



Test Data Management for DevOps: Actifio Differentiation

A EIGHT-POINT DEVOPS CHECKLIST

Continuous Integration. Continuous Delivery. Continuous Obsolescence. It's a quest for Continuous Everything!

And IT is under continuous pressure. Executives are demanding faster applications release cycles with consistently higher quality. The idea of DevOps has development teams buzzing. IT needs to accelerate self-service platform provisioning with assured security and controls.

They know that it's not just about infrastructure and platform. It's about modernizing data provisioning for testing across every environment: Sandbox, Development, Unit Test, Integration Testing, QA and UAT. Enterprises have recognized the importance of provisioning and refreshing production data copies instantly and securely using self-service that's regulated by IT controls and masking.

Development & QA want to catch and fix bugs early. IT, DevOps and application release managers know that fast provisioning of high fidelity production data copies means faster, higher quality product releases. And they're showing enterprise executives that in the process, infrastructure and costs are reduced.

Enterprises need to ensure that they're in good hands. That means understanding what's important in data virtualization and test data management. They want to be sure that their choice of vendor for test data management, data virtualization, and DevOps will satisfy the requirements that matter now and in the future.

Here are eight considerations, a checklist of what matters most to enterprise test data management. Consider these as critical to your evaluation of Actifio or any other test data management technologies. Throughout the document you will see **#CHECKPOINT** indicators highlighting Actifio differentiation.

1. User Acceptance Testing (UAT)

Start with Pre production/Staging/UAT environments. The fundamental reason IT has UAT is to ensure new code rollout has been tested in an environment that looks exactly the same as production environment: same compute, same OS and app stack, same storage, same storage protocol. For example, if a million-dollar Oracle database is using Fibre Channel (FC) storage in production; you wouldn't want to use non-FC like NFS in your UAT environment. If production runs on physical servers, reliable UAT can't be confident using a virtual machine (VM).

#CHECKPOINT Actifio helps provision virtual databases (virtual copies of production) in UAT environments using the same protocols and environments that exist in production. For example: Actifio can provision virtual databases over Fiber Channel as well as iSCSI protocols

2. Oracle Real Application Clusters (RAC) & Automated Storage Management (ASM)

Enterprise Applications are built on Oracle because it's arguably the best RDBMS ever. Oracle's best practices dictate the use of ASM. And, if it's mission critical it had better be on RAC. Most organizations have adopted these design recommendations.

#CHECKPOINT Actifio ingests data from multiple RAC nodes in parallel and very efficiently to significantly reduce the refresh window.

#CHECKPOINT Actifio runs virtual databases using ASM on a multi node RAC cluster—the same as production. This means complete flexibility to auto provision virtual databases to non-ASM, ASM, and RAC environments with same or different numbers of nodes from production. No manual intervention. No complex scripting. No coordination.

3. Very Large Data Bases (VLDB) & Many Databases (DBs)

Enterprises can commonly have VLDBs in sizes that range from 10TB to 20TB to 50TB or even 80TB.

#CHECKPOINT Actifio can handle an 80TB single database with a single appliance.

#CHECKPOINT Many enterprises have 10s to 100s or even 1000s of databases. Actifio can handle 100s of DBs up to 100TB all managed by a single appliance. Managing 1000 databases with 1000TB of data can be shared across 10 Actifio appliances.

#CHECKPOINT Any enterprise with multiple Actifio appliances can manage all from a single pane of glass providing central management, reporting, and administration.

4. VMs, File Systems and NAS Filers

A multi-tier application, other than a database, has multiple components that are typically installed in multiple VMs. In some complex applications that are not stateless, the app could store data in file systems, and in some cases even NAS filers.

#CHECKPOINT Actifio provides a unified way to capture VMs, file systems, and NAS filers as well. It instantly provisions virtual copies of entire VMs, file systems or NAS filers to test environments.

5. More Power to Database Administrators (DBAs)

DBAs love to be in control. They love command line interfaces (CLI). They want to use an Oracle Recovery Manager (RMAN) like CLI to provision virtual DBs, backup, recover and un-provision virtual DBs.

#CHECKPOINT Actifio provides a CLI so DBAs can control everything from the CLI without learning a new user interface.

6. Simplicity or Complexity?

Consider an enterprise with a Microsoft SQL DB. Actifio uses a simple architecture to ingest the SQL data: MS SQL—(FC or iSCSI)—>>> Actifio

It's very simple, and it has the flexibility to ingest the SQL data using iSCSI or Fiber Channel.

#CHECKPOINT To the best of our knowledge, here is how one of our competitors architecture shows data ingestion in multiple steps:

MS SQL —(NFS)—>>> Staging Server — (iSCSI)
—>>> Competitor

Not only does the data travel twice over the network, but there is a danger of another choke point. If a production SQL DB has a million transactions a day, each of those transactions will be replayed on the staging server. That adds the cost of a server with compute, memory, OS license, and MS SQL license. If organization have multiple SQL DBs, that means guessing the size and number of multiple added staging servers. It means monitoring, management, and administration costs for an architectural headache. Not cheap. Not necessary.

7. Application Programming Interface (Is it APIable?)

Many enterprises have an internal portal or use DevOps tools such as Jenkins, Chef, Puppet, or Ansible. They use these to streamline automation and configuration management that provisions infrastructure to Dev & QA teams.

#CHECKPOINT Actifio has APIs and API SWAT teams that help enterprises integrate Actifio into their custom orchestration tool of choice.

8. Platform or Point Tool?

Who, in any enterprise, wants yet another point tool? Every organization wants reduced infrastructure and fewer tools to manage. Actifio is a complete scalable platform. Consider this, Actifio ingests data from production incrementally, forever. Then it uses data virtualization magic to provision virtual databases to test environments. Actifio extends functionality to include enterprise-grade global deduplication, replication to remote sites, data storage for long-term retention, and incremental auto-hydration of data at remote sites for instant DR.

The platform equation looks like this.

Actifio = Enterprise Grade Test Data Management + Enterprise Grade Backup & Disaster Recovery & Archive

Enterprise Grade Test Data Management = Self Service Data Provisioning + Data Masking + Role Based Access Control + Test Data Protection + Data Rewind + Test Data Promotion

Enterprise Grade Backup & DR = Local Backup + Local Recoveries + Global Dedup + Efficient Dedup Replication + Long Term Data Retention @ Remote Site + Instant DR @ Remote Site

Actifio has broad platform support, including Windows, Linux, AIX, Solaris, HPUX, VMware, Hyper-v, AWS, file systems, databases, NAS filers and the list goes on. These are just some of the reasons IBM, SunGard, and 50 other service providers are delivering their BaaS, DRaaS, TDMaaS services powered by the Actifio platform.

Even without the need for immediate Enterprise backup and DR replacement, once they have Actifio for Test Data Management, they have the platform license for backup and DR.

Anytime they're ready they can migrate backup and DR to Actifio.

#CHECKPOINT Without Actifio, do organizations have such a genuine global enterprise-grade platform? Are they in good hands?

Actifio is the world's first and only enterprise-class copy data virtualization platform—and a real enterprise-grade platform for DevOps.

Click [here¹](#) for a short 3 min video showing how simple and easy it is to provision virtual copies of a TB Oracle DB.

Click [here²](#) for test data management white paper.

Click [here³](#) for CXO presentation.

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Radically Simple



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1 <http://www.actifio.com/resources/oracle-devtest-data-demo/>

2 <http://info.actifio.com/dev-test-impact-report>

3 <http://www.actifio.com/cxo-video/>