voke Impact™ Note: A Focus on CA Service Virtualization

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CAN YOUR ENTERPRISE RISK DEVELOPERS AND TESTERS BEING OUT OF SYNC?

Today's software teams must work collaboratively and with unparalleled synchronism. The demand to release software more frequently with a focus on delivering quality to the customer means that testers must keep pace with developers to avoid the common constraints associated with software engineering.

Service virtualization is an established technology to help enterprise architects, developers, and testers obtain unrestricted access to incomplete or unavailable services to finish their tasks in the software lifecycle. While the technical benefit of service virtualization is removing constraints in the software lifecycle, the business benefit is the protection of the brand.

Service virtualization enables the entire software supply chain to share virtualized services for development or testing. Being able to share virtualized services across the entire software supply chain means teams will:

Through the sharing of virtualized services across the software supply chain and between different team members, software engineering teams are able to statefully simulate and model dependencies of unavailable or limited services. Statefulness is a key differentiator of service virtualization and represents realistic composite behavior. Statefulness allows for the concurrent sharing of assets across multiple teams in the software supply chain as well as asset modification to create different conditions and behaviors.

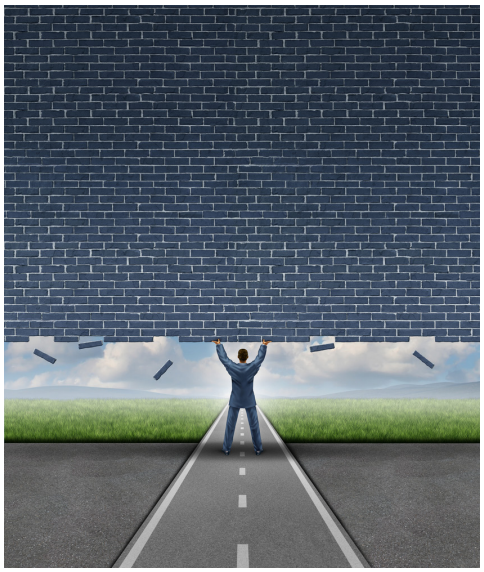
Promote synchronicity of your software engineering teams through service virtualization.

- Remove constraints
- Remove wait times
- Remove uncertainty

Make service virtualization a must-have technology for your software engineering teams.

Let's look at three opportunities to protect your brand and business through the use of service virtualization.

1 Plan to Use Service Virtualization from the Beginning



Soundbite marketing and catchy headlines make it seem as though software engineering has reached a state of utopia. Many teams take the cavalier approach that all of their problems are solved, and the use of service virtualization is not needed. This approach is far from the truth. Software engineering teams today are responsible for creating a quality customer experience that is reflective of the organization's brand promise. Service virtualization is a necessary technology that allows the software supply chain to work together and deliver business value.

The reality of software engineering is that teams will encounter constraints along the way. The impact of these constraints is felt across the entire team and frequently well into production. Constraints will limit the amount of testing completed, which may result in more defects, either known or unknown, being leaked to the next stage of the software lifecycle. Service virtualization helps to remove constraints encountered by software engineering teams and enables testers to keep pace with developers.

> "TEST AND FAIL AT ANY TIME IN ISOLATION—NOT PRODUCTION!"

Ideally, when any source code is checked in, virtualized assets are part of that package. Virtualized assets must be part of the code repository and the continuous integration environment. In essence, service virtualization is part of the daily hygiene of the software engineering team. Planning to use service virtualization from the beginning of a project

gives teams a safe place to test and fail, gives teams access to everything they need, and limits surprises in production.

Test and fail in isolation not production—plan to use service virtualization from the beginning.

2 Release Quality Software with Confidence—Shift Left

The proliferation of applications and the explosion of devices that run those apps are staggering. To satisfy the expectations of the customer, it is more important than ever to focus on quality over simply time to market. Customer demands are continually maturing and merely being first to market with questionable quality creates customer fatigue and a healthy skepticism on the part of the customer to trust but verify the functionality, performance, and security of any app.

> "ENVIRONMENTS AND DATA AS CLOSE TO PRODUCTION-LIKE AS POSSIBLE!"

One of the most perplexing problems that software engineering teams face today is having on-demand environments available for handling the plethora of test cases needed to satisfy a quality release. The lack of stable and predictable environments slows down or eliminates testing. This lack of environments leads to less automation across the software lifecycle.

By shifting left with service virtualization, developers and testers have access to on-demand environments as close to production-like as possible. Predictable on-demand environments mean the software supply chain has access to unavailable or incomplete services that make up an application. Taking advantage of service virtualization will enable teams to repeat scenarios and automate more so software can be released with more confidence and quality. Service virtualization is a critical component for teams that want to be able to make better use of automation.

Release quality apps—use service virtualization to provide environments as close to production-like as possible.

3 Test Early, Test More, Test Longer, Test Harder

Software is often released from stage to stage or sprint to sprint with defects that create unintended consequences. These unintended consequences are frequently a result of teams desiring to move quickly and not focusing on the details required to deliver a quality end-to-end experience of an application.

Software testing rarely reaches a point of diminishing returns. Today's software engineering teams must test more platforms and more integration points. They must be able to test earlier when applications, architectures, databases, services, components, and so on are either incomplete or unavailable. Teams must be able to test as long and as frequently as necessary to make sure defects do not leak from stage to stage or sprint to sprint and manifest as one of those unintended consequences that are so universally troublesome. Additionally, teams must also be able to test their software for performance. Service virtualization allows well-coordinated and collaborative teams to decrease the risk of unintended consequences brought about by the lack of testing—both functional and non-functional.

By allowing the entire software supply chain to test more, earlier, longer, and harder against virtual assets before going live, teams are able to discover defects more quickly. Take the time to create virtualized assets and be able to synchronize testing with development to deliver on a quality experience for your customer without unintended consequences.

Slow down to move fast with quality.

Service virtualization is a must-have technology for organizations that want to release software more confidently while meeting customer expectations for quality, performance, and security. It is no longer acceptable for software engineering teams to work in a silo. Collaborative software engineering teams must architect, develop, and test thoroughly to delight and excite the customer.

> "SLOW DOWN TO MOVE FAST!"

Software engineering is a discipline that requires the expertise of each team member. Service virtualization unites the software engineering team by making it easy to create virtualized assets that are usable in each stage of the software lifecycle. Service virtualization is a technology that scales to benefit the entire enterprise.

Protect the brand and the business—adopt service virtualization so software engineering teams can focus on the customer and deliver quality software across the enterprise with the desired speed.

EXPLORE THE CA FAMILY OF SERVICE VIRTUALIZATION PRODUCTS

CA Technologies is a global enterprise software company founded in 1976. The company focuses on helping enterprises achieve better business outcomes through its enterprise software solutions.

CA's Service Virtualization family of products is an established product offering that is:

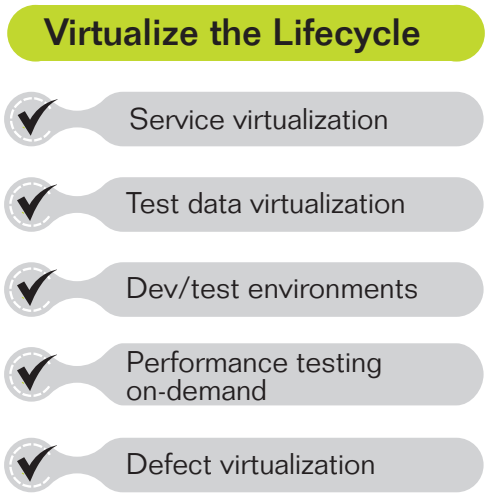
1. Scalable to allow the entire enterprise to use virtualized assets across the supply chain
2. Stateful to allow teams to share virtualized assets with real behavior across the supply chain
3. Persona-based to allow each member of the team to have the right service virtualization offering

CA Service Virtualization family of products enables a variety of members of the software engineering team to realize the benefits of service virtualization, such as early defect discovery and remediation, on-demand environments for end-to-end testing, and access to incomplete or unavailable services, components, databases, architectures, etc. The personas that CA addresses with its service virtualization products are:

- Architects, test automation engineers, and developers: CA Service Virtualization with a full breadth of protocols
- Testers: CA Service Virtualization Community Edition (CE) with an easy-to use UI and Wizard-based environment
- Developers: Code SV with in-process virtualization

CA Service Virtualization products remove the objections surrounding service virtualization, such as ease of use and the need for a lighter-weight product. The persona-based approach enables quick and easy implementation of service virtualization and allows software engineering teams to instrument the entire software lifecycle. Stateful virtualized assets are accessible, sharable, and usable at every stage of the software lifecycle by every member of the team.

With a focus on enabling better business outcomes through the use of its solutions, CA is giving software engineering teams an easy way to adopt and implement service virtualization as a core piece of technology central to success. Once teams realize the impact of service virtualization, they will be able to adopt other parts of the CA product portfolio, such as CA Service Virtualization for Performance Testing, CA Application Test & CA Agile Requirements Designer, CA Test Data Manager, Continuous Application Insight, Veracode, and Release Automation.



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