
nyoug.org

# NYOUG

## New York Oracle User Group

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.

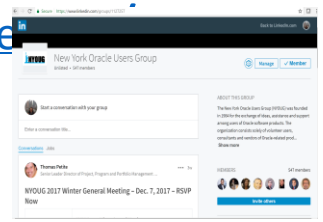
Leadership
Contact Us / E-Mail

| | | |
|---|---|---|
| President | Simay Alpoge | president@nyoug.org |
| Vice President | Coleman Leviter | vicepresident@nyoug.org |
| Treasurer | Robert Edwards | treasurer@nyoug.org |

# Connect with us !

**Twitter - @nyoug_nyc, @NYOUG_Pres**

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



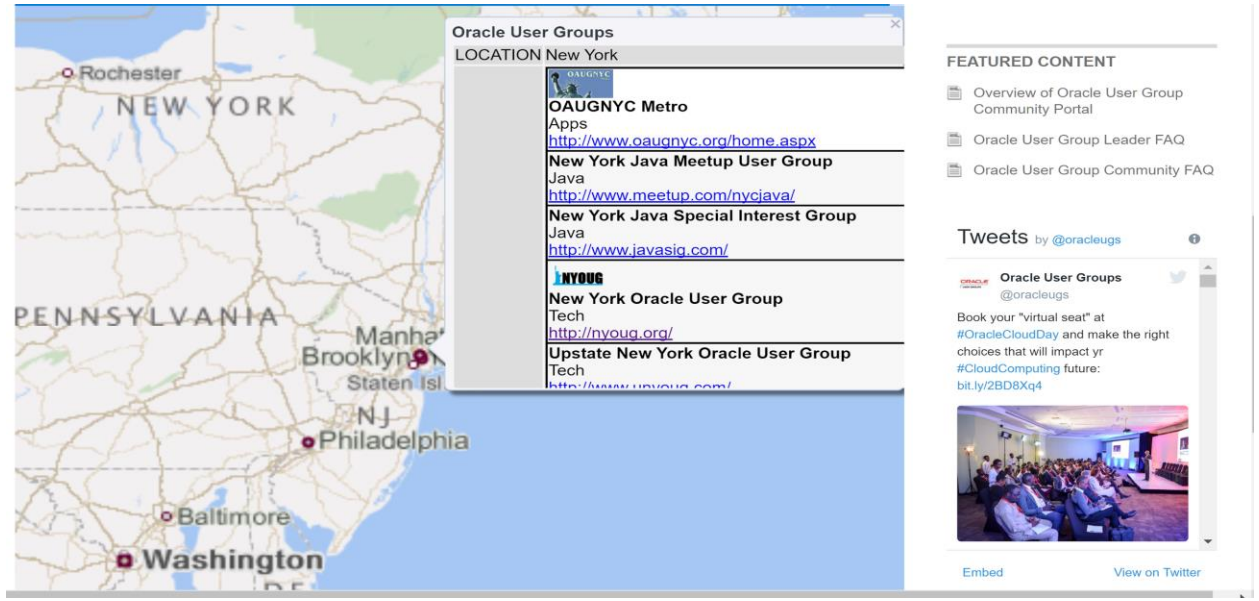

**Linkedin – New York Oracle Users Group**


**Facebook - New York Oracle Users Group**

**Web site – http://nyoug.org/**

# Outreach to our members

**Oracle User Group Community**




**https://community.oracle.com/community/usergroups**


# THANK YOU

Quest®

# Standard Edition
# Hello 19C – Goodbye RAC

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Where Next Meets Now.


DISRUPTION MAY BE THE KINDLING YOU NEEDED

# Agenda

- Got RAC?
- Why RAC?
- HA and DR – Differences and similarities
- No RAC - What are my options?
- Wrap Up

# Got RAC?

- Not in 19c Standard Edition
- Oracle MOS Doc ID 2504078.1 (January 2020)

  Starting with Oracle Database 19c, Oracle RAC in no longer supported with the Oracle Standard Edition(SE), customers attempting to upgrade to Oracle Database 19c will have to choose between one of the following upgrade paths, unless a migration into the Oracle Cloud can be considered.

  Upgrade from Standard Edition to Enterprise Edition.

  Convert the Oracle RAC Database to a Single Instance database

- Is that it?
  - Not really
  - You have options
  - But first……

# Why RAC?

- Different talk
- Major uses
  - HA
  - Workload Isolation
  - DR
    - Single point of failure
    - Same location
  - Extreme Scaling
    - Not with Standard Edition

# Why RAC - HA

- Quick Failover
- Almost seamless
  - App still sees disconnect and reconnect
- Single point of failure – the database
- Lots of alternatives

# Why RAC – Workload Isolation

- Scalability
- Like a second instance
  - If done correctly
  - Block pings if not
- Single point of failure
- Probably the best case for Enterprise Edition or Cloud

# HA and DR – Differences and Similarities

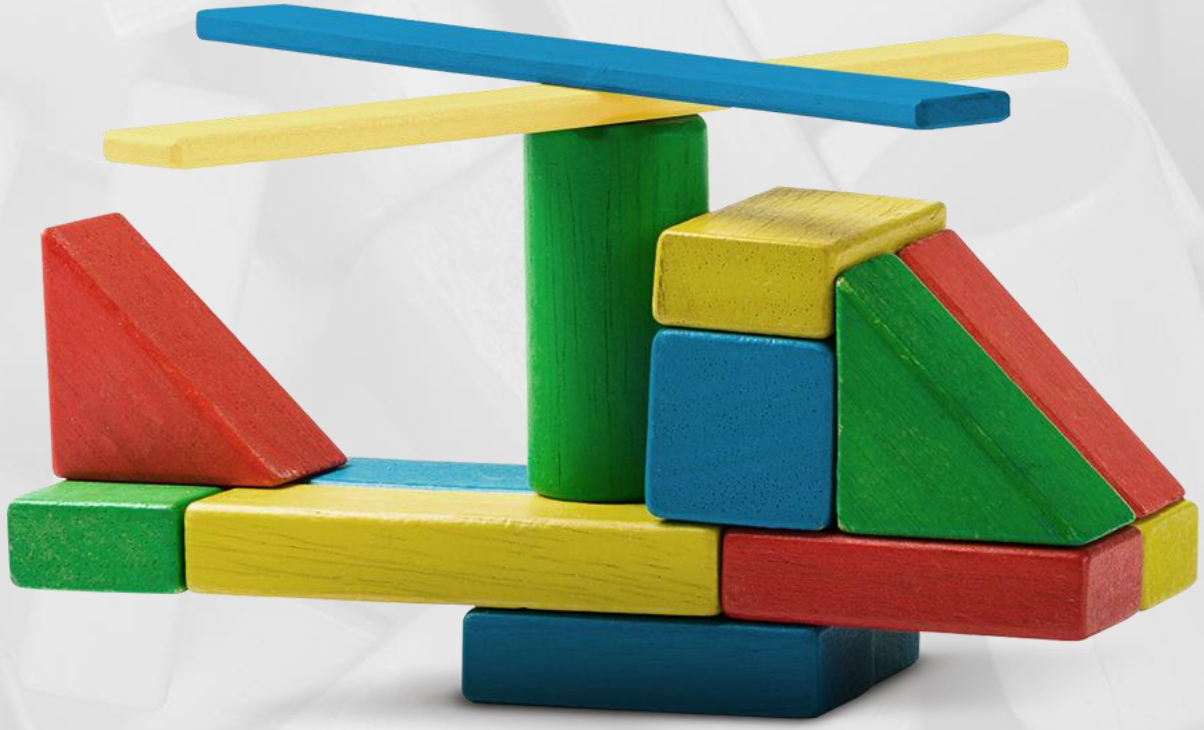
- What's the difference?
  - HA – High Availability – "Characteristic of a *system* which aims to ensure an agreed upon level of operational, usually uptime for a higher than normal period"
  - Disaster Recovery – "A set of policies and procedures which focus on protecting an *organization* from any significant effects in case of a negative event"
- Key Words – *SYSTEM, ORGANIZATION*
  - Your BUSINESS won't stay running if your database is available, but your network is not; or if you can't ship your goods because your building has burned to the ground

# HA and DR – Differences and Similarities

- Discover and manage expectations
  - Will you have a job if the business expected a 5 second outage and your "HA solution" took 30 minutes?
  - How much data can you afford to lose if your Data Center burns to the ground (RPO)?
  - How long will it take to recover if you can't occupy your building for a month (RTO)?
- How much is enough?
- Proper Planning Prevents Pretty Poor Performance!

GET
UNCOMFORTABLE
WITH
DISRUPTION

# THEN GET CREATIVE



# Standard Edition Goodbye RAC

Quest

Where Next Meets Now.

# No RAC - What are your options?

- Do without
- Enterprise Edition
- SE/HA
- The cloud
- Replication

# Do without

- Did you really need RAC in the first place?
- Backup and Recover
- Mount disks on a non-Production System
- Consider expectations
  - Time to recover
  - Data loss
  - Cost of Downtime
- Consider risks
  - It’s all about costs
- Consider management and maintenance

# Enterprise Edition

- Easiest
  - Just pay Oracle and run some scripts
- Most expensive
  - Pay Oracle
  - Needs more management
  - Still has a single-point of failure
    - The database
  - No DR without additional cost

# SE/HA

- Standard Edition/High Availability
  - StopGap
- No “migration”
- Less expensive than Enterprise Edition
- SE/HA vs RAC
  - Requires Clusterware and ASM
  - Longer failovers
  - “Back to the Future” – it’s OS Clustering
- Still no DR
- Still has single point of failure

# The cloud

- That’s another talk
- Can provide both HA and DR
- Autonomous is great for most cases
- Costs are hard to compare; but it’s not “free”
- Definitely a “project”
  - Requires migration
- Security concerns

# Replication

- A second instance
- HA and DR in one

THE RIGHT SOLUTION IS OUT THERE

WE'LL FIND IT

# Goodbye RAC
# Hello SharePlex

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Where Next Meets Now.

# A Second Instance

- Open Read/Write
- Workload Isolation
- Rolling upgrades
- Database/OS Version agnostic

# HA and DR in One

- No single point of failure
- No location limitations
- No recovery time

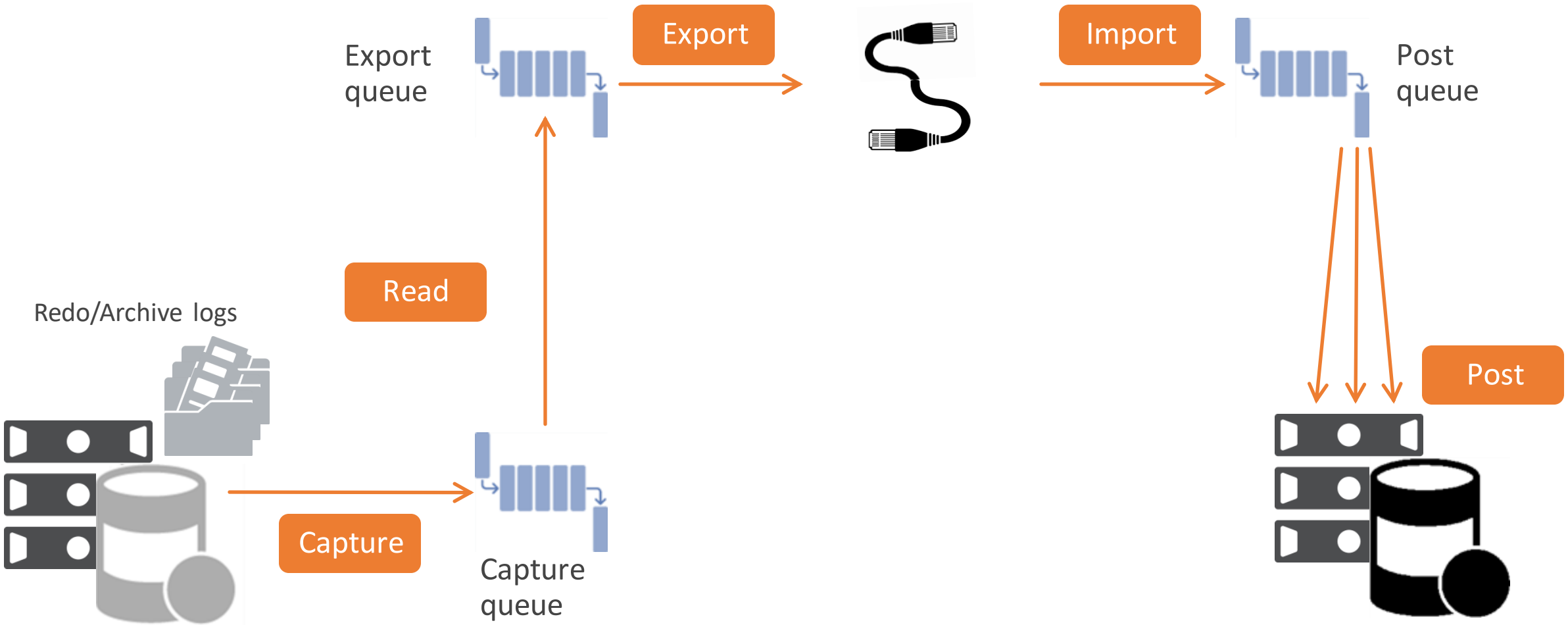
# Making it work - Options

- New 19c Instance
  - Start clean
  - No conversion/update
  - Starts with a consistent copy
- Use one of the RAC nodes
  - No additional copy
  - Use DBUA

# Upgrading with SharePlex

- Near-Zero Downtime
- No Data Loss
- Testing and Failback

# SharePlex Architecture



# Resources

- https://www.quest.com/community/blogs/b/database-management/posts/what-happened-to-high-availability-in-oracle-19c-standard-edition
- https://www.quest.com/community/blogs/b/database-management/posts/a-better-way-for-ha-dr-in-oracle-19c-standard-edition
- https://www.quest.com/video/computer-processing-company-provides-shareplex-testimonial8127871/
- https://www.quest.com/products/shareplex/

# Questions?

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Where Next Meets Now.