

# Diginome DataDNA: Certifying Big Data at High Speed with Oracle No SQL on Cisco UCS

Diginome is Cisco's Data Certification Platform for Cisco Customers, using Cisco UCS and Oracle No SQL DB. Diginome has validated its DataDNA data certification solution on Cisco UCS and Oracle NO SQL DB and has proven the combined solution to be exceptionally fast and scalable for certifying big data. Detailed results are described below.

## WHY CERTIFY DATA?

Data that isn't certified isn't reliable, and therefore isn't truly actionable. Analytics that are based on unreliable data can bring unwelcome circumstances, but the ability to certify huge volumes of fast-moving data, structured and unstructured, has been out of reach for most organizations, until now. As data grows in volume, velocity and variety, the only sure and sustainable way to certify it is with software.

### WHAT IS CERTIFIED DATA?

#### Data that is:

- audited (traced)
- validated (rules)
- monitored (alerts, alarms, action)
- meets a variety of tests at times (100% e.g. domain integrity, completeness, latency, compliance, and other data quality validations)

## DATADNA IS DESIGNED TO

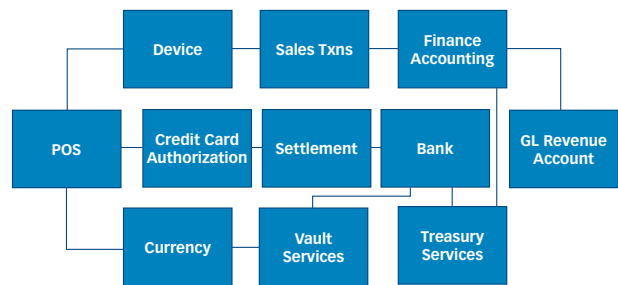
- Validate incoming and changing information against business rules,
- Record and associate all digital information events in the information integrity platform to enable current and historical integrity view
- Provide to the business stakeholders sophisticated real-time data integrity aggregation and analysis that spans the entire history of events for each and every datum.

Such an environment requires a robust, capable platform with the following characteristics:

- Highly available; scalable
- Flat and simple data structures
- Extremely fast read access
- Simple administration, key-value data model; transaction support
- Transparent load balancing; elastic
- Proven horse-power and architecture

## TEST SCENARIO

The testing scenario involved a complex high-volume POS transactional environment that generates huge volumes of structured and unstructured data on a daily basis and would quickly scale into the petabytes.



## TEST SUMMARY

Overall, Diginome's testing proved that the Cisco Data Certification Platform powered by Diginome DataDNA and Oracle NoSQL DB delivers the high performance and scalability necessary to ensure that even big data can be certified and reliable.

## PERFORMANCE RESULTS

- Transaction Volume: 18.6m/hr+
- DB Writes: 228ms
- DB Reads: 68ms/482ms
- Size 1.34PB +

Writes into the Diginome objects running on Oracle NoSQL DB were sustained at an average of just over 340k rows/minute with no noticeable degradation during peak times. Data loading was bounded only by memory and physical storage available in the testing platform.

The platform was tested at multiple scale factors and showed linear scalability.

## PLATFORM SPECIFICATIONS

The platform was a 3-node configuration of:

- Cisco UCS Servers
- Oracle NoSQL DB
- Diginome DataDNA objects (key-value pair structures)



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