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15 de Agosto de 2020, Brasil

# BEGINNER-FRIENDLY PYTHON FOR ORACLE DBAs

**This beginner-friendly Python lecture will take you from zero to programming in Python.**



"Opinions expressed are solely my own and do not express the views or opinions of my employer."



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2013







# Bruno Reis da Silva

- Afro-Brazilian
- Outside the coding world:
- Loves to travel : 30 countries and counting;
- Learn Languages: Portuguese, Spanish, English and currently learning Swedish;
- Working out.



## CAREER PATH



- Joined at IBM Brazil as a contractor. (June 2011 - December 2013). Role: Junior Oracle DBA



- Became an IBM employee (IBMER). (December 2013 - December 2016). Role: Oracle DBA Specialist - Subject Matter Expert



- Promoted to Hungary, Europe. ( December 2016 - October 2018). Role: Senior Oracle Cloud Database Administrator. (IT Advisory).

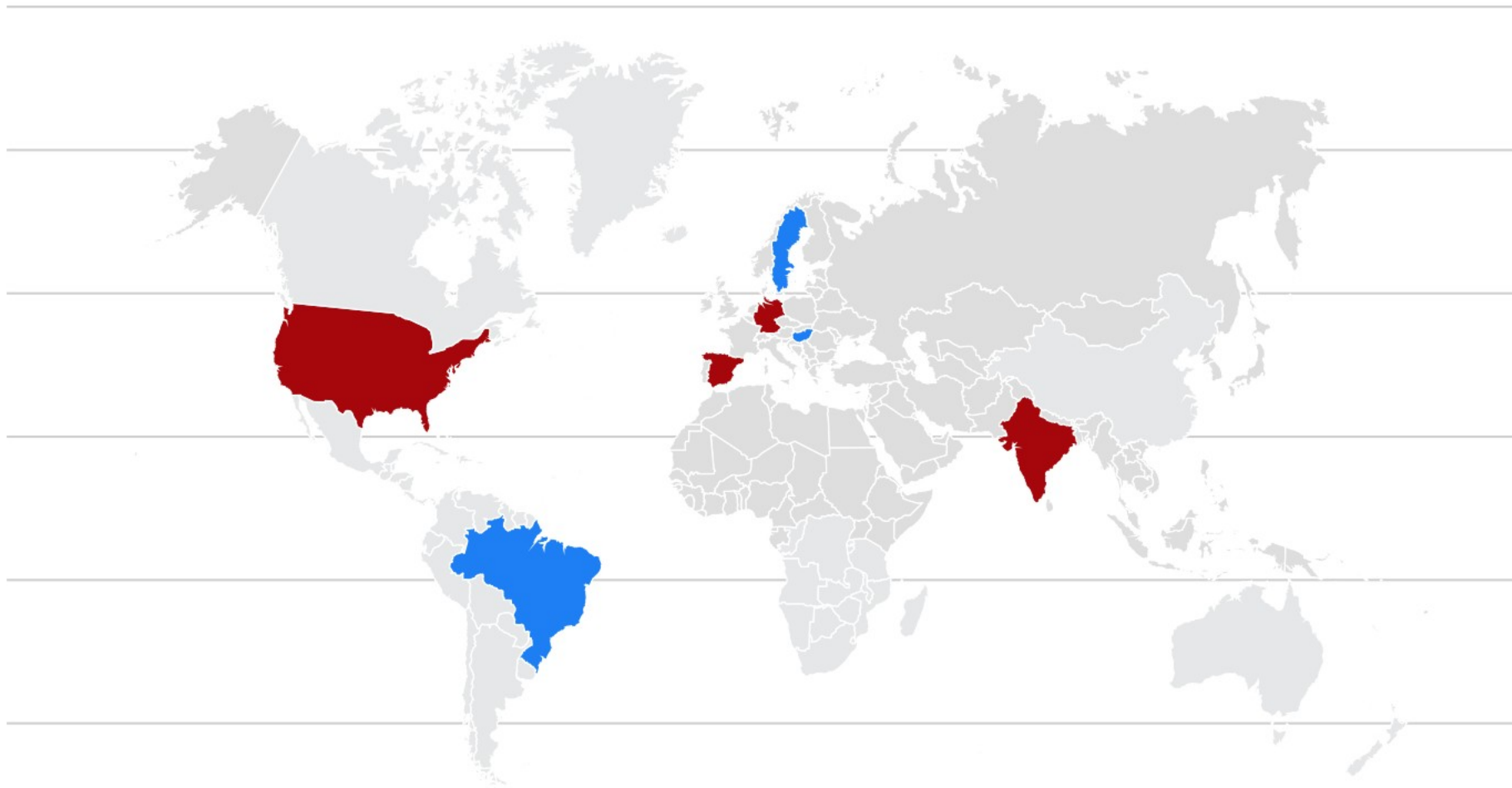


- Promoted to Sweden, Europe. (October 2018 - Second Semester 2020). Role: Senior Oracle Database Adminstrator & Database Cloud Support Engineer.



Joined an Oracle Partner in Sweden called Epico Tech, former Miracle Sweden. (Second Semester 2020 - onwards). Role: Oracle Consultant

# Bruno Reis da Silva



## Project I have worked locally:

South America:

- Brazil (5 years) 2011-2016

Europe:

- Hungary (2 years) 2016-2018

- Sweden (2 years) 2018- onwards

## Projects I have worked remotely:

•North America:

- The United States of America (USA)

•Europe:

- Spain, Germany

•Asia:

- India



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Issue #19/2020



Our first issue of 2020 dives into the history of AskTOM. Connor McDonald reflects on its inception and how his personal journey intertwines with it. Meanwhile, Jim Czuprynski reveals his super-power: Autonomous DB and ML. Enjoy these and many more stories!

[Download Issue 19/2020](#)

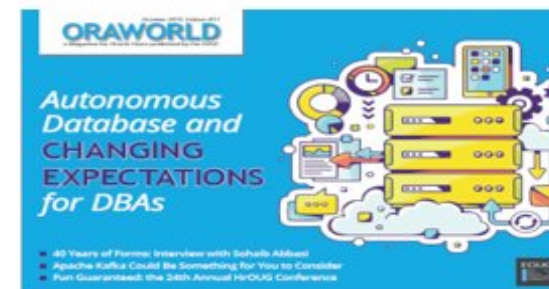
Issue #18/2019



Issue 18 takes a look at Self-Service Integration with author Arturo Viveros answering the questions What?, Why? and How? The last issue of the year also marks the starts of a new series on APEX by Carsten Czarski. Of course, you can expect many more stories from the Oracle world.

[Download Issue 18/2019](#)

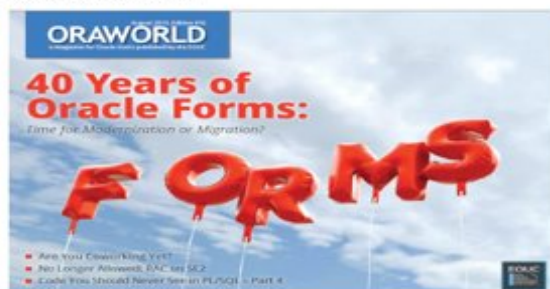
Issue #17/2019



In this issue we look at how Autonomous Database will change the work for DBAs. Also, concluding our 40 Years of Forms feature, we bring you an insightful interview with Sohaib Abbasi, the former Senior Vice President of Oracle's Tools and Education divisions.

[Download Issue 17/2019](#)

Issue #16/2019



Issue #16 celebrates 40 years of Oracle Forms. We look at the history of the famous software tool including an interview with its developer Bill Friend. Also, we conclude

Issue #15/2019



The focus of issue #15 is on games: We have an interview with gamification expert Dr. Mathias Fuchs who examines the phenomenon from a cultural and political perspective.

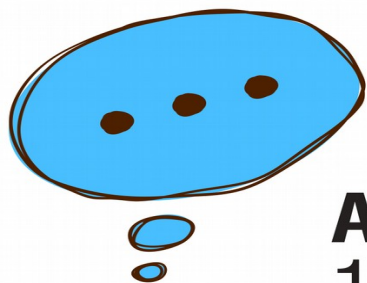
Issue #14/2019



Issue #14 highlights ways to generate the perfect user experience. You will dive deep into such diverse topics as digitalization for seniors, the importance of data clustering,



# QUIZ



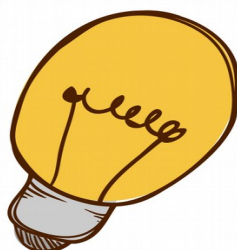
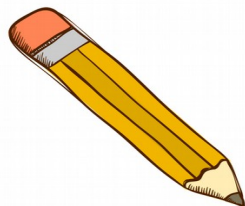
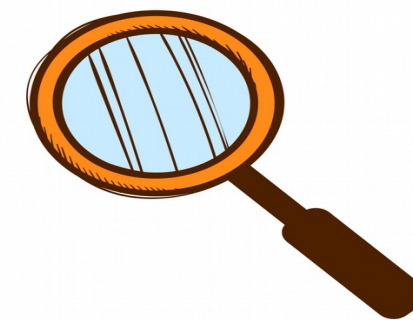
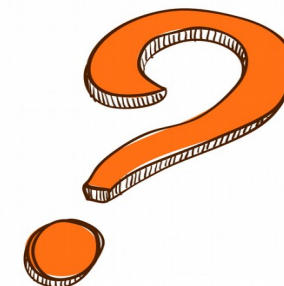
**As regras para concorrer ao quiz são:**

- 1- Acertas as perguntas do QUIZ;
- 2- Fazer um post no LinkedIn com o seguinte texto:

"Acompanhei a palestra do @Bruno Reis do blog <http://www.techdatabasket.com> no dia 15 de Agosto de 2020 e ganhei um voucher por responder corretamente ao QUIZ.  
**#EPICOTECH #SWEOUG "**

No final da palestra a primeira pessoa que responderá corretamente o Quiz de pergunta ganhará um voucher de certificação Oracle que será enviado para o e-mail da pessoa no dia 31 de Agosto de 2020.

***O primeiro que responder no chat em 1 minuto será o ganhador.***





## O que esperar de esta apresentação e as razões por trás disso:

- DBAs físicos e desenvolvedores;
- Automação está se tornando mais relevante;
- É um Kick-starter para a programação Python;
- Banco de dados Oracle e multi-cloud já é uma realidade.





<https://www.oracle.com/a/ocom/docs/applications/50704-oracle-strategic-dba-checklist.pdf>

As enterprises transition to Oracle Autonomous Database, routine administrative and infrastructure tasks—such as provisioning new databases, upgrading or patching existing databases, tuning queries, and making backups—are no longer necessary. While some database administrators (DBAs) may be uneasy about this incursion into their traditional administrative turf, others see the potential to liberate themselves from routine maintenance tasks. Here are 10 ways to enhance your career, get in front of this rising wave of automation, and learn to spearhead new business initiatives.

- 1. Pivot:** Shift your role from database administrator to data architect.
- 2. Create:** Focus on data delivery and data modeling, not on routine maintenance.
- 3. Evolve:** Look for opportunities to work on projects that involve security, information lifecycle management, and application tuning.
- 4. Learn:** Educate yourself on the latest Oracle Database product offerings, so you know when to recommend Oracle Autonomous Database rather than another cloud service.
- 5. Experiment:** Volunteer to try out new software by signing up for beta test programs, so you can stay abreast of new product capabilities that will keep your organization at the cutting edge.
- 6. Collaborate:** Get involved with agile development projects to help developers quickly create new applications and iterations.
- 7. Innovate:** Devise better ways to predict how data can be used to deliver better predictive insight, improve customer experience or apply data to create new revenue opportunities.
- 8. Analyze:** Help business professionals discern trends and patterns in their data and use new types of analytics tools.
- 9. Orchestrate:** Develop broader insight into data life cycle and help broker a smooth transition to the cloud.
- 10. Strategize:** Don't let user requests dominate your time. Get involved in security, performance tuning, high availability, migrations, and upgrades—all the things that move your business forward.

Read the new ipaper here. →

It contains other relevant insights from IT experts: Oracle Database experts, ACE Directors, and savvy database professionals who see the wisdom and advantages of embracing automation.

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**ORACLE**  
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Database

# Advice for Upwardly Mobile DBAs

## Ten Ways to Advance Your Career in an Era of Autonomous Database Technology





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# What is Python Programming Language?





## - O que é linguagem de programação Python?

- Python é uma linguagem de programação interpretada, de alto nível e de uso geral;
- Guido van Rossum é o criador e o primeiro lançamento do Python foi em 1991; ;
- Linguagem fácil e intuitiva;
- Código Aberto (open source)
- Adequação para tarefas diárias
- Python diferencia maiúsculas de minúsculas: BR <> br
- Comentários #
- PL / SQL semelhante, mas não o mesmo. É uma vantagem se você já conhece PL / SQL.

## - O que é linguagem de programação Python?

Conceitos básicos:

1 - Tipos:

1.1 (INTEGER)INT: Ex. 12

- Os inteiros (integers) podem ser negativos ou positivos;
- Faixa finita;

1.2 (FLOAT) FLUTUANTE:

- Números reais: por exemplo, 12.21
- Float pode ser um número inteiro

## - O que é linguagem de programação Python?

Conceitos básicos:

1 - Tipos:

1.3 STRINGS:

Descrição = "SKI IS BLUE"

S	K	I		I	S		B	L	U	E
0	1	3	4	5	6	7	8	9	10	11

1.4 BOOLEAN:

True (T) - 1

False (F) - 0



## - O que é linguagem de programação Python?

- Typecasting

Integer 2 -> Float 2.0;

Float 1.1 -> Integer 1;

**BE CAREFUL**

## - O que é linguagem de programação Python?

Expressões

Exemplo:  $5+10=15$

-	+	addition operator
-	-	subtraction operator
*	*	multiplication operator
/	/	division operator
//	//	integer divide operator
%	%	modulus (remainder) operator



## - O que é linguagem de programação Python?

Variáveis

```
_salary = 500.000  
Name = "Reis"  
print(_salary)  
print(Name)
```

## - O que é linguagem de programação Python?

### Tuples

- Aqui está um TUPLE "numbers":

```
numbers=(0,23,5,6,7,2,4,24)
```

- As Tuples (tuplas) são imutáveis.



## - O que é a linguagem de programação Python?

### Listas

- Aqui é uma List "B":

```
B=['Lebron James', 15.2, 1975]
```

- As listas são mutáveis

## - O que é a linguagem de programação Python?

Dicionários

```
{"key01":1,"key02":"02","key03":[3,3,3],"key04):(4,4,4),"key05":5}
```



## - O que é a linguagem de programação Python?

Sets

```
players_list=["Ronaldo","Real Madrid", "Real Madrid", 2001]  
players_set=set(players_list)  
players_set: {'Ronaldo', 'Real Madrid', 2001}
```

## - O que é a linguagem de programação Python?

### Funções

Python tem muitas funções integradas.

```
def function(d):  
    #add 20 to d  
  
    f=d+20;  
  
    print(d, "Plus 20 is =", f)  
    return f;
```



- O que é a linguagem de programação Python?

Objetos

```
class myexampleclass:
```

```
    d=250;
```

```
b1=myexampleclass()
```

```
print(b1.d)
```

## - O que é a linguagem de programação Python?

### Objetos

- função interna `__init__()`

```
class Customer:
    def __init__(person, name, age):
        person.name = name
        person.age = age
```

```
p1 = Customer("Maria", 52)
```

```
print(p1.name)
print(p1.age)
```

```
Maria
52
```

## - O que é a linguagem de programação Python?

### Objetos

- função interna `__init__()`

```
class Customer:
    def __init__(person, name, age):
        person.name = name
        person.age = age

    def function01(person):
        print("The name of the person is " + person.name)
```

```
p1 = Customer("Maria", 52)
```

```
p1.function01()
```

```
The name of the person is Maria
```



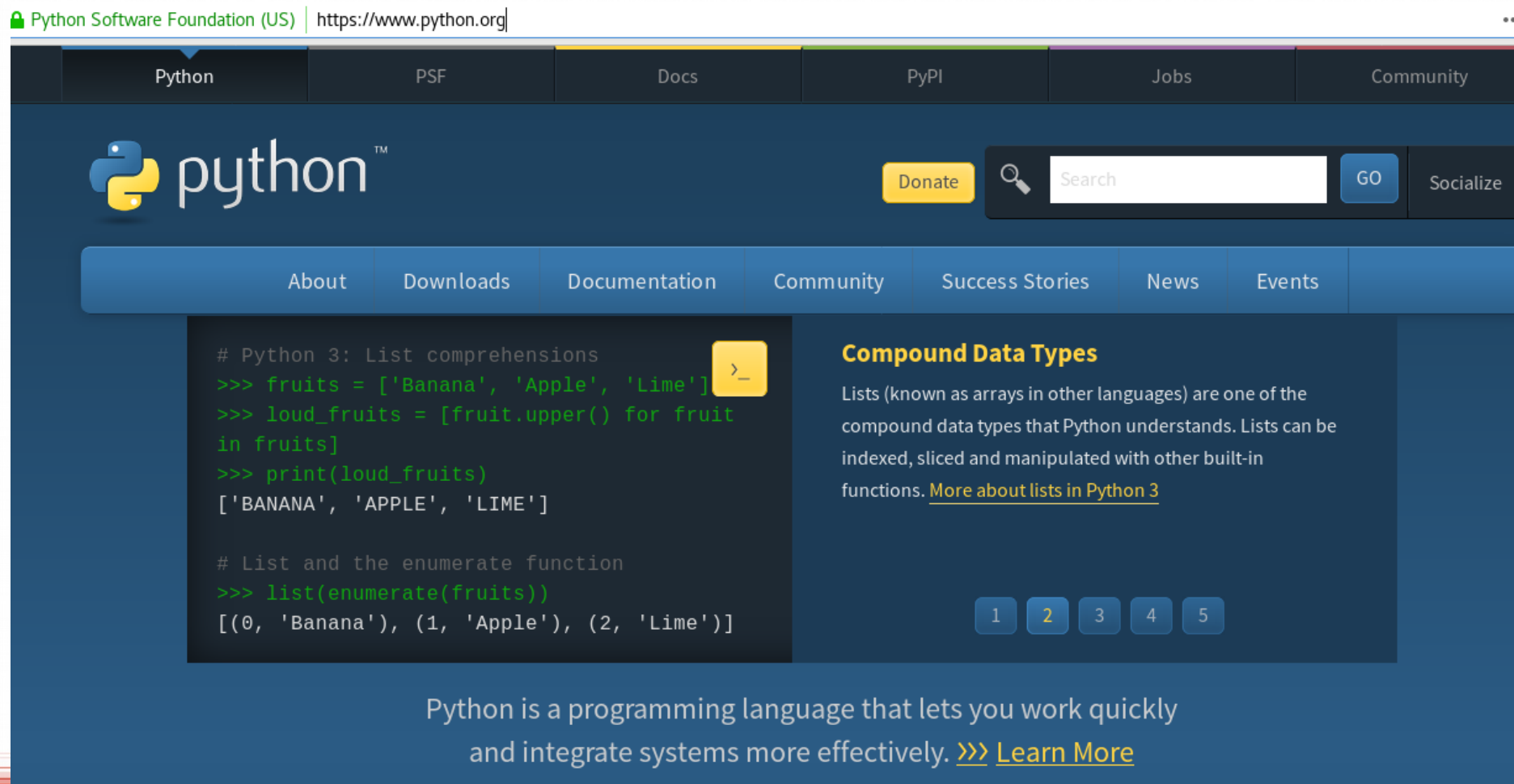
- What is Python Programming Language?

- What can you do with Python?



## - O que você pode fazer com Python?

- <https://www.python.org/>



Python Software Foundation (US) | <https://www.python.org/>

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```
# Python 3: List comprehensions
>>> fruits = ['Banana', 'Apple', 'Lime']
>>> loud_fruits = [fruit.upper() for fruit
in fruits]
>>> print(loud_fruits)
['BANANA', 'APPLE', 'LIME']

# List and the enumerate function
>>> list(enumerate(fruits))
[(0, 'Banana'), (1, 'Apple'), (2, 'Lime')]
```

### Compound Data Types

Lists (known as arrays in other languages) are one of the compound data types that Python understands. Lists can be indexed, sliced and manipulated with other built-in functions. [More about lists in Python 3](#)

1 2 3 4 5

Python is a programming language that lets you work quickly and integrate systems more effectively. >>> [Learn More](#)

## - O que você pode fazer com Python?

- **Install in Oracle Linux.**

- Documentação: <https://yum.oracle.com/oracle-linux-python.html>

<https://yum.oracle.com/oracle-linux-python.html>

**ORACLE**

HOME SUPPORT DOCUMENTATION DOWNLOADS Stay Connected:

### Python for Oracle Linux

All about developing with Python on Oracle Linux

Home > Python for Oracle Linux

#### Table of Contents

- About Python on Oracle Linux
- Installing Python
  - Enabling Required Repositories
  - System Python
- About Support for Python 2
- Installing Python 3 from Oracle Linux Latest Repo
- Installing Python 3 from EPEL
- Installing Python 3 from the Software Collection Library
- Installing Python on Oracle Linux 8 via AppStream Modules
- cx\_Oracle: Connecting Python to Oracle Database
  - About Oracle Instant Client
  - Installing cx\_Oracle for Python 3 from the Oracle Linux 7 Latest Repository
  - Installing cx\_Oracle for System Python







## - O que você pode fazer com Python?

### -- Install in Oracle Linux.

- Documentação: <https://yum.oracle.com/oracle-linux-python.html>

[yum.oracle.com/repo/OracleLinux/OL6/latest/x86\\_64/index.html](https://yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/index.html)










	<code>python-2.6.6-66.0.1.el6_8.x86_64.rpm</code>	18- Aug-2016	75.8 K
	<code>python-2.6.6-68.0.1.el6_10.x86_64.rpm</code>	13- Jun-2019	76.0 K
	<code>python-2.6.6-68.0.2.el6_10.i686.rpm</code>	05- Dec-2019	76.2 K
	<code>python-2.6.6-68.0.2.el6_10.x86_64.rpm</code>	01:13 05- Dec-2019	76.2 K
		01:13 03-	...

## - O que você pode fazer com Python?

-- Install in Oracle Linux.

- Documentação: <https://yum.oracle.com/oracle-linux-python.html>

[yum.oracle.com/repo/OracleLinux/OL7/latest/x86\\_64/index.html](https://yum.oracle.com/repo/OracleLinux/OL7/latest/x86_64/index.html)

	python-2.7.5-68.0.1.el7.x86_64.rpm	12- Apr-2018 01:14	92.5 K
	python-2.7.5-69.0.1.el7_5.x86_64.rpm	03- Jul-2018 14:00	92.6 K
	python-2.7.5-76.0.1.el7.x86_64.rpm	01- Nov-2018 10:47	93.8 K
	python-2.7.5-77.0.1.el7_6.x86_64.rpm	09- Apr-2019 23:37	93.9 K
	python-2.7.5-79.0.1.el7_6.x86_64.rpm	04- Jun-2019 18:29	94.1 K
	python-2.7.5-80.0.1.el7_6.x86_64.rpm	20- Jun-2019 21:04	94.3 K
	python-2.7.5-86.0.1.el7.x86_64.rpm	07- Aug-2019 08:48	95.1 K
	python-2.7.5-86.0.3.el7.x86_64.rpm	05- Dec-2019 02:06	95.3 K
	python-2.7.5-88.0.1.el7.x86_64.rpm	27- Nov-2019 10:00	95.4 K

## - O que você pode fazer com Python?

- Conheça a versão Python em seu sistema:

### - Python no Oracle Linux 6.10

```
[root@sel ~]# which python
/usr/bin/python
[root@sel ~]# python --version
Python 2.6.6
[root@vm2 ~]# cat /etc/oracle-release
Oracle Linux Server release 6.10
[root@sel ~]# |
```

### - Python no Oracle Linux 7.6

```
[oracle@localhost ~]# which python
/bin/python
[oracle@localhost ~]# python --version
Python 2.7.5
[oracle@localhost ~]# cat /etc/oracle-release
Oracle Linux Server release 7.6
[oracle@localhost ~]# uname -a
Linux localhost.localdomain 4.14.35-1818.3.3.el7uek.x86_64 #2 SMP Mon Sep 24 14:
45:01 PDT 2018 x86_64 x86_64 x86_64 GNU/Linux
[oracle@localhost ~]#
```

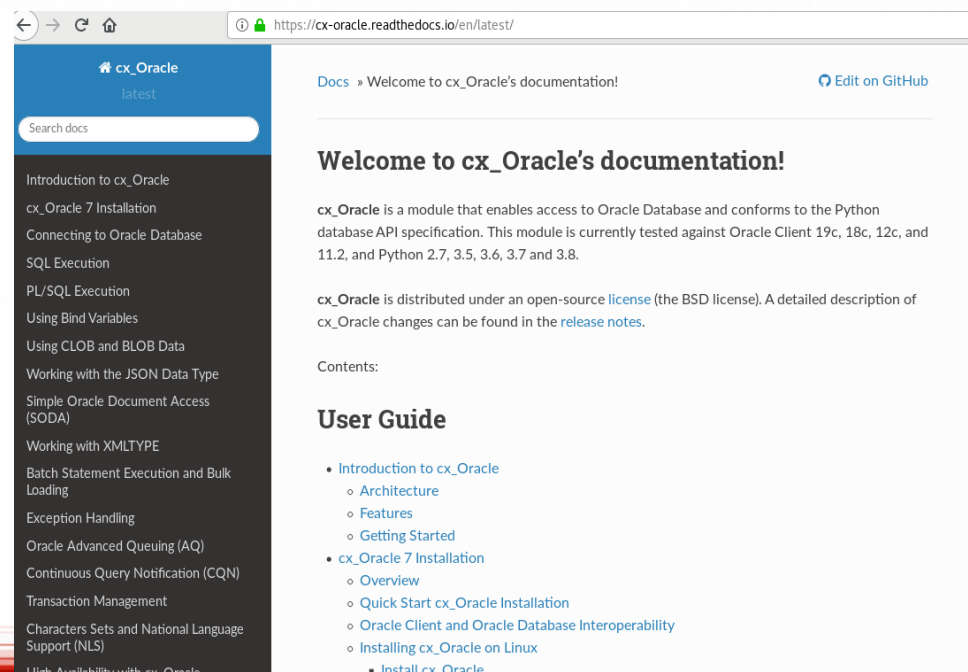


## - O que você pode fazer com Python?

### 1 - Connect to the Oracle Database.

#### 1.1 - cx\_Oracle x Installation :

- Documentação: <https://cx-oracle.readthedocs.io/en/latest/>



The screenshot shows a web browser displaying the cx\_Oracle documentation page. The browser address bar shows the URL <https://cx-oracle.readthedocs.io/en/latest/>. The page has a dark blue sidebar on the left with a search bar and a list of navigation links. The main content area is white and contains the following text:

Docs » Welcome to cx\_Oracle's documentation! [Edit on GitHub](#)

### Welcome to cx\_Oracle's documentation!

cx\_Oracle is a module that enables access to Oracle Database and conforms to the Python database API specification. This module is currently tested against Oracle Client 19c, 18c, 12c, and 11.2, and Python 2.7, 3.5, 3.6, 3.7 and 3.8.

cx\_Oracle is distributed under an open-source [license](#) (the BSD license). A detailed description of cx\_Oracle changes can be found in the [release notes](#).

Contents:

### User Guide

- [Introduction to cx\\_Oracle](#)
  - [Architecture](#)
  - [Features](#)
  - [Getting Started](#)
- [cx\\_Oracle 7 Installation](#)
  - [Overview](#)
  - [Quick Start cx\\_Oracle Installation](#)
  - [Oracle Client and Oracle Database Interoperability](#)
  - [Installing cx\\_Oracle on Linux](#)
    - [Install cx\\_Oracle](#)

## - O que você pode fazer com Python?

### - cx\_Oracle x Installation - Pre-requisites:

- Install python version 3;

```
oraclelinux7]# python --version
Python 2.7.5
```

```
oraclelinux7]# yum install -y python3
Loaded plugins: langpacks, ulninfo
Resolving Dependencies
--> Running transaction check
---> Package python3.x86_64 0:3.6.8-13.0.1.el7 will be installed
--> Processing Dependency: python3-libs(x86-64) = 3.6.8-13.0.1.el7 for package: python3-3.6.8-13.0.1.el7.x86_64
--> Processing Dependency: python3-pip for package: python3-3.6.8-13.0.1.el7.x86_64
--> Processing Dependency: python3-setuptools for package: python3-3.6.8-13.0.1.el7.x86_64
--> Processing Dependency: libpython3.6m.so.1.0()(64bit) for package: python3-3.6.8-13.0.1.el7.x86_64
--> Running transaction check
---> Package python3-libs.x86_64 0:3.6.8-13.0.1.el7 will be installed
---> Package python3-pip.noarch 0:9.0.3-7.el7_8 will be installed
---> Package python3-setuptools.noarch 0:39.2.0-10.el7 will be installed
```

...

...

```
Dependency Installed:
python3-libs.x86_64 0:3.6.8-13.0.1.el7          python3-pip.noarch 0:9.0.3-7.el7_8          python3-setuptools.noarch 0:39.2.0-10.el7
```

```
Complete!
oraclelinux7]#
```

## - O que você pode fazer com Python?

- cx\_Oracle x Installation – Pre-requisites:

• Install Cx\_Oracle 7 from Pypi: <https://pypi.org/project/cx-Oracle/>

```
oraclelinux7] python3 -m pip install cx_Oracle --upgrade
```

```
Collecting cx_Oracle
```

```
Using cached
```

```
https://files.pythonhosted.org/packages/d5/15/d38862a4bd0e18d8ef2a3c98f39e743b8951ec5efd8bc63e75db04b9bc31/cx\_Oracle-7.3.0-cp36-cp36m-manylinux1\_x86\_64.whl
```

```
Installing collected packages: cx-Oracle
```

```
Successfully installed cx-Oracle-7.3.0
```



## - O que você pode fazer com Python?

- cx\_Oracle x Installation – Pre-requisites:

### •Install Oracle Instant Client:

Oracle Instant Client Zip Files

<https://www.oracle.com/ae/database/technologies/instant-client/linux-x86-64-downloads.html>

Oracle Instant Client RPMs

```
yum install oracle-instantclient12.1-basic-12.1.0.2.0-1.x86_64.rpm
```

### (Example of Instant Client Installation for Oracle Database 12cR1):

```
oraclelinux7]# yum install oracle-instantclient12.1-basic-12.1.0.2.0-1.x86_64.rpm
Loaded plugins: langpacks, ulninfo
Examining oracle-instantclient12.1-basic-12.1.0.2.0-1.x86_64.rpm: oracle-instantclient12.1-basic-12.1.0.2.0-1.x86_64
Marking oracle-instantclient12.1-basic-12.1.0.2.0-1.x86_64.rpm to be installed
Resolving Dependencies
--> Running transaction check
---> Package oracle-instantclient12.1-basic.x86_64 0:12.1.0.2.0-1 will be installed
Installed:
  oracle-instantclient12.1-basic.x86_64

...
Complete!
oraclelinux7]#
```

## - O que você pode fazer com Python?

- cx\_Oracle x Installation – Pre-requisites:

•Add Instant Client to the runtime link path .

```
oraclelinux7]# sh -c "echo /usr/lib/oracle/12.2/client64/lib > /etc/ld.so.conf.d/oracle-instantclient.conf"
oraclelinux7]# ldconfig
oraclelinux7]$ export LD_LIBRARY_PATH=/usr/lib/oracle/12.1/client64/lib:$LD_LIBRARY_PATH
```

## - O que você pode fazer com Python?

1 - Connect to the Oracle Database.

### 1.2 - Install the Oracle Database software (Example of a 12Cr1 Oracle Database software installed in a Oracle Linux 7.6):

SQL\*Plus: Release 12.1.0.2.0 Production on Mon Jun 1 05:24:19 2020

Copyright (c) 1982, 2014, Oracle. All rights reserved.

Connected to:

Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production

With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

```
SQL> select instance_name, status from v$instance;
```

```
INSTANCE_NAME  STATUS
```

```
-----
```

```
pythondb  OPEN
```



## - O que você pode fazer com Python?

1 - Connect to the Oracle Database.

### 1.3 - Create the script to connect to the Oracle Database (Script called myconnectdb.py):

```
oraclelinux7]$ cat myconnectdb.py
from __future__ import print_function
import cx_Oracle
```

```
# Connect as user "c##brunors" with password "112233" to the "oraclepdb" service running on this computer.
connection = cx_Oracle.connect("c##brunors", "112233", "pythondbhost.localdomain/pythondbservice.localdomain")
```

```
cursor = connection.cursor()
```

```
cursor.execute(
    'SELECT count(*) from all_users')
for value in cursor:
```

```
    print("Values:", value)
```

```
oraclelinux7]$ python3 myconnectdb.py
Values: (36,)
```

## - O que você pode fazer com Python?

2 - E.g Comparing files to be used by na Oracle External tables :

### **2.1 File:**

#### **File techtable1.txt:**

```
oraclelinux7]$ cat techtable1.txt  
BRZ,Brazil,Portuguese  
NEZ,New Zealand,English  
PRT,Portugal,Portuguese  
SPN,Spain,Spanish
```

#### **File techtable2.txt:**

```
oraclelinux7]$ cat techtable2.txt  
ITL,Italy,Italian  
ENG,England,English  
SWE,Sweden,Swedish  
HUN,Hungary,Hungarian
```

## - O que você pode fazer com Python?

2 - E.g Comparing files to be used by an Oracle External tables :

### 2.2 File comparetablefiles.py:

```
oraclelinux7]$ cat comparetablefiles.py
f1=open("tehtable1.txt","r")
f2=open("tehtable2.txt","r")
n = 0
for line1 in f1:
    for line2 in f2:
        if line1==line2:
            print("Same value in both lines.\n", line1[n])
            n += 1
        else:
            print("The line" ,n, "at the file tehtable1.txt is:")
            print(line1)
            print(" The line", n, "at the file tehtable2.txt is:")
            print(line2)
            n += 1
    break
f1.close()
f2.close()
```



## - O que você pode fazer com Python?

2 - E.g Comparing files to be used by an Oracle External tables :

### 2.3 - File comparetablefiles.py:

```
oraclelinux7]$ python comparetablefiles.py  
(The line', 0, 'at the file techtable1.txt is:)  
BRZ,Brazil,Portuguese
```

```
(' The line', 0, 'at the file techtable2.txt is:)  
ITL,Italy,Italian
```

```
('The line', 1, 'at the file techtable1.txt is:)  
NEZ,New Zealand,English
```

```
(' The line', 1, 'at the file techtable2.txt is:)  
ENG,England,English
```

```
('The line', 2, 'at the file techtable1.txt is:)  
PRT,Portugal,Portuguese
```

```
(' The line', 2, 'at the file techtable2.txt is:)  
SWE,Sweden,Swedish
```

```
('The line', 3, 'at the file techtable1.txt is:)  
SPN,Spain,Spanish
```

```
(' The line', 3, 'at the file techtable2.txt is:)  
HUN,Hungary,Hungarian
```

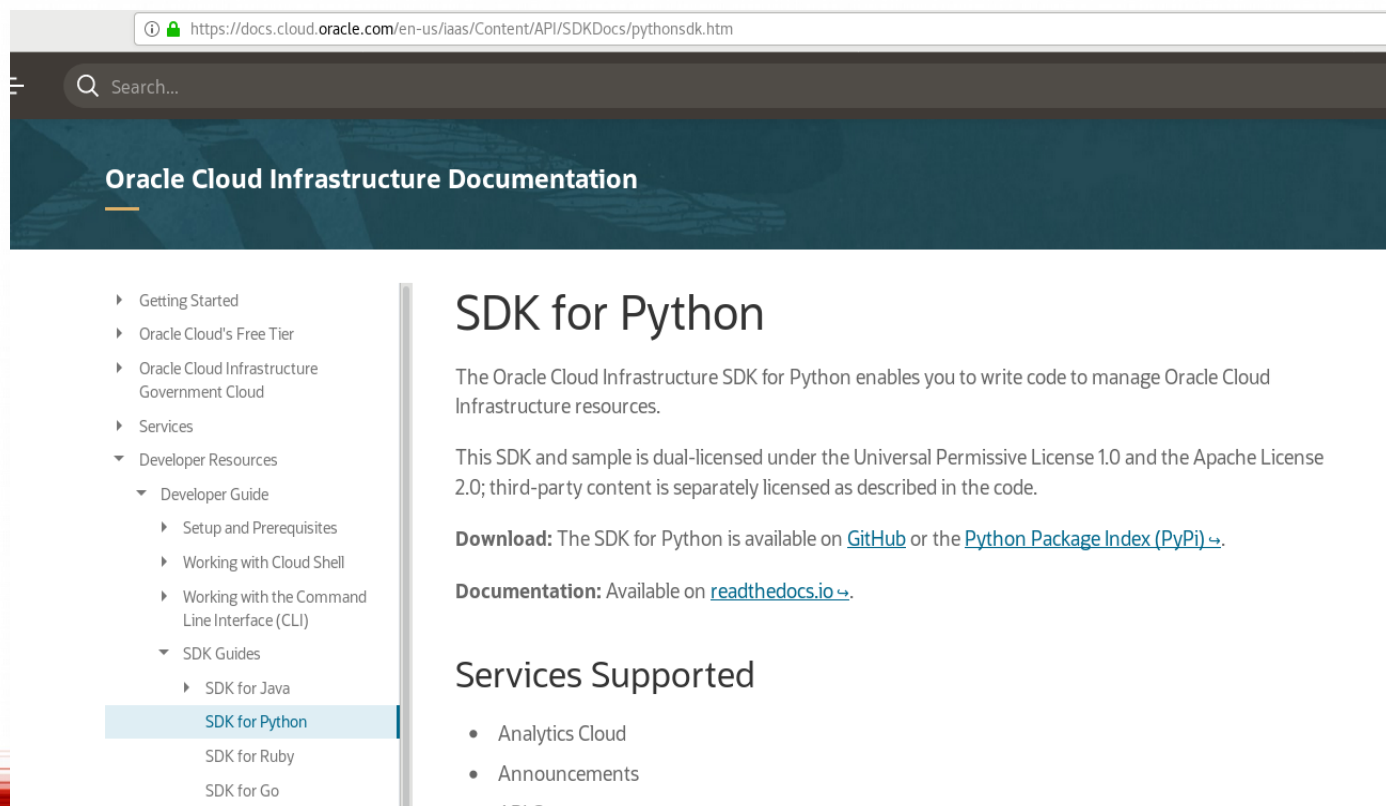
# - O que você pode fazer com Python?

## 4- Python and OCI:

### 4.1 - Python OCI SDK:

Documentação: <https://docs.cloud.oracle.com/en-us/iaas/Content/API/SDKDocs/pythonsdk.htm>

Github Oracle: <https://github.com/oracle/oci-python-sdk>



The screenshot shows the Oracle Cloud Infrastructure Documentation page for the SDK for Python. The browser address bar displays the URL: <https://docs.cloud.oracle.com/en-us/iaas/Content/API/SDKDocs/pythonsdk.htm>. The page header includes a search bar and the title "Oracle Cloud Infrastructure Documentation".

The main content area is titled "SDK for Python" and includes the following text:

The Oracle Cloud Infrastructure SDK for Python enables you to write code to manage Oracle Cloud Infrastructure resources.

This SDK and sample is dual-licensed under the Universal Permissive License 1.0 and the Apache License 2.0; third-party content is separately licensed as described in the code.

**Download:** The SDK for Python is available on [GitHub](#) or the [Python Package Index \(PyPi\)](#).

**Documentation:** Available on [readthedocs.io](#).

The "Services Supported" section lists:

- Analytics Cloud
- Announcements

A left-hand navigation menu is visible, with "SDK for Python" highlighted under the "Developer Guide" section.

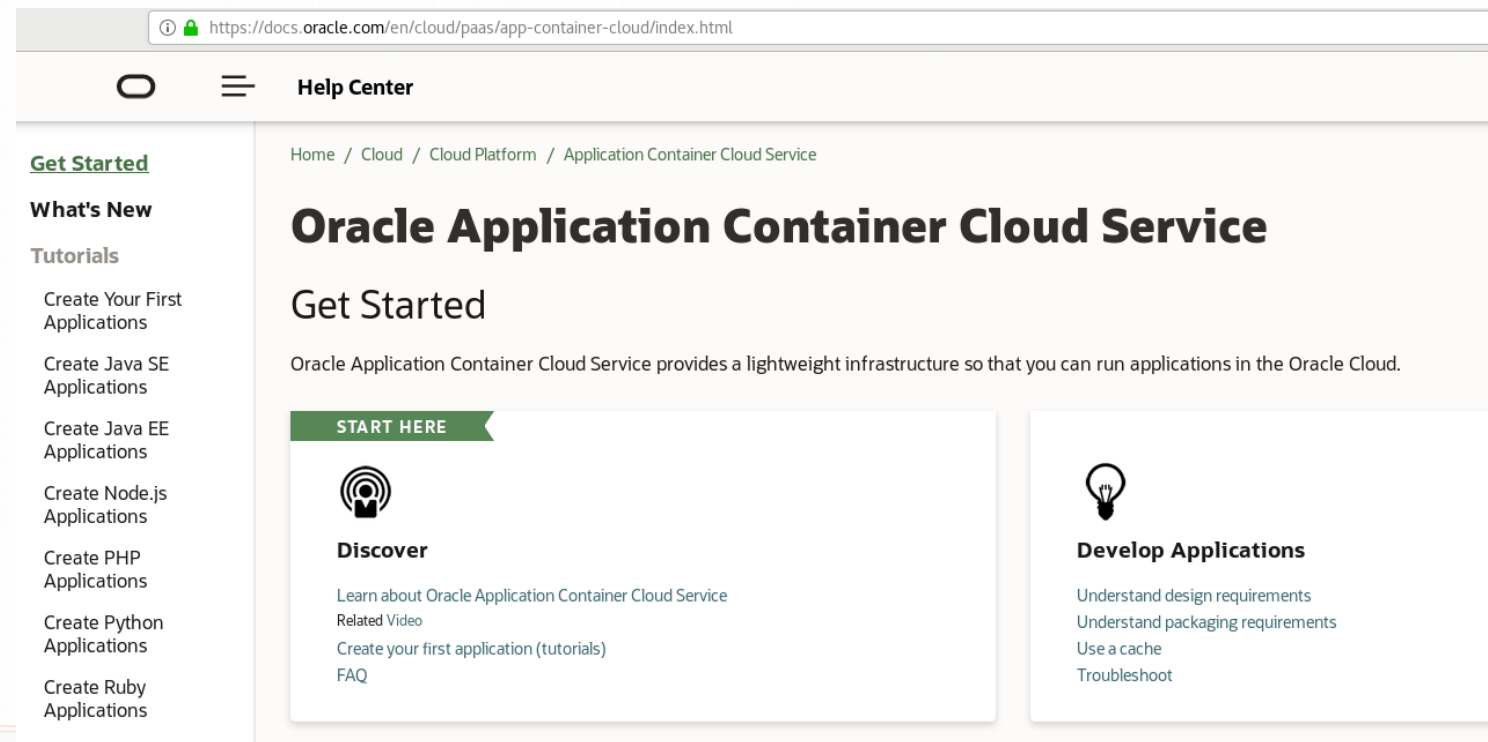
# - O que você pode fazer com Python?

## 4- Python and OCI (Oracle Cloud Infrastructure ):

### 4.2 - Oracle Application Container Cloud Service :

<https://docs.oracle.com/en/cloud/paas/app-container-cloud/index.html>

 <https://github.com/brunorsreis/oraclepython>



The screenshot shows the Oracle Help Center page for 'Oracle Application Container Cloud Service'. The breadcrumb trail is 'Home / Cloud / Cloud Platform / Application Container Cloud Service'. The main heading is 'Oracle Application Container Cloud Service' followed by 'Get Started'. Below this, a paragraph states: 'Oracle Application Container Cloud Service provides a lightweight infrastructure so that you can run applications in the Oracle Cloud.' There are two main cards under the 'START HERE' section: 'Discover' and 'Develop Applications'. The 'Discover' card includes links for 'Learn about Oracle Application Container Cloud Service', 'Related Video', 'Create your first application (tutorials)', and 'FAQ'. The 'Develop Applications' card includes links for 'Understand design requirements', 'Understand packaging requirements', 'Use a cache', and 'Troubleshoot'. On the left, a sidebar lists various application types: 'Create Your First Applications', 'Create Java SE Applications', 'Create Java EE Applications', 'Create Node.js Applications', 'Create PHP Applications', 'Create Python Applications', and 'Create Ruby Applications'.



## - O que você pode fazer com Python?

### 4- Python and OCI (Oracle Cloud Infrastructure ):

#### 4.2 - Oracle Application Container Cloud Service : Deploy a Python Application to Oracle Cloud

##### 3- Steps:

- Crie uma aplicação Python
- Prepare a aplicação para implantação
- Implante sua aplicação no serviço de nuvem Oracle Application Container

- What is Python Programming Language?

- What can you do with Python?

- What is the next?



- Python and DBA career ?

## Python e a carreira de DBA?

### - Oracle Database Administrator L3 role

#### Job Description

We are currently looking for a Oracle Database Administrator L3 to integrated to a team dedicated to a digital transformation on client's infrastructure in the context of missions for a client in sea transport business.

#### Your role :

- Maintain existing databases by investigating key factors (storage, input/output frequencies, access time etc.) and unusual incidents and problems
- Install patches and upgrade software to enhance database performance and compliance
- Maintain and manage database backup and recovery, data propagation (replication) and performance monitoring/tuning.
- Oracle DBA Monitors database disk space usage and perform RCA of database issues and recommend solutions or workaround.
- Research, recommend and implement automation methods to proactively manage databases.
- Perform database design tasks related to the structure of a database including analysis, logical data model review, and physical database design.
- Implement monitoring procedures to maximize availability and performance of the database.
- Participate and/or take a lead role with the infrastructure and database configurations/changes, upgrades etc.
  
- Offer based on an indefinite-term employment contract which term is linked to a temporary assignment

#### Required Expertise

- Ability to drive projects in international environment
- Strong drive on technical experts
- Minimum 3 years of experience in administering of Oracle databases and Oracle Goldengate
- Good knowledge of Oracle 11g and Oracle 12c architecture
- Experience with database optimization and SQL tuning
- Good knowledge of administrative tasks in Oracle 11g and Oracle 12c
- Good knowledge and experience with following Oracle products and technologies: RAC, ASM, Data Guard, RMAN, Cloud Control
- Good knowledge of SQL, PL/SQL
- Good knowledge of administration of Linux/UNIX OS in terms of database management

#### Preferred Expertise

- Experience in ExaData administration
- Experience in administering databases in Oracle Public Cloud
- Programming in BASH, PERL, Python
- Certificates OCM, OCE RAC, OCE Data Guard
- French speaker required



## - Python e a carreira de DBA?

- Senior Oracle PL/SQL Risk Developer

### Senior Oracle PL/SQL Risk Developer

Intercontinental Exchange ★★★★★ 105 reviews - Atlanta, GA

Apply On Company Site

#### Job Purpose

The Senior Oracle PL/SQL Developer will join a team of highly motivated and skilled individuals focused on the development and maintenance of multiple applications supporting Risk Management for ICE global Clearing Houses. We develop and support applications that monitor the trading activities of our clearing members in near real-time to evaluate risk and allow our risk analysts to make decisions on collecting more collateral during the day. We also develop and support applications that calculate stress gains/losses, determine if a member is highly concentrated in an asset, and a complex set of asset price movements over many years to predict potential movements in the future and hold capital from our members to ensure the clearing house is insulated from a potential member going defunct. Lastly, the group is highly engaged in providing and supporting tools and applications for business analytics and data management (Tableau and others). The environment is fast paced, exciting, and demanding.

The successful candidate will have considerable experience in database design, PL/SQL development, a good working knowledge of end-user and server-side data processing techniques, an excellent understanding of SDLC and agile development methodologies. The candidate will have a strong understand of Oracle tuning and performance investigation. A strong plus is a candidate familiar with working with very large datasets, queries, procedures, and management of the same.

#### Knowledge and Experience

- Minimum 5 years experience in PL/SQL Development
- Excellent communication skills
- Understanding of SDLC process and tools, agile program management concepts and version control
- Ability to work productively under pressure, and multi-task effectively
- Strong self-management skills and ability to juggle multiple projects
- Strong interpersonal skills and the ability to work well in a team environment
- Exposure in the financial services technologies, particularly in futures and options

#### Preferred

- Oracle 11g, 12c and RAC experience
- Tableau and Python experience
- Experience working in Unix/Linux environment
- Oracle Application Express (APEX)
- Experience with JavaScript/jQuery
- Understanding of messaging middleware

## - Python e a carreira de DBA?

### - Oracle DBA role

Title: Oracle DBA

Length: 12+ Months Contract

Location: Tarrytown, NY

Job Description

Key Responsibilities:

Works as part of the team to provide technical support for applications that have database requirements, including requirements gathering, through installation, configuration, testing and other production.

Expertise on database versions 11g,12c,18c including upgrades. Expertise with automating repetitive tasks using shell/python scripts.

Expertise with configuring and maintaining RAC clusters and Dataguard configurations. Experience with SQL and PL/SQL tuning, including in-depth tuning analysis with highly complex and vendor supplied code Experience working in a Linux/Unix environment, with equivalent experience writing, maintaining, and/or debugging operating system shell scripts Experience with database Backups, including RMAN, RMAN in a Data Guard Environment, classic export/import, and Oracle data pump. Experience working with traditional Data Warehousing databases, including Database Design and implementation skills, tuning and troubleshooting, Design, Installation, configuration, patching and upgrading of database server software and related products. Establish and maintain sound recovery and backup policies and procedures Implement and maintain database security (create and maintain users and roles, assign privileges). Ensuring data integrity and availability Establish and execute periodic disaster recovery testing Performance management, and tuning Database management, monitoring, and maintenance Capacity planning, Database licensing, Database security and encryption Evaluation of database features and database related products Provide Database compliance for Sarbanes Oxley (SOX)

Seniority level: Entry level

Employment type: Full-time

Job function: Information Technology

Industries: Information Technology and Services Computer Software Financial Services

## - Python e a carreira de DBA?

### - Oracle Database Administrator

---

Title: Oracle Database Administrator

What will you be doing in this role?

Installs and upgrades database software on the following server platforms and ensures license compliance: Oracle on RHEL/AIX, SQL Server on Windows, MySQL on RHEL

Performs database migrations from on-prem to AWS RDS and EC2 instances

Manages storage associated with Oracle/SQL Server/MySQL databases and assists system administrators with storage allocation and planning related to the database.

Monitors and optimizes the performance of Oracle instances in a networked environment.

Monitors and optimizes the performance of SQL Server and MySQL instances in a networked environment.

Designs and implements viable database backup, recovery, and high availability strategies and mechanisms. Executes database recovery, restoration, and/or restart as required.

Defines and implements database security, audit, and resource allocation policies and procedures. Defines, creates, and manages user accounts, profiles, privileges, roles, and required audit information.

Monitors and optimizes database instance using database administration tools, SQL scripts, and database utilities. Monitors SGA, resource utilization, and configures database parameters accordingly.

Designs and implements the data extraction, data load, and database synchronization routines and functions.

Assists in specification and implementation of tables, views, indexes, integrity, security, and business rules using DDL, DCL, DML, and PL/SQL functions, procedures, and packages.

Provides on-call support for enterprise-wide databases and responds to incidents in a timely manner.

Requirements:

Bachelor's Degree in related field or equivalent experience.

Requires 3 years in production database administration experience in a Production environment

Requires experience in project management, systems and database administration and integration, user relations, and vendor interactions.

Requires solid experience in monitoring, tuning, and administrating Oracle 11g/12c and/or SQL Server 2012/2014/2016 databases

Requires solid experience installing, configuring, and administering Oracle RAC and Oracle ASM.

Requires solid experience with, Oracle SQL\*NET, SQL\*Loader, SQL Plus and Import/Export utilities in a Windows server or Linux environment.

What else are we looking for?

Experience with patient care-oriented databases and hospital-based financial and administrative database applications preferred.

Experience with MySQL administration a plus

Experience with cloud technologies a plus, especially AWS (RDS/EC2)

Experience with Epic Clarity administration a plus

Requires experience in SQL, DDL, DCL, and DML programming. PowerShell, Python and/or Shell Scripting a plus.

Oracle or SQL Server DBA Certification required

Knowledge of Oracle Enterprise Manager, Oracle Internet Directory and/or WebLogic is preferred.



## - Python e a carreira de DBA?

### - Oracle Database Administrator

Title: Oracle Database Administrator

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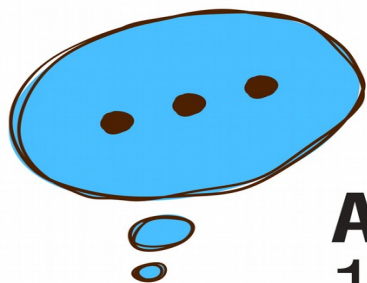
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# QUIZ



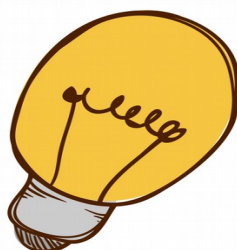
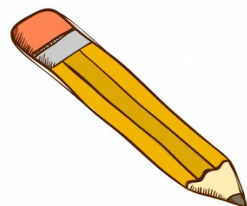
**As regras para concorrer ao quiz são:**

- 1- Acertas as perguntas do QUIZ;
- 2- Fazer um post no LinkedIn com o seguinte texto:

"Acompanhei a palestra do @Bruno Reis do blog <http://www.techdatabasket.com> no dia 15 de Agosto de 2020 e ganhei um voucher por responder corretamente ao QUIZ.  
**#EPICOTECH #SWEOUG "**

No final da palestra a primeira pessoa que responderá corretamente o Quiz de pergunta ganhará um voucher de certificação Oracle que será enviado para o e-mail da pessoa no dia 31 de Agosto de 2020.

***O primeiro que responder no chat em 1 minuto será o ganhador.***





# QUIZ - PERGUNTAS

1) Quem é o criador do Python e de qual país ele é?

2) Cite 3 características da linguagem Python?

3) Quais são os tipos de variáveis? *(Dica: são 4)*

4) Qual é o nome do módulo para acessar o banco de dados Oracle conforme as especificações API do Python?

5) A plataforma Oracle Cloud Data Science tem Python ou não? *(Responda como sim ou não)*





# QUIZ - RESPOSTAS

- 1)  
**Nome: Guido van Rossum**  
**País: Holanda**
  
- 2)  
**Open Source;**  
**Fácil e intuitivo;**  
**Case sensitive.**
  
- 3)  
**Int, String, Boolean e Float**
  
- 4)  
**Cx\_Oracle**
  
- 5)  
**Sim**



# QUESTÕES?



 [www.twitter.com/brunorsdba](https://www.twitter.com/brunorsdba)  
 [www.techdatabasket.com](https://www.techdatabasket.com)

 <https://github.com/brunorsreis/oraclepython>