

Why You Should Consider an Oracle to Amazon RDS Migration.

PRESENTED BY

Brandon Webb

Senior Cloud Architect

datAvail
BI/Analytics • Applications • Databases



New York Oracle User Group (NYOUG)

Virtually live from New York, the world's most exciting city welcomes all Oracle users, associates, students and professionals to become part of this dynamic group.

NYOUG was formed in 1984 for the exchange of ideas, assistance and support among users of Oracle software products.

nyoug.org

Leadership

President: Simay Alpoge
president@nyoug.org

Vice President: Coleman Leviter
vicepresident@nyoug.org

Treasurer: Robert Edwards
treasurer@nyoug.org



PRESENTER

Brandon Webb

Senior Cloud Architect

Experience

- ^ 5+ years Cloud Technologies

Accredited

- ^ AWS Associate Solutions Architect
 - ^ Oracle Associate Solutions Architect
-
- ^ Masters in Information Systems

Datavail Overview

We are data specialists

Databases, Analytics, and
Application Data Integration



16+ years delivering
data services



700+ customers
with average client
retention of 7 years



Managed services,
projects, and staffing

datAvail

BI/Analytics • Applications • Databases



Database Operations

- ⬆ All major platforms: SQL Server, Oracle, DB2, MySQL, MongoDB, PostgreSQL, AWS, Azure
- ⬆ Comprehensive development & operational services
- ⬆ US & Global models
- ⬆ Reactive and proactive services



Application Management

- ⬆ EBS
- ⬆ Hyperion/Essbase
- ⬆ Microsoft Dynamics
- ⬆ SharePoint
- ⬆ Custom development
 - Microsoft .NET
 - Oracle APEX



Analytics, Visualization & Integration

- ⬆ Microsoft SSRS, SSIS, SSAS
- ⬆ PowerBI
- ⬆ Oracle OBIEE, BICS, GoldenGate
- ⬆ Informatica
- ⬆ Oracle Data Integrator
- ⬆ ETL development and operational run

Fill Out Evaluation Form

Fill out the Cloud Adoption survey for a chance to **WIN** a Work from Home package!

<https://www.techvalidate.com/registration/bdbc0b7e1d>

The Work from Home package includes:

- ⬆ Datavailopoly – the game for DBAs by DBAs
- ⬆ Datavail mask
- ⬆ Noise-canceling headphones
- ⬆ Datavail hoodie
- ⬆ Datavail insulated cup
- ⬆ Sherpa blanket



Agenda

- ^ Patching, patching, patching....
- How much space do you need..... 5G.... wait 10G... can you do 50G?
Is that parameter right? Crap did we forget to add that?
- Our DB is down, can you confirm? The load looks high.....
- Of course our backups are working.....
- It's the database... No way it's the server
- Well, we trust them... We know them
- Did we license everything correctly..... oh no!

Agenda

^ Security

- Administrative Tasks
- Availability
- Backup & Recovery
- Performance
- Automation
- Licensing

WHY DO ALL THIS... SAVINGS!

- **Licensing**
- **Patching**
- **Mistakes**
- **Bad Hardware**
- **Testing**
- **Redundancy**
- **Accounting**
- **Software**
- **Consolidate**

**Joke: What's a
hackers favorite
season?**

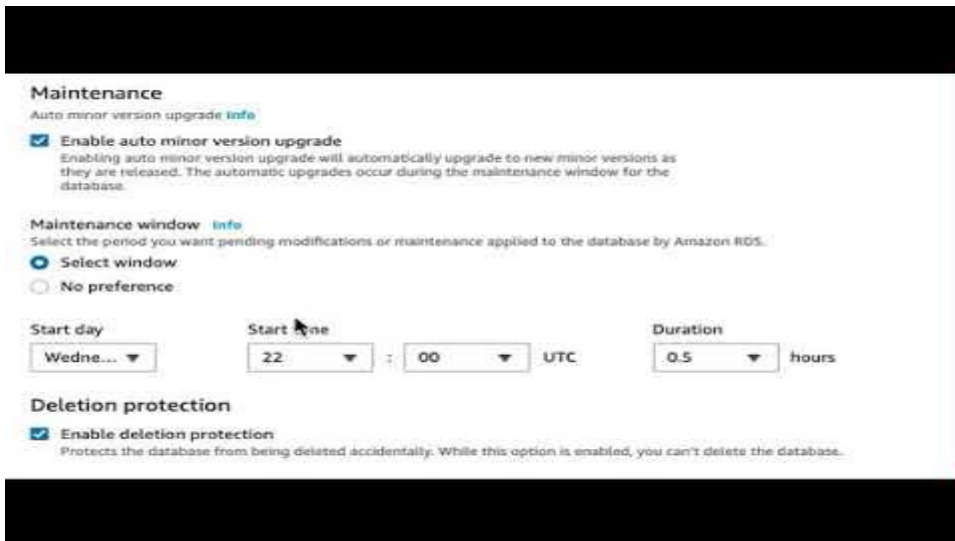
**Answer: Phishing
Season**

Security

- ^ Patching
- ^ Listener Port
- ^ Encryption
- ^ ACLs
- ^ SYS/SYSTEM Passwords
- ^ SYSDBA
- ^ Profiles

Picture of "I trust you", or
something not secure here

Security



The screenshot shows the AWS RDS Maintenance configuration page. It includes sections for 'Maintenance' with an 'Enable auto minor version upgrade' checkbox checked, 'Maintenance window' with a 'Select window' radio button selected, and 'Deletion protection' with an 'Enable deletion protection' checkbox checked. The maintenance window settings are configured for Wednesday at 22:00 UTC for a duration of 0.5 hours.

Maintenance
Auto minor version upgrade [info](#)

☒ **Enable auto minor version upgrade**
Enabling auto minor version upgrade will automatically upgrade to new minor versions as they are released. The automatic upgrades occur during the maintenance window for the database.

Maintenance window [info](#)
Select the period you want pending modifications or maintenance applied to the database by Amazon RDS.

☒ **Select window**
☐ No preference

Start day: Wedne...
Start time: 22 : 00 UTC
Duration: 0.5 hours

Deletion protection

☒ **Enable deletion protection**
Protects the database from being deleted accidentally. While this option is enabled, you can't delete the database.

- ^ Benefits of AWS
 - No More Scheduling Patching
 - You state the schedule & AWS will patch the database for you

Administrative Tasks

- ^ Can I get more space?
- ^ That tablespace is full again
- ^ How big did you want that again...
- ^ Can I be added to the database
- ^ SYSDBA
- ^ Profiles

Picture of someone overwhelmed
with tasks

Administrative Tasks

The screenshot shows the 'Storage' configuration page in the datAvail interface. It includes a 'Storage type' dropdown menu set to 'General Purpose (SSD)'. Below this is an 'Allocated storage' input field with the value '40' and a 'GIB' unit indicator. A note specifies the range from 20 to 65,536 GIB. A warning box states that provisioning less than 100 GIB for high throughput workloads could lead to higher latencies. The 'Storage autoscaling' section has a checked checkbox to 'Enable storage autoscaling'. At the bottom, the 'Maximum storage threshold' is set to '100' GIB, with a note that charges apply when the database autoscales to this threshold.

Storage

Storage type [info](#)
General Purpose (SSD)

Allocated storage
40 GIB
(Minimum: 20 GIB, Maximum: 65,536 GIB) Higher allocated storage may improve IOPS performance.

Storage autoscaling [info](#)
Provides dynamic scaling support for your database's storage based on your application's needs.

☒ Enable storage autoscaling
Enabling this feature will allow the storage to increase once the specified threshold is reached.

Maximum storage threshold [info](#)
Charges will apply when your database autoscales to the specified threshold.
100 GIB
Minimum: 41 GIB, Maximum: 65,536 GIB

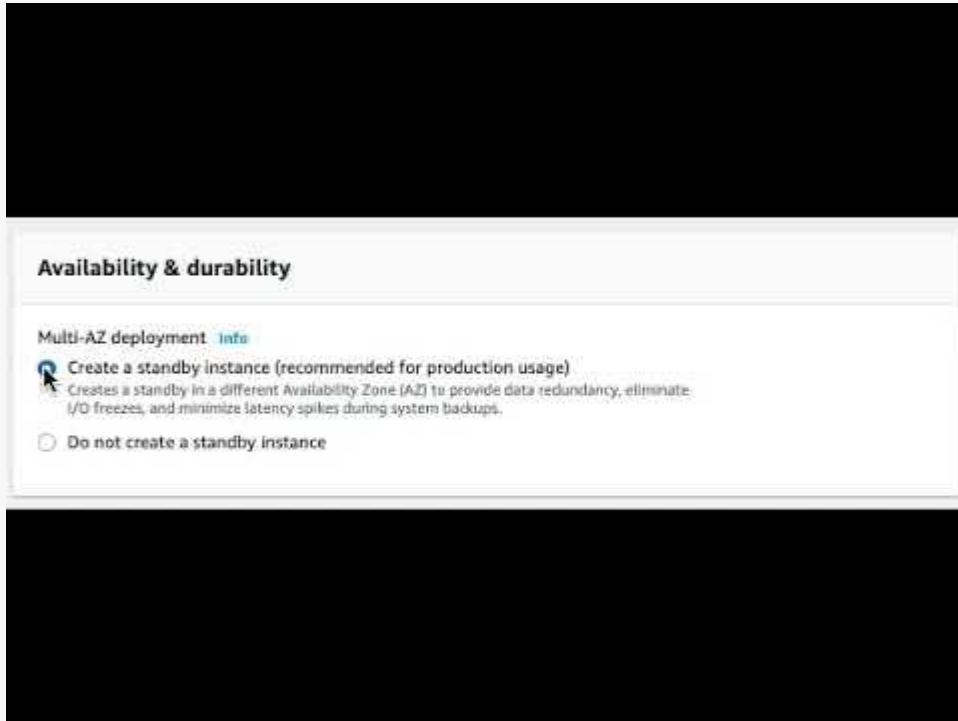
- ^ Benefits of AWS
- ^ Built in Graphs/Reports
- ^ Configuration Management
- ^ Compliance
- ^ Standardization
- ^ Knowledge Transfer
- ^ Code Pipeline



Something like this

Availability

- ^ Standby Management
- ^ GoldenGate
- ^ How big did you want that again...
- ^ Can I be added to the database
- ^ Update
- ^ SYSDBA
- ^ Profiles



- ^ Benefits of AWS
 - Standby Management done by AWS
 - No more lagging/unknowns
 - Zone Preference/Region Solutions

Backup & Recovery

password authentication
Authenticate with database password

☐ Password and IAM database authentication
Authenticate using the database password and user credentials (through AWS IAM user and roles)

▼ **Additional configuration**
Database options, encryption enabled, backup enabled, instance details, Performance insights enabled, Enhanced Monitoring enabled, multi-az, CloudWatch Logs, backup protection enabled

Database options

Initial database name [help](#)

If possible, specify a database name, Amazon RDS does not create a database.

DB cluster parameter group [help](#)

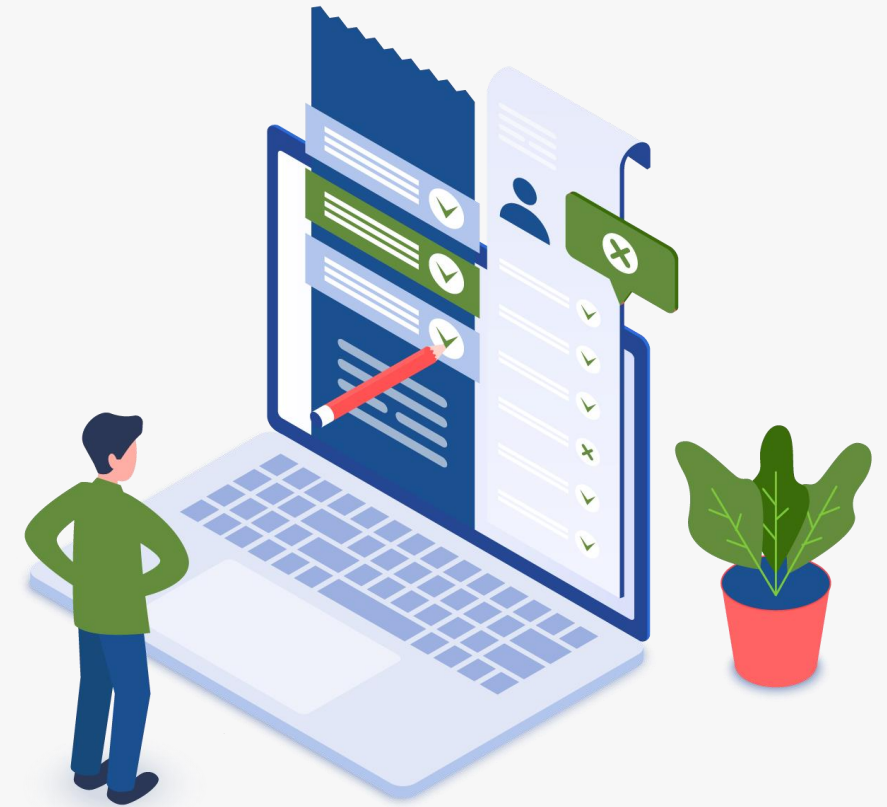
DB parameter group [help](#)

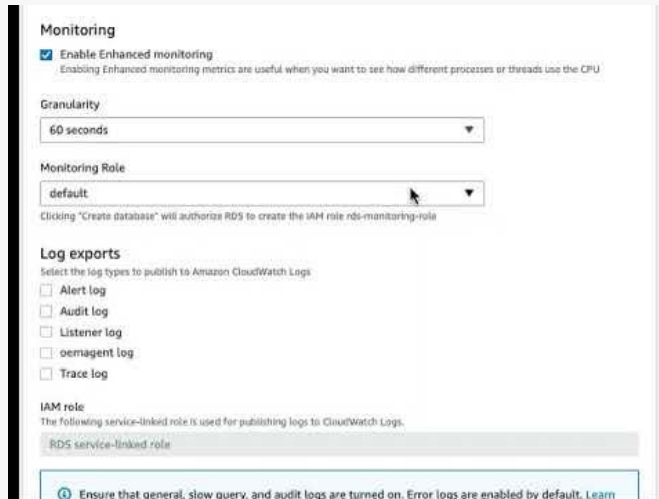
Option group [help](#)

Failover priority

Backup
Optional, must include snapshot of your database

Backup retention period [help](#)
Choose the number of days that RDS should retain automatic backups for this instance





Ability to Review Export Logs via the GUI

No more mailing logs as you can download them

Cloudwatch Metrics for Alerting

Zoom In/Out Graphs for Analysis of Thresholds

▼ View default settings for Easy create

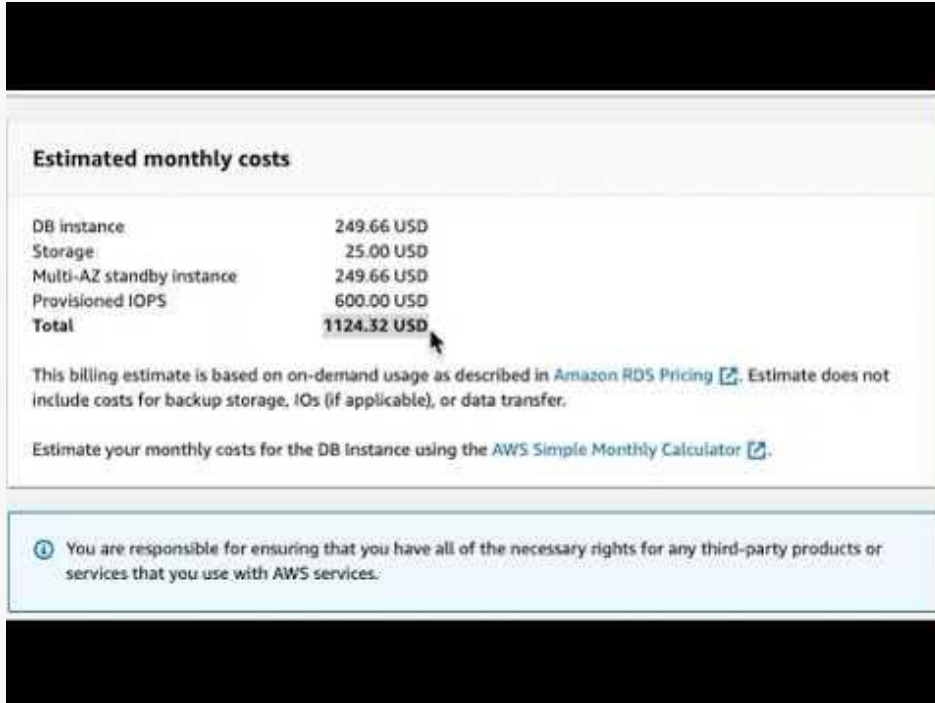
Easy create sets the following configurations to their default values, some of which can be changed later. If you want to change any of these settings now, use [Standard Create](#).

Configuration ▼	Value	Editable after database is created ▲
Database Features	provisioned	No
Encryption	Enabled	No
VPC	Default VPC (vpc-a55d01c2)	No
Option Group	default:aurora-mysql-5-7	No
Subnet Group	default	Yes
Automatic Backups	Enabled	Yes
VPC Security Group	sg-bd06c4c6	Yes
Publically Accessible	No	Yes
Database Port	3306	Yes
DB Cluster Identifier	database-1	Yes
DB Instance Identifier	database-1	Yes
DB Engine Version	5.7.mysql_aurora.2.07.2	Yes
DB Parameter Group	default:aurora-mysql5.7	Yes
DB Cluster Parameter Group	default:aurora-mysql5.7	Yes
Performance Insights	Enabled	Yes
Monitoring	Enabled	Yes
Maintenance	Auto Minor Version Upgrade Enabled	Yes
Delete Protection	Not Enabled	Yes

Automating File Transfers to Amazon RDS for Oracle databases

AWS CLI for automating database provisioning, spin up test/dev environments

```
aws rds create-db-instance \  
  --db-instance-identifier test-mysql-instance \  
  --db-instance-class db.t3.micro \  
  --engine mysql \  
  --master-username admin \  
  --master-user-password secret99 \  
  --allocated-storage 20
```



The screenshot displays the 'Estimated monthly costs' section of the Amazon RDS pricing calculator. It lists the following costs:

Component	Cost (USD)
DB instance	249.66
Storage	25.00
Multi-AZ standby instance	249.66
Provisioned IOPS	600.00
Total	1124.32

Below the table, a note states: 'This billing estimate is based on on-demand usage as described in [Amazon RDS Pricing](#). Estimate does not include costs for backup storage, IOs (if applicable), or data transfer.'

At the bottom, there is a link to 'Estimate your monthly costs for the DB Instance using the [AWS Simple Monthly Calculator](#)'.

A disclaimer at the very bottom reads: 'You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services.'

You can run Amazon RDS for Oracle under two different licensing models – “License Included” and “Bring-Your-Own-License (BYOL)”. In the "License Included" service model, you do not need separately purchased Oracle licenses; the Oracle Database software has been licensed by AWS.

On Demand VS Reserved Instances

<https://aws.amazon.com/rds/reserved-instances/>



**Connect
With Us!**



@nyoug_nyc, @NYOUG_Pres



New York Oracle Users Group



New York Oracle Users Group



<http://nyoug.org/>



<https://www.meetup.com/New-York-Open-Group-Meetup/>



Outreach to Our Members.

The screenshot displays the Oracle User Groups website. On the left, a map of New York and surrounding areas (Pennsylvania, New Jersey, Delaware, Maryland, Virginia) is shown. A red pin marks the location of New York City. On the right, a sidebar titled 'Oracle User Groups' lists several user groups with their respective logos and links:

- OAUGNYC Metro**
Apps
<http://www.oaugnyc.org/home.aspx>
- New York Java Meetup User Group**
Java
<http://www.meetup.com/nycjava/>
- New York Java Special Interest Group**
Java
<http://www.javasig.com/>
- NYOUG**
New York Oracle User Group
Tech
<http://nyoug.org/>
- Upstate New York Oracle User Group**
Tech
<http://www.nyoug.com/>

Below the list, there is a section titled 'FEATURED CONTENT' with links to:

- Overview of Oracle User Group Community Portal
- Oracle User Group Leader FAQ
- Oracle User Group Community FAQ

There is also a 'Tweets by @oracleugs' section featuring a tweet from @oracleugs about booking a 'virtual seat' at #OracleCloudDay and making choices that will impact the future of #CloudComputing. The tweet includes a photo of a large audience at a conference.

Oracle User Group Community

<https://community.oracle.com/community/usergroups>

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A group of people are sitting in a circle, engaged in a discussion. The image is overlaid with a blue gradient. The text "Questions & Discussion" is written in white, bold, sans-serif font on the right side of the image. The background shows several people's hands and arms, suggesting an active conversation. One person in the foreground is gesturing with their hand, while others are listening or looking towards the center of the circle.

Questions & Discussion



Thank You!

nyoug.org

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Thank You!

datavail.com