/7/21 4:08 PM	ENAGAMINE	Global

Page 1 of 1 (1 of 1 items) | < 1 >

4. Referências

Algumas documentações importantes:

- Autonomous Database: <https://www.oracle.com/autonomous-database/>
- Archicture Reference: <https://docs.oracle.com/en/solutions/serverless-dataload-adw/index.html#GUID-36A94B9D-0B06-4A4A-81B0-A292392181BD>