Parasoft Artifacts in Microsoft Azure

Introduction

The combination of Microsoft Azure, Microsoft VSTS, and Parasoft Service Virtualization—operating natively within the Microsoft environment—enables organizations to rapidly deploy a complete test environment on demand.

"Dynamic, disposable" test environments can be instantly provisioned from a golden template, used and dirtied, then simply destroyed. There is no need to share test environments or resources across teams or test phases: the exact environment you need is instantly spun up whenever you want it, then destroyed as soon as you're done with it. Dynamic infrastructures provide advanced flexibility for extreme automation. Moreover, when you need to scale (e.g., for performance testing), you can do that on demand.

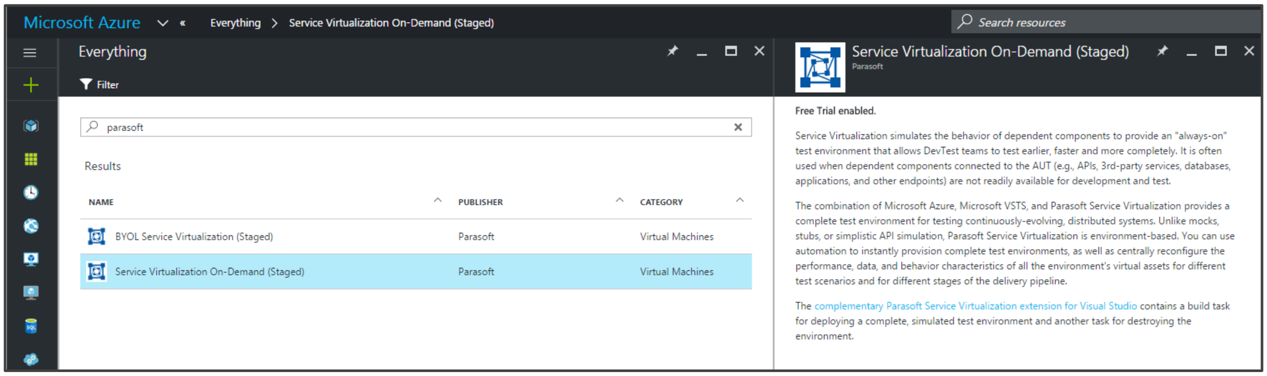
The following sections provide an introduction to the architecture and components accessible via the Microsoft Azure and Microsoft Visual Studio marketplaces.

Parasoft VM in Azure Marketplace

From the Azure Marketplace, you can deploy a Parasoft Service Virtualization VM on Azure. There are two licensing options: bring your own license (BYOL) and on-demand, which allows you to immediately start using Parasoft Service Virtualization on an hourly basis.

The Parasoft Service Virtualization VM on Azure Marketplace contains the following components:

- Parasoft Continuous Testing Platform (including Environment Manager)
- Parasoft Virtualize Server
- Parasoft Data Repository Server



NAME	PUBLISHER	CATEGORY
BYOL Service Virtualization (Staged)	Parasoft	Virtual Machines
Service Virtualization On-Demand (Staged)	Parasoft	Virtual Machines

Service Virtualization On-Demand (Staged)

Parasoft

Free Trial enabled.

Service Virtualization simulates the behavior of dependent components to provide an "always-on" test environment that allows DevTest teams to test earlier, faster and more completely. It is often used when dependent components connected to the AUT (e.g., APIs, 3rd-party services, databases, applications, and other endpoints) are not readily available for development and test.

The combination of Microsoft Azure, Microsoft VSTS, and Parasoft Service Virtualization provides a complete test environment for testing continuously-evolving, distributed systems. Unlike mocks, stubs, or simplistic API simulation, Parasoft Service Virtualization is environment-based. You can use automation to instantly provision complete test environments, as well as centrally reconfigure the performance, data, and behavior characteristics of all the environment's virtual assets for different test scenarios and for different stages of the delivery pipeline.

The complementary Parasoft Service Virtualization extension for Visual Studio contains a build task for deploying a complete, simulated test environment and another task for destroying the environment.

The Continuous Testing Platform allows organizations to rapidly and precisely validate that their applications satisfy business expectations around functionality, reliability, performance, and security. Even novice team members can configure and provision a complete test environment, then immediately execute tests against the appropriate test environment configurations.

Environment Manager is the module of the Continuous Testing Platform which enables the user to create and manage “environments.” Environments consist of virtual services, real endpoints, data and a visual depiction of the application environment under test. Environment Manager also allows creation of virtual assets from traffic files, obtained by starting “recording” sessions inside the browser, or definition files (WSDL, RAML, Swagger or WADL). Virtual assets can mimic the behavior of web services, databases, mainframes, and other components. They aid in testing and development efforts by significantly reducing dependencies on the state of these external components.

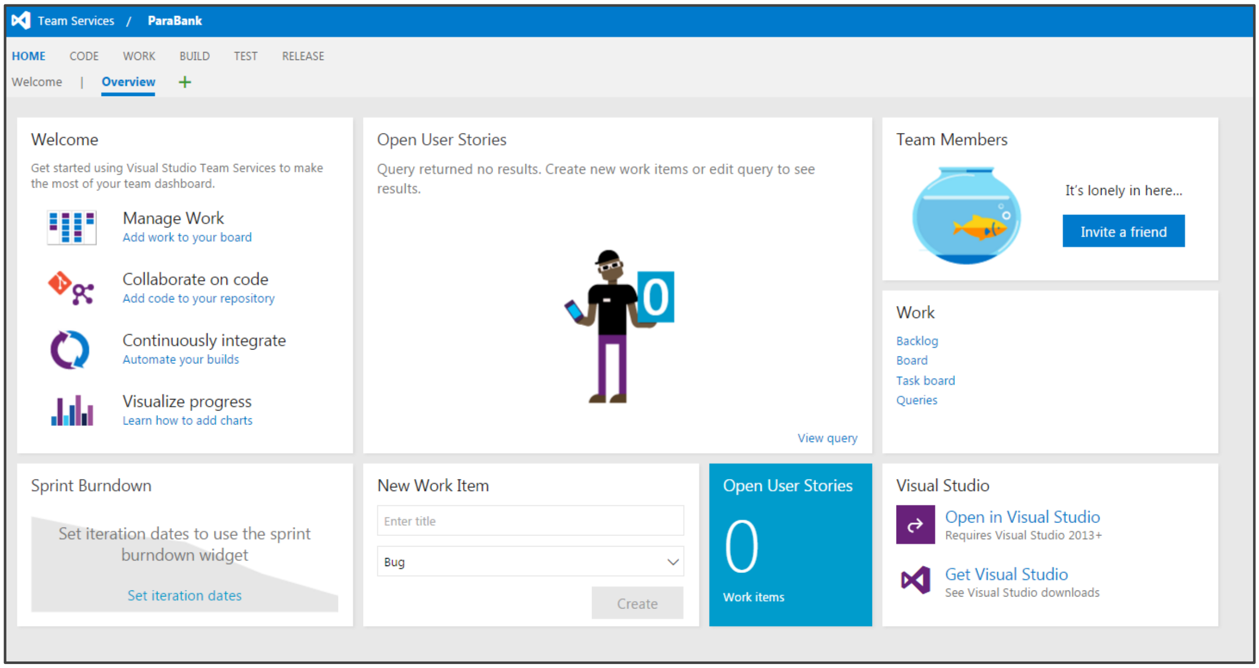
Parasoft Virtualize Server hosts virtual assets and proxies. When a virtual asset is deployed on the Virtualize server, the application under test may send requests to the virtual asset and receive virtual responses. Proxies allow the user to dynamically control the configuration of the application environment (that is, whether requests from the application under test are being forwarded to a virtual service or real endpoint) without making any changes to the application under test.

Data Repository Server allows the user to enhance the behavior of the virtual assets with data driven responses. When a virtual asset is created from traffic, all associated data is stored within the data repository server. When the virtual asset is invoked, it will pull data from the data repository server to construct a response.

For detailed steps on creating a Parasoft virtual machine in Azure, refer to “Using Parasoft in VSTS” or “Creating your own Virtual Assets in Microsoft Azure” documents.

VSTS Deploy Steps

Visual Studio Team Services (VSTS) allows you to create projects, manage code, and set up a continuous build and release process. VSTS provides a marketplace with plugins to expand the functionality of VSTS by integrating with 3rd-party platforms, including Parasoft Service Virtualization.



Get started using Visual Studio Team Services to make the most of your team dashboard.

Query returned no results. Create new work items or edit query to see results.

It's lonely in here...

Set iteration dates to use the sprint burndown widget

Once Parasoft's plugin has been installed, it allows users to "deploy" a simulated test environment so that the correct data, endpoints and functionality are always available during a build/release process. The simulated test environment can then be cleaned-up or "destroyed" instantly once the build/release process has completed. Both of these steps are available as "release" tasks in VSTS.

Parasoft's "Using Parasoft in VSTS" guide explains how to configure VSTS to grab the source code for a demo web application ("Parabank") from the Parabank GitHub repository, build the code on a hosted build machine, and release the resulting .war file to a dedicated Azure VM. It also demonstrates how to use the Parasoft "Deploy" task to provision a simulated test environment needed to test the Parabank application.

About Parasoft

Parasoft provides innovative tools that automate time-consuming testing tasks and provide management with intelligent analytics necessary to focus on what matters. Parasoft's technologies reduce the time, effort, and cost of delivering secure, reliable, and compliant software, by integrating static and runtime analysis; unit, functional, and API testing; and service virtualization. Parasoft supports software organizations as they develop and deploy applications in the embedded, enterprise, and IoT markets. With developer testing tools, manager reporting/analytics, and executive dashboarding, Parasoft enables organizations to succeed in today's most strategic development initiatives — agile, continuous testing, DevOps, and security.

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