**What is Service Virtualization?**

Service Virtualization is a method that helps you to emulate (virtual services) the behaviors of the component in a Service Oriented Architecture ([Microservice](https://www.guru99.com/microservices-tutorial.html)). Practically the software development, testing, and operations teams do not work in synch, and each team has to wait for others to have components ready. This causes delays in workflows and may deliver an inferior product. With Service Virtualization, DevOps teams use virtual services instead of production services, so they can test the system even when key components are not ready. With Service Virtualization, integrating of applications takes place early in the development cycle thereby reducing time and cost to fix errors.

**Best Service & API Virtualization Tools: Top Picks**

Here, is the list of top Service Virtualization tools with popular features and download links-

**1) Mountebank**

[Mountebank](http://www.mbtest.org/) is an open source tool which can execute multi-protocol tests. The codebase is Node JS. It is easy to create stubs and mocks.

[](http://www.mbtest.org/)

**Features:**

* Mountebank tool aims to be fully cross-platform, with native language bindings
* It is non-modal and multi-protocol solution. It can test SMTP, HTTP, TCP, and HTTPS
* This tool provides service virtualization service free of cost without any platform constraints
* Frequently updated, mature, and stable tool.

mountebank is the first open source tool to provide cross-platform, multi-protocol test doubles over the wire. Simply point your application under test to mountebank instead of the real dependency, and test like you would with traditional stubs and mocks.

mountebank is the most capable open source service virtualization tool in existence

Why mountebank?

mountebank has the following goals:

Trivial to get started

mountebank is easy to install, without any platform dependencies. mountebank aims for fun and comprehensive documentation with lots of examples, and a nice UI that lets you explore the API interactively.

A platform, not just a tool

mountebank aims to be fully cross-platform, with native language bindings. Servers are extensible through scripting when the out of the box functionality isn't enough.

Powerful

mountebank is the only open source service virtualization tool that is non-modal and multi-protocol. Commercial solutions exist, but their licensed platforms make it hard to move the tests closer to development and may even require a specialized IDE. mountebank provides service virtualization free of charge without any platform constraints

**2) Hoverfly cloud**

[Hoverfly cloud](https://hoverfly.io/) is an integrated service virtualization solution. It is designed from the ground up for integration, automation, and performance. You can optimize virtualized services to efficiently handle the load from the system under test.

**Features:**

* Easily deployable on Google, AWS, Google & Azure cloud
* Virtualized services are automatically provisioned as part of the test setup
* You can scale on demand based on the performance requirements of your tests
* Allows for reporting using existing test tools

**Learn More:**<https://hoverfly.io/>

**3) MicroFocus Data Simulation Software**

[MicroFocus Data simulation software](https://www.microfocus.com/en-us/products/service-virtualization/overview) allows developers and QA testers to virtualize micro service’s behavior. The tool does not delay delivery regardless of access to production systems.

[](https://www.microfocus.com/en-us/products/service-virtualization/overview)

**Features:**

* Helps to create simulation of application behavior
* Allows modifying data, network, and performance models. Without doing changes in test conditions and performance needs
* Service Virtualization features integrated with Performance Center, ALM, LoadRunner, and Unified Functional Testing
* Model the functional network and checks the behavior of virtual services by using step-by-step wizards

**Learn More:**<https://www.microfocus.com/en-us/products/service-virtualization/overview>

**4) CA service Virtualization**

[CA Service Virtualization](https://www.broadcom.com/products/software/continuous-testing/service-virtualization) tool simulates unavailable systems across the software development lifecycle. The tool helps developers, QA testing team to work together for faster delivery and higher application quality and reliability.

[](https://www.broadcom.com/products/software/continuous-testing/service-virtualization)

**Features:**

* It simplifies the management of development and testing processes.
* Helps to streamline development by virtualizing dependent systems including mainframes, and external service providers
* Allows project to be developed in parallel instead of waterfall model
* Reduce demand for development environments

**Learn More:** <https://www.broadcom.com/products/software/continuous-testing/service-virtualization>

**5) Mocklab**

[Mocklab](http://get.mocklab.io/) is service virtualization tool with user-friendly UI. It allows easy copy, paste or record stubbed HTTP responses. It helps for easy sharing among the team.

[Mocklab](http://get.mocklab.io/)

**Features:**

* Helps organization to remain productive even when a dependent API doesn’t exist
* Test edge case and failure modes which the real API never able to produce
* Helps to recognize issues faster and find key issues with the feature of help of visual request log

**Learn More:**<http://get.mocklab.io/>

**6) Rational Test Virtualization Server**

[IBM Rational Test Virtualization](https://www.ibm.com/in-en/marketplace/rational-test-virtualization-server) offers fast and quick testing in the development lifecycle. It helps to reduce dependencies by simulating part or an entire application. This helps [software testing](https://www.guru99.com/software-testing-introduction-importance.html) teams as they need not wait for the availability of those applications to begin their work.

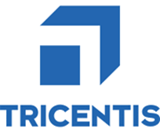
**Features:**

* Virtualize services, software, and applications.
* Reuse and share virtualized environments
* Offers support for middleware technologies
* Allows integration with other tools

**Learn More:**<https://www.ibm.com/in-en/marketplace/rational-test-virtualization-server>

**7) Tricentis Tosca**

[Tricentis Tosca](https://www.tricentis.com/resources/orchestrated-service-virtualization/) allows steady access to dependent systems so that tests can be execute reliably, and continuously. It simulates the dependent component behavior need to run your tests

[](https://www.tricentis.com/resources/orchestrated-service-virtualization/)

**Features:**

* Helps testers to test highly interconnected systems with many components evolving in parallel
* Simulate Interactions necessary for Testing
* Automated Message Validation process