HOW NETROPYVE AND NEOLOAD WILL HELP YOU GUARANTEE A SUCCESSFUL MIGRATION TO THE CLOUD

With businesses looking to the Cloud as a primary resource to drive competitive differentiation, it's recommended that migration be a deliberate and systematic process. Although the promise of higher reliability and lower cost make the Cloud an alluring option, 41% of businesses find themselves unprepared for the migration and end up reverting their applications to colocation facilities. For enterprises seeking to ensure a successful cutover, and even those who are just considering a switch, the validation of cloud applications should be atop the list of concerns.

Developing cloud applications or migrating to a cloud environment means adding a lot of variable conditions between client and server. Applications that perform adequately on a corporate headquarters' local network are often sluggish, slow, or unresponsive once deployed. WAN conditions, such as bandwidth constraints, latency, jitter, and packet loss, can bring an application to a screeching halt once implemented within a cloud environment (where distance is taken into consideration). 47% of businesses returning to traditional colocation cite latency as the most significant factor in their cloud departure.

Moving to the Cloud Needs to be Tested

When moving to the Cloud, a common mistake some organizations make is translating their current architecture into cloud instances. Reason being, when building the architecture, the tendency is to oversize the servers. So, instead of translation, we should calculate the CPU capacity needed for each architectural node.

With this method, the total cost of your cloud architecture would be more realistic and palatable. In turn, cost-cutting the Cloud journey required to rethink the current architecture of the application. This means that it's essential to have the proper approach to validate your cloud migration becomes a requirement.

Build — Test — Redesign — Migrate — Validate

Step 1: Build the Baseline of Your Current Applications

•   The baseline is the core element of your migration; it requires to build a workload model to align with your current production load

•   This test would allow you to retrieve the performance Service Level Objective (SLO) of your future architecture as well as identify:

- •   Current response time
- •   Transactions/hour capacity
- •   Existing infrastructure usage
- •   Your performance engineer will help with:
- •   Performance strategy creation
- •   Load test scenario development
- •   Production test execution
- •   SLO extraction

Step 2: Test Your Current Architecture by Including the Network Constraints Related to Your Ideal Cloud Architecture's Future State

- Run the same test by including the network condition between:
- Users and your future cloud
- Cloud architecture and potential backend server hosted internally
- Compare your SLO to validate no significant regression for your end users or your infrastructure

Step 3: Redesign Your Architectures

- Redefine the size of the instances required to run the application CPU, disk, network, etc.
- Use the auto scaling feature provided by cloud providers

Step 4: Migrate Your Application to Your New Cloud Architecture

- Create deployment scripts for the deployment of your application over the cloud
- Build backup scripts of your data
- Run the functional test to validate the new deployment

Step 5: Validate Your Migration's Effectiveness

Run the production test after the migration to validate the user experience and the behavior of your new cloud architecture.

How NeoLoad will Help You Succeed with Your Cloud Migration

The NeoLoad performance testing platform is designed to help today's performance engineers and developers save time. With advanced capabilities such as automatic script maintenance and conversion, one-click dashboard accessibility, organizations are now able to fully automate, provide visibility, and easily share with key stakeholders across Dev, QA, and Ops.

- Quickly create realistic load tests from anywhere in the world be it via your infrastructure or with the Neotys Global Load Cloud.
- Understand your current performance profile and prepare for comparison of old vs. new infrastructure.

  - Responsive, unified perspective through overload testing results via web dashboards
  - Test-over-test trends view as post-release configuration tweaks are applied
  - Traceable, auditable SLA reporting in CI via JUnit compatible outputs
  - Drag and drop web graphing that teams can share and customize to fit their needs
  - Build reusable, shared test assets that work across environments
  - Two-way integration with APM platforms for end-user metrics at high load pre-release
  - Use same load infrastructure for many targets and environments with shared licensing
  - Fault isolate down to specific servers and services to improve readiness confidence

Why Apposite?

To establish an objective understanding of how applications will perform within the cloud, the most convenient solution lies in network emulation. By emulating a real-world cloud network for testing purposes, a network emulation appliance can be a critical tool in this process. A network emulator allows testers to measure the actual throughput and responsiveness of applications within a test network to which they can apply the conditions and

impairments they expect to encounter in the cloud. This test network also helps in deciding how much WAN bandwidth is required and which vendors solution best suit the needs of a system. Maybe a workload isn't prepared for a transition to a cloud based environment? Figure it out quickly within the lab using a network emulator.

The direct connection between NeoLoad and NetropyVE allows companies to mimic any network topology and scenario (good, bad, or intermittent) - in a controlled and repeatable manner - from development through quality assurance to deployment.

- Real-world network condition integration with Neoload performance testing
- Easy to use and understand application performance views across mobile, WiFi, WAN, LAN, satellite, DSL, cloud and other types of networks
- Normal and extreme network condition configuration to interpret user experience impact
- Controllable and repeatable test network environment – a better alternative compared to testing in the real network
- Impact simulation associated with movement within the Cloud

About Neotys

Neotys has nearly 15 years of development investment into NeoLoad – the performance testing platform designed to accelerate Agile and DevOps processes. It's built by engineers who recognized that to achieve their Agile adoption objective, they needed to create a product that could facilitate superior load and performance testing continuously. The result – up to 10x faster test creation and maintenance with NeoLoad.
We genuinely believe that the Performance Engineer can become the critical application performance partner providing the best testing coverage while respecting the cadence of the Continuous Delivery process. As performance becomes the responsibility of the wider team, continued delivery of an optimized performance testing platform is what drives our work every day.

About Apposite

Apposite Technologies' award-winning WAN emulation products provide IT professionals with high precision tools for benchmarking the performance of applications across wide area networks. Distinguished by industry-best ease-of-use and unmatched value, Apposite's network emulators inform critical decisions impacting bandwidth investment, application deployment, and end-user satisfaction. Apposite's network emulation products are used by 2,500 leading enterprises, network application developers, government and military organizations, and telecoms carriers around the world.

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