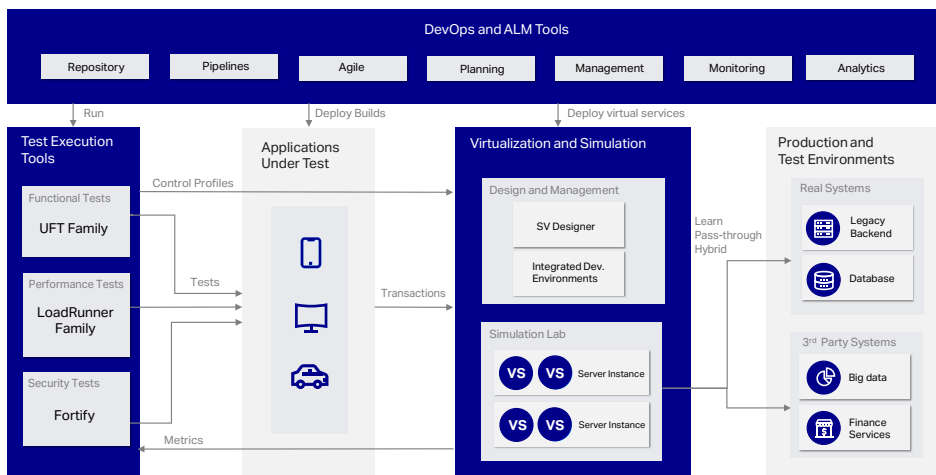


Service Virtualization

Easily eliminate the development and testing “wait time” that slows application delivery by enabling teams to quickly create realistic simulations of APIs and Virtual Services. Now, teams can focus on service quality rather than resource constraints.



Product Highlights

Today’s composite app initiatives often create a difficult dilemma for development and testing teams: meet the project deadline OR deliver a high-quality service. The core issue: growing interdependency among functional components leads to reliance on resources from third-party vendors, which leads to wait time and extra cycles.

OpenText™ Service Virtualization enables application teams to easily create Virtual Services that can replace targeted services in a composite application or multi-step business process. By accurately simulating the behavior of the actual component, it enables developers and testers to begin performing functional or performance testing right away, in parallel,

even when the real services are not available, when data access is restricted, when data is difficult to attain, or when the services are not suitable for the particular test.

Major impediments addressed by Service Virtualization:

- Non-availability of production and 3rd party systems for development, functional and performance testing causing delays
- Increased complexity in building and maintaining testing environments with high maintenance costs
- Inability of developers to quickly identify and replicate the root cause of failure and deliver fixes in a timely manner

Key Features

- **One solution for unit, functional and performance testing**—built-in data and performance modelling capabilities; pre-built integrations to OpenText™ ALM, OpenText™ UFT and OpenText™ LoadRunner family of solutions
- **Cross-vertical usage**—proven in multiple industry sectors including financial services, telecom, utilities, insurance manufacturing and more
- **Data-oriented simulation**—broad built-in enterprise protocols coverage and modelling techniques independent of customers technical background and skills
- **Large-scale load testing**—build for scale and load testing of realistic performance simulation scenarios without impacting production or 3rd party systems
- **Dev focused API simulation**—new simulation technology with innovative approach to solving advanced simulation use cases in testing of enterprise applications spanning across Web, Mobile and Internet of Things
- **Flexible infrastructure**—deployment of multiple simulation nodes depending on performance or test environments needs with multiple licensing options
- **Comprehensive technology stack**—100+ technologies and protocols available for virtualization and simulation, as a combination of transport and message parts
- **Design, publish and run in minutes**—achieve faster time to value with the industry’s most user-friendly solution to design, publish and run enterprise Virtual Services and API simulations

By using Service Virtualization, development and testing teams can achieve:

- Faster time-to-market by speeding up release cycles
- Increase efficiencies by eliminating bottlenecks caused by application complexity and dependencies
- Shorter test and reproduction cycles with earlier detection of defects
- Improved overall product quality with fewer defects reaching production
- Reduce costs by eliminating the requirement for access to constrained business-critical infrastructure, third-party systems, or pay-per-use cloud components for testing

The net result of using Service Virtualization is not only the ability to "shift-left" and execute tests earlier in the delivery cycle, but also to focus on service quality attributes such as performance, reliability, and scalability. In short, Service Virtualization delivers both faster delivery times and higher quality services. In the process, it creates significant benefits for all application delivery stakeholders.

Key Benefits and Features

Increase Efficiency: Shift-Left and Execute Tests Earlier in the Delivery Cycle

INDUSTRY'S MOST USER-FRIENDLY SOLUTION TO DESIGN AND PUBLISH VIRTUAL SERVICES

Service Virtualization provides an intuitive design IDE with data-oriented modeling independent of the customer's technical background and skills. Service Virtualization capabilities include learning, data and samples imports, manual scenario modelling, data driving from database or files, advanced scripting, and interactive, on-the-fly simulation model creation. The easy-to-use design IDE contains an embedded simulation runtime for quick simulation debugging and local use.

Users can quickly model access to dependent application components and shared services, expose unfinished components to

testing teams and other projects for dev/test and eliminate the need to create and maintain programming stubs.

OUT-OF-THE-BOX BROAD PROTOCOL AND SIMULATION COVERAGE

Service Virtualization comes with a range of pre-built industry-wide protocols enabled for out-of-the-box simulation. Service Virtualization provides dynamic data generation, auto-parameterization to increase simulation robustness, and built-in data masking to ensure data security. Advanced simulation capabilities like hybrid simulation and performance batch processing cover even the most complicated testing scenarios.

DEVELOPER-FOCUSED SIMULATION WITH EXTENDED MOBILE AND IOT CAPABILITIES

Service Virtualization comes with complementary Service Virtualization Lab technology providing developers and test engineers with a powerful set of new capabilities to solve advanced simulation use cases in testing of enterprise applications spanning web and mobile user interfaces, from legacy back-ends to cloud-native applications, connected devices, and Internet of Things. Service Virtualization Lab provides dev testers the use of simulation language, simulation of publish-subscribe pattern, and the ability to use simulation models as invocation scenarios, streams of data, or API tests. Service Virtualization Lab is highly portable and embedded in other test automation tools.

Improve Quality: Conduct More Realistic, Scalable, and Secure Tests with Fewer Defects Reaching Production

ONE SOLUTION FOR UNIT, FUNCTIONAL AND PERFORMANCE TESTING

Service Virtualization comes with built-in performance modelling capabilities on top of functional and data models. Ready-to-use integration to performance testing tools and scalable simulation runtime allows easy simulation of extreme backend services behavior

that are hard to achieve on limited physical infrastructure, helps to mitigate constraints, and test performance within application dependencies. Users can stand up working test environments faster and with lower costs and conduct more realistic tests by modelling backend functional, performance, and network behavior.

SCALABLE AND SECURED SIMULATION INFRASTRUCTURE

Service Virtualization comes with a flexible simulation infrastructure capable of handling large numbers of concurrent simulations while delivering thousands of transactions per second. Virtual Services are deployed in Service Virtualization Server nodes serving multiple Virtual Services and controlled over API, command line interface, or web-based portal. The access to Service Virtualization Server is secured by authentication and Virtual Services can be restricted using Access Control Lists (ACLs).

WEB-BASED MANAGEMENT

Web-based Service Virtualization Management Interface brings visibility and control to Virtual Services across multiple server nodes. It allows provisioning and control of virtual environments; management and configuration of protocol agents; parameterized search and filtering; and access to Virtual Service and server statistics, event audit, logged messages and simulation reports. Server and Virtual Service statistics can be exported to an external file in .xlsx format.

FLEXIBLE DEPLOYMENT

Service Virtualization's infrastructure allows deployment of multiple Service Virtualization Servers depending on performance requirements, test environments, system architecture, or organizational needs. Users can choose either to use direct OS installation or containerized deployment with pre-created Docker images.

Faster Time to Market: Accelerate the Software Release Cycle with End-to-End Testing Tool Integrations

PRE-INTEGRATED FOR USE WITH FUNCTIONAL AND PERFORMANCE TESTING TOOLS

Service Virtualization comes with pre-built integrations to the OpenText™ UFT Functional Testing and OpenText™ LoadRunner Performance Testing portfolios. Test engineers can easily provision and control Virtual Services directly from automation tools and collect metrics during test execution and simulation time. Service Virtualization integration to LoadRunner tools allows real time capture and visualization of Virtual Service simulation and server metrics directly in LoadRunner tools. Auto deployment of associated Virtual Services is provided once the script is executed and also provides the ability to change simulation conditions on the fly when the script is already running.

MOBILE TESTING WITH SIMULATION

OpenText™ UFT Mobile includes a built-in capability for Dev Testers and Developers to execute their tests with simulated APIs within test automation tools. Service Virtualization Lab enables mobile application teams to easily create Virtual Services that can replace targeted services in a composite application or multi-step business process. The Service Virtualization lab is deployed together with UFT Mobile and allows simulation of REST API and communication to physical devices over NFC and Bluetooth services that Application Under Test (AUT) consumes.

TEST ASSET MANAGEMENT

Service Virtualization comes with pre-built integrations to Application Lifecycle Management (ALM) and Source Code Management (SCM), allowing storage and management of Service

Virtualization projects as test resources in ALM or together with testing assets in SCM. Shared Service Virtualization asset management allows easier maintenance and versioning, and facilitates re-use of the Virtual Services by other users and other testing tools.

DEVOPS AND CONTINUOUS INTEGRATION

Integration with Continuous Integration (CI) tools using Service Virtualization management API and CI plugins such as Jenkins or Bamboo allows Service Virtualization to be part of the continuous integration process. When combined with test automation, these capabilities enable enhanced workflows for Developers and Testers through shortened feedback cycles in Continuous Integration, Continuous Testing, and DevOps practices.

Key Software Components and Licensing

Service Virtualization Software consists of the following applications:

Service Virtualization Designer

The Service Virtualization Designer is a client application enabling creation of Virtual Services and run simulations of real service behavior. The Service Virtualization Designer is used for design and validation of Virtual Services within the same desktop environment and includes an embedded server for hosting virtual services.

Service Virtualization Server

The Service Virtualization Server is a standalone server application that hosts the running of Virtual Services. The Service Virtualization Server is optimized for performance, can contain many more services than the Service Virtualization Designer, and can be accessed by multiple Designers.

Service Virtualization Lab Server

The Service Virtualization Lab Server is a standalone application that can run a subset of protocols and only Virtual Services defined by simulation language—in context of API, mobile and IoT testing.

Service Virtualization Management Interface

The Service Virtualization Management Interface is a web application enabling management of Virtual Services and configuration on Service Virtualization Servers, without opening the Designer or individual projects. The Service Virtualization Management interface is installed by default when you install the Service Virtualization Server.

Flexible Licensing

Service Virtualization offers two editions and two Service Virtualization Server licensing options to accommodate almost any organizational need.

EXPRESS EDITION

- Service Virtualization Designer: 3 VS, 10 TPS (free)

ENTERPRISE EDITION

- Service Virtualization Designer: seat, unlimited VSs, 10 TPS
- Service Virtualization Server:
 - Static: server instance, unlimited VSs
 - Dynamic: VSs in simulation, unlimited Service Virtualization Server nodes, 3 VS types
 - Includes limited capacity of Service Virtualization Lab Virtual Services

“With Service Virtualization, we test earlier and gain more confidence in our end-to-end capabilities. We’ve replaced unreliable systems, increased staff efficiency, and launched new customer services with complete success.”

ALAN ABERNETHY
Principal Engineer
Sky

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System Requirements

Supported Operating Systems:

- Windows: Windows 8.1, 10, 11, Windows Server 2012/R2, 2016, 2019, 2022
- Linux (Service Virtualization Server only): Red Hat Enterprise Linux 7.0–7.3, 8.0–8.5, Oracle Linux 7.3, 8.2 and CentOS 7, 8.2
- Database: MS SQL 2008, 2012, 2014, 2016, 2019, 2022, Azure SQL, Oracle 11g/12c, PostgreSQL 9.x/12.x
- Service Virtualization Lab Server: Open JDK 8u112, 8u361, Oracle Java 1.8.111
- Containers: Docker (Windows and Linux), VMware
- Service Virtualization Configurator: Java 11

Learn More

For additional information about Service Virtualization:

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