Catalog Extract Results for KL

Summary

This document provides an initial insight into the data extracted and analysed for the KL database catalog. The intention is that these insights will enable a better understanding of the topology of the KL database estate and that this will facilitate the formation of meaningful database groups. These can then be further processed to establish their suitability for migration to Oracle Cloud.

Data Extract

Extract Details

Extract Run Date : **2023-07-05 10:01:37**

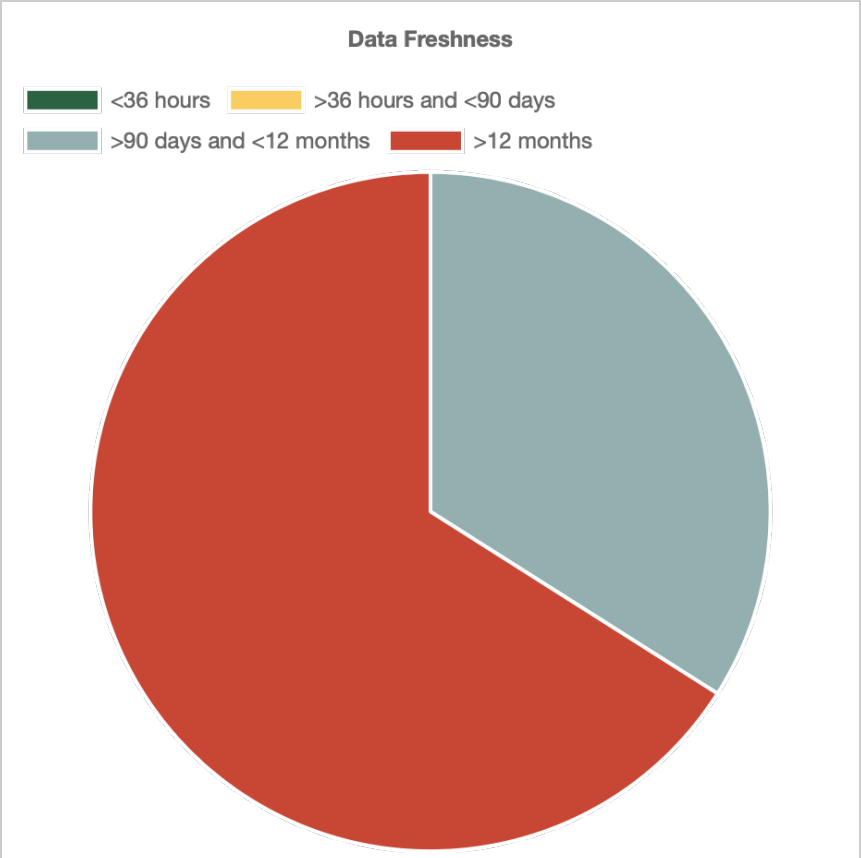
KL provided Oracle with details of databases in the Database Catalog extract. We successfully processed 416 databases.

Data Freshness

Of the 416 databases processed;

- 0% (0 databases) had metrics collected <36 hours extraction.
- 0% (0 databases) had metrics collected >36 hours and <90 days extraction.
- 34% (143 databases) had metrics collected >90 days and <12 months extraction.
- 66% (273 databases) had metrics collected >12 months extraction.

Data Freshness	% Databases
<36 hours	0
>36 hours and <90 days	0
>90 days and <12 months	34
>12 months	66

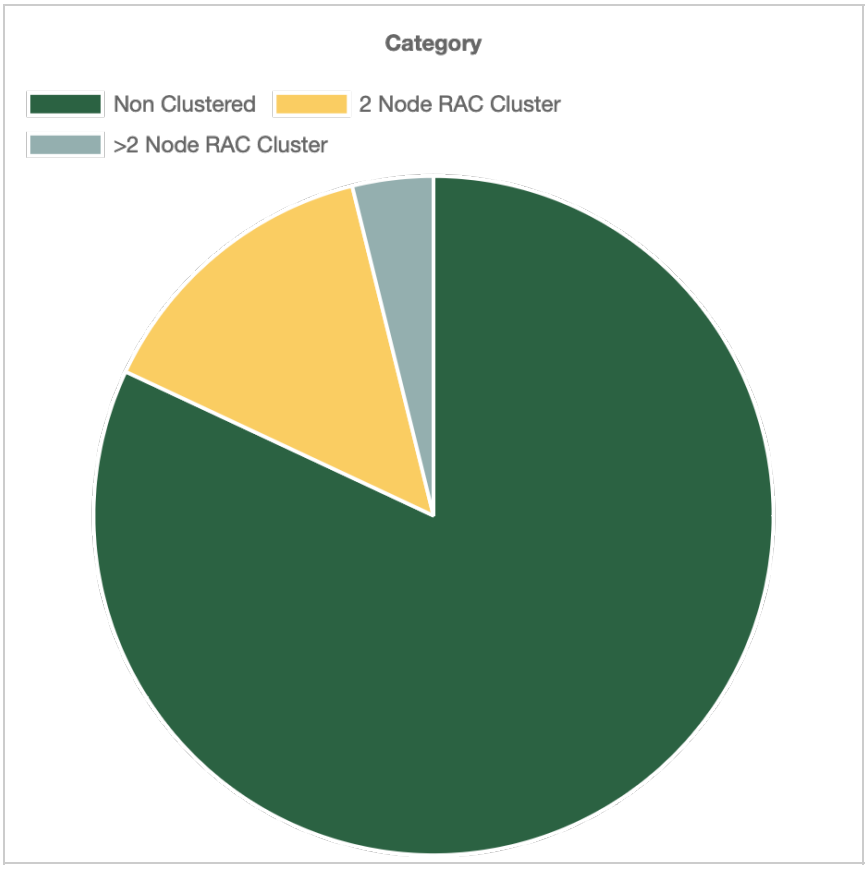


Catalog Overview

Database Hosts

We identified 82 database hosts. We classified the database hosts as follows:

Category	# Databases
Non Clustered	341
2 Node RAC Cluster	59
>2 Node RAC Cluster	16

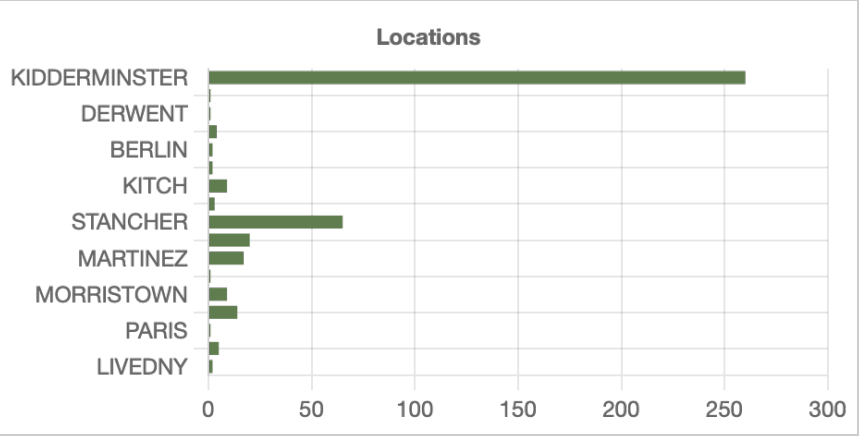

Category
Non Clustered
2 Node RAC Cluster
>2 Node RAC Cluster

Geography

Locations

We allocated databases to a location based upon the naming conventions for database hosts.

Locations	# Databases
KIDDERMINSTER	260
LONDON	1
DERWENT	1
HAMPTON	4
BERLIN	2
CAPE MAY	2
KITCH	9
CARFED	3
STANCHER	65
JORUNTA	20
MARTINEZ	17
BENSEN	1
MORRISTOWN	9
SAINT HUGO	14
PARIS	1
POLESKI	5
LIVEDNY	2

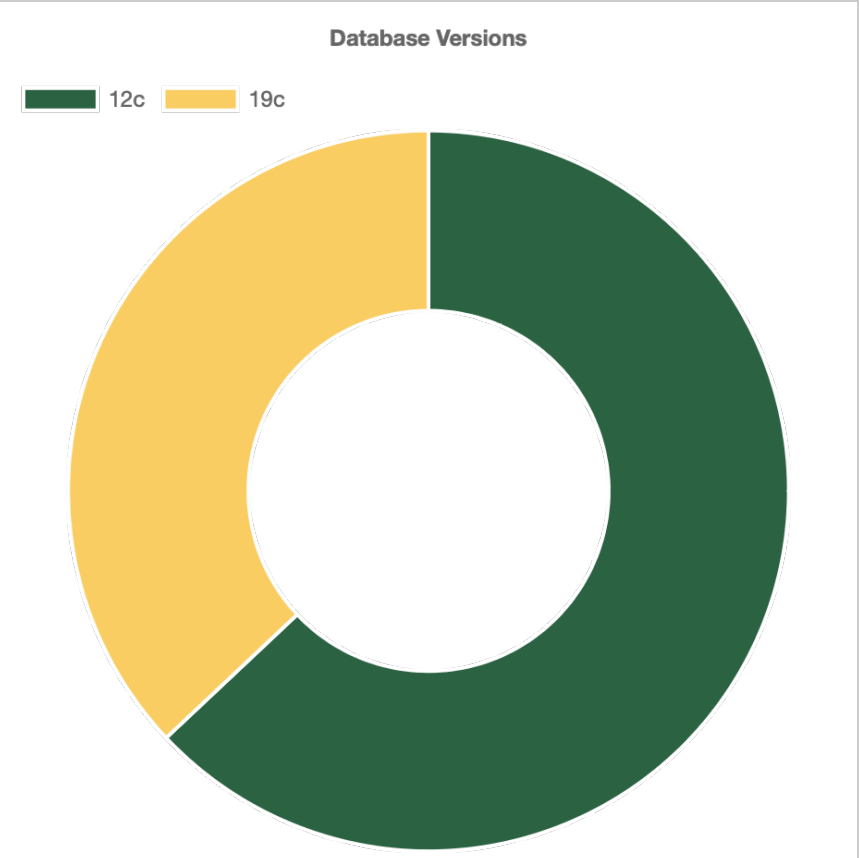


Database

Database Versions

The analysis process supports several database versions ranging from version 11g through to 21c. The more recent the version of the on-premises database is, the closer its alignment will often be to a suitable Oracle Cloud service.

Database Versions	# Databases
12c	262
19c	154



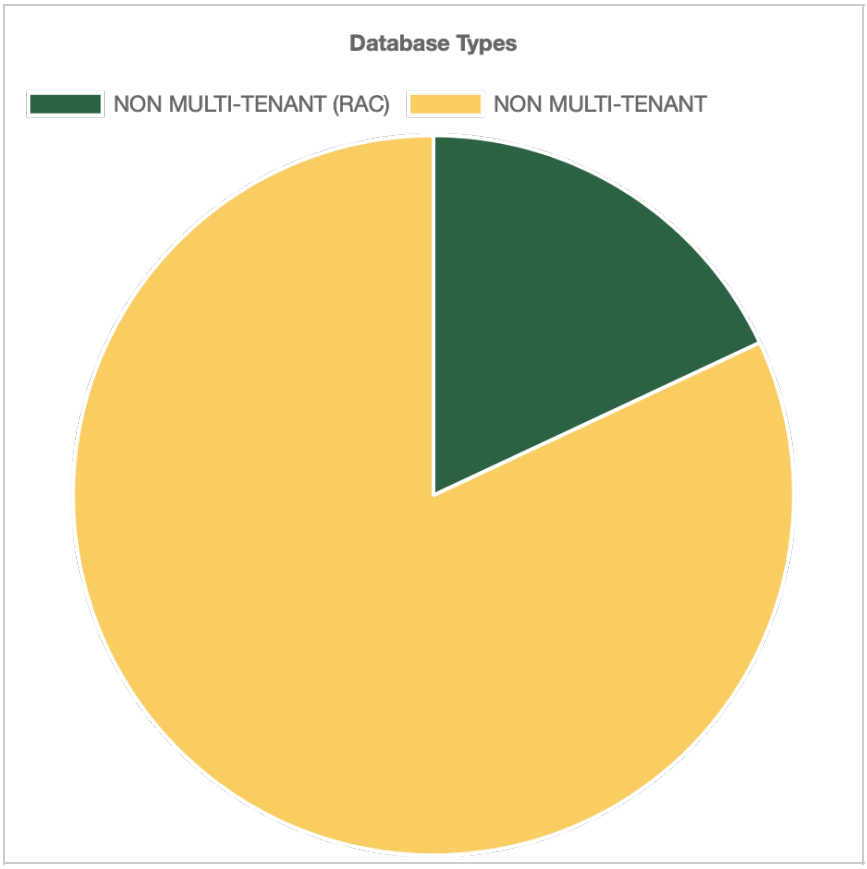
Database type - Multi-tenant

For the purposes of this exercise and dataset, we consider a “database” to be one of two types;

- A Non-Multitenant Database
- A PDB in a multi-tenant container database

The distribution of database types is as follows;

Database Types	# Databases
NON MULTI-TENANT (RAC)	75
NON MULTI-TENANT	341


Database Types
NON MULTI-TENANT (RAC)
NON MULTI-TENANT

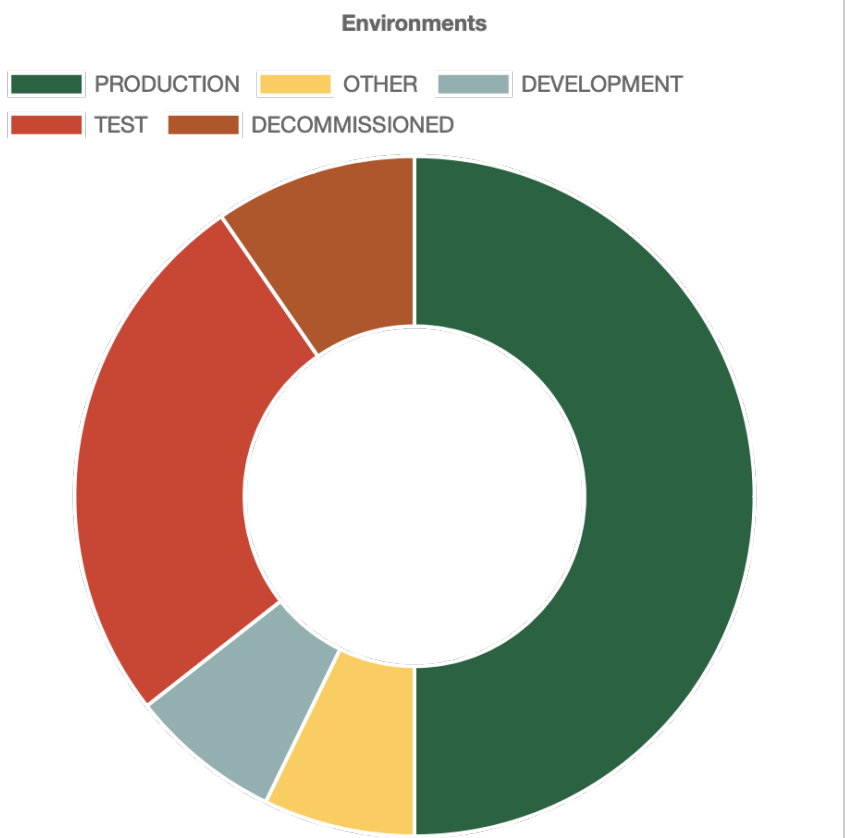
Environments

Environment Types

We determined the environment type for each database :

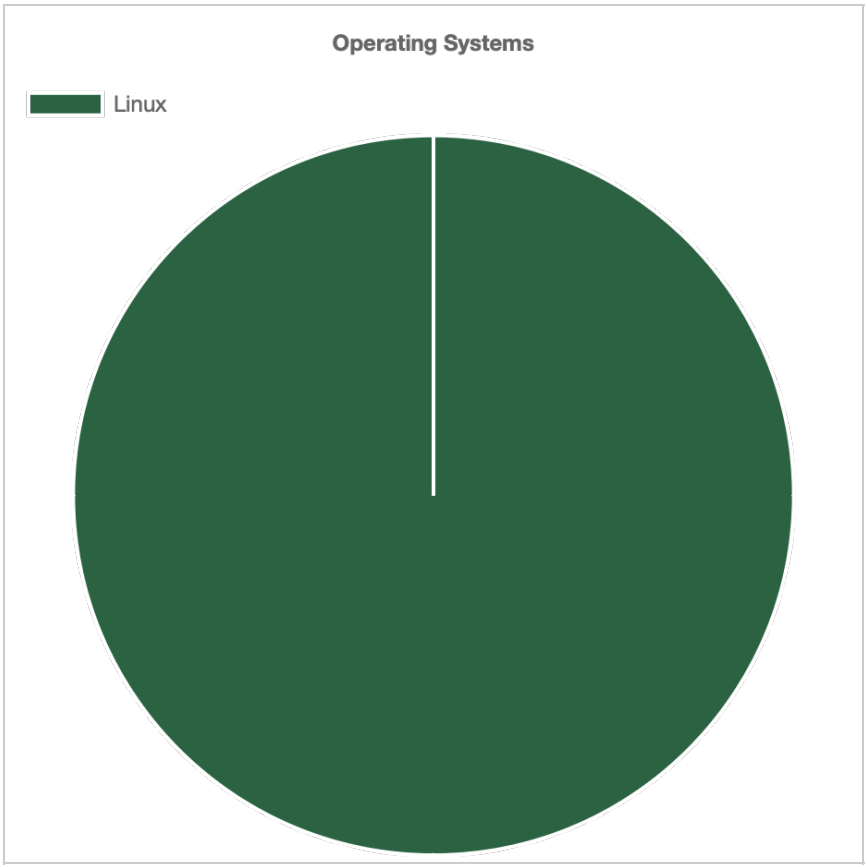
The distribution of environment types across the KL database catalog is as follows;

Environments	# Databases
PRODUCTION	208
OTHER	30
DEVELOPMENT	30
TEST	108
DECOMMISSIONED	40



Operating System Versions

Operating Systems	# Databases
Linux	416


Operating Systems
Linux

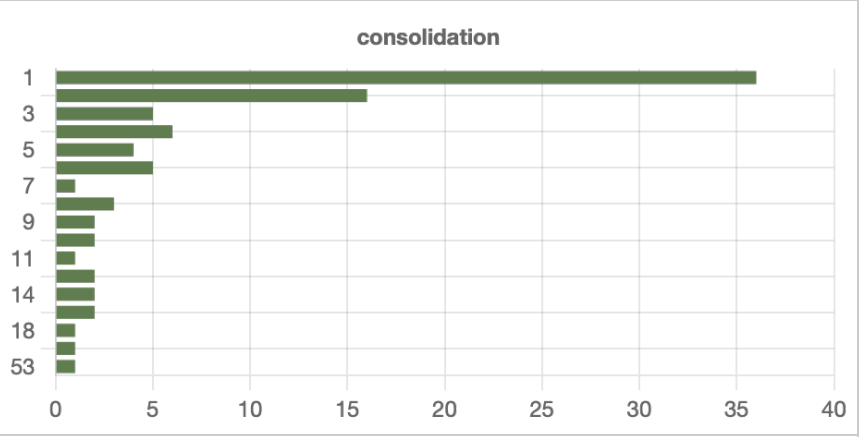
Consolidation

Database Density

Database consolidation can significantly reduce the costs associated with running a database estate. Databases can be consolidated either by running multiple database instances on a single host (either physical or virtual) or by running single databases within individual virtualised operating on top of a physical host. Additionally, further database consolidation can be achieved by using Oracle's Multitenant Database Option.

We found the following levels of consolidation :

consolidation	# Databases
1	36
2	16
3	5
4	6
5	4
6	5
7	1
8	3
9	2
10	2
11	1
12	2
14	2
16	2
18	1
24	1
53	1



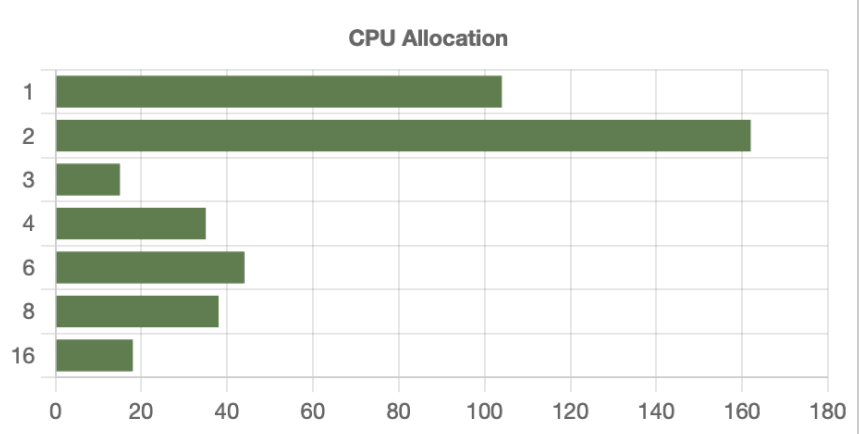
Database CPU Allocation (approximate)

We have estimated the number of CPUs allocated to each database based on the the level of consolidation (e.g. if a 12 core server runs 4 databases, then we equally dive to estimate 3 CPUs per database)

Here is the distribution of the number of databases by CPU allocated:

CPU Allocation	# Databases
1	104

2	162
3	15
4	35
6	44
8	38
16	18



Next Steps – Group Extracts

The next step for this exercise is to create one or more groups of databases and extract detailed information about each database.

Groups are databases that share similar characteristics and properties. An example Group definition might be;

“All in a single country, test databases, running at 19C, that are not RAC”

Groups enable us to exercise a targeted and tailored approach to analysis and assessment.

We recommended that the Pilot group contains between 20 and 50 databases. The purpose of the Pilot group is to ensure that the permutations of database deployment can be successfully extracted and analysed with minimal operational overhead.