

Azure Load Testing



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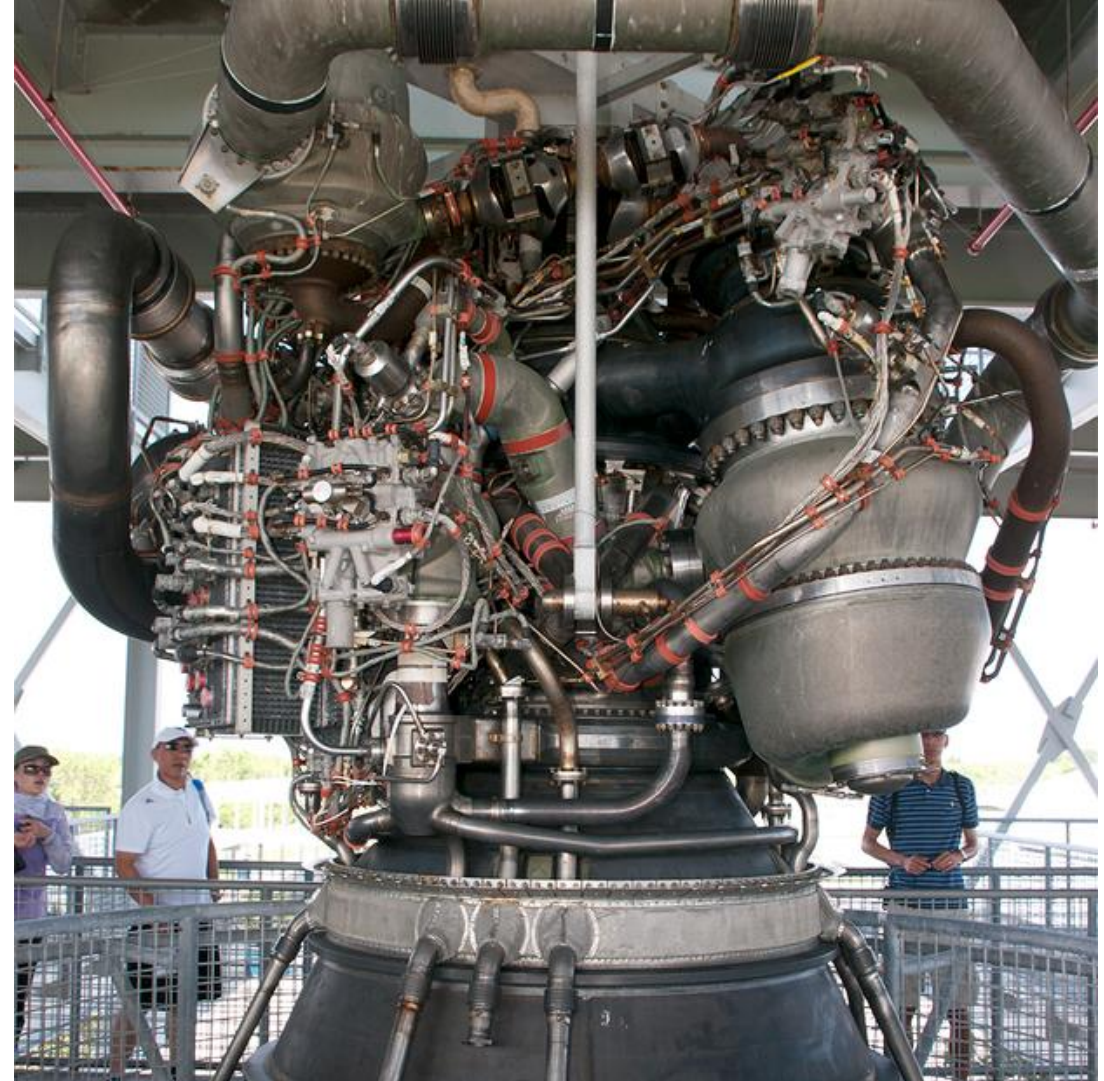


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Site
Reliability
Engineering

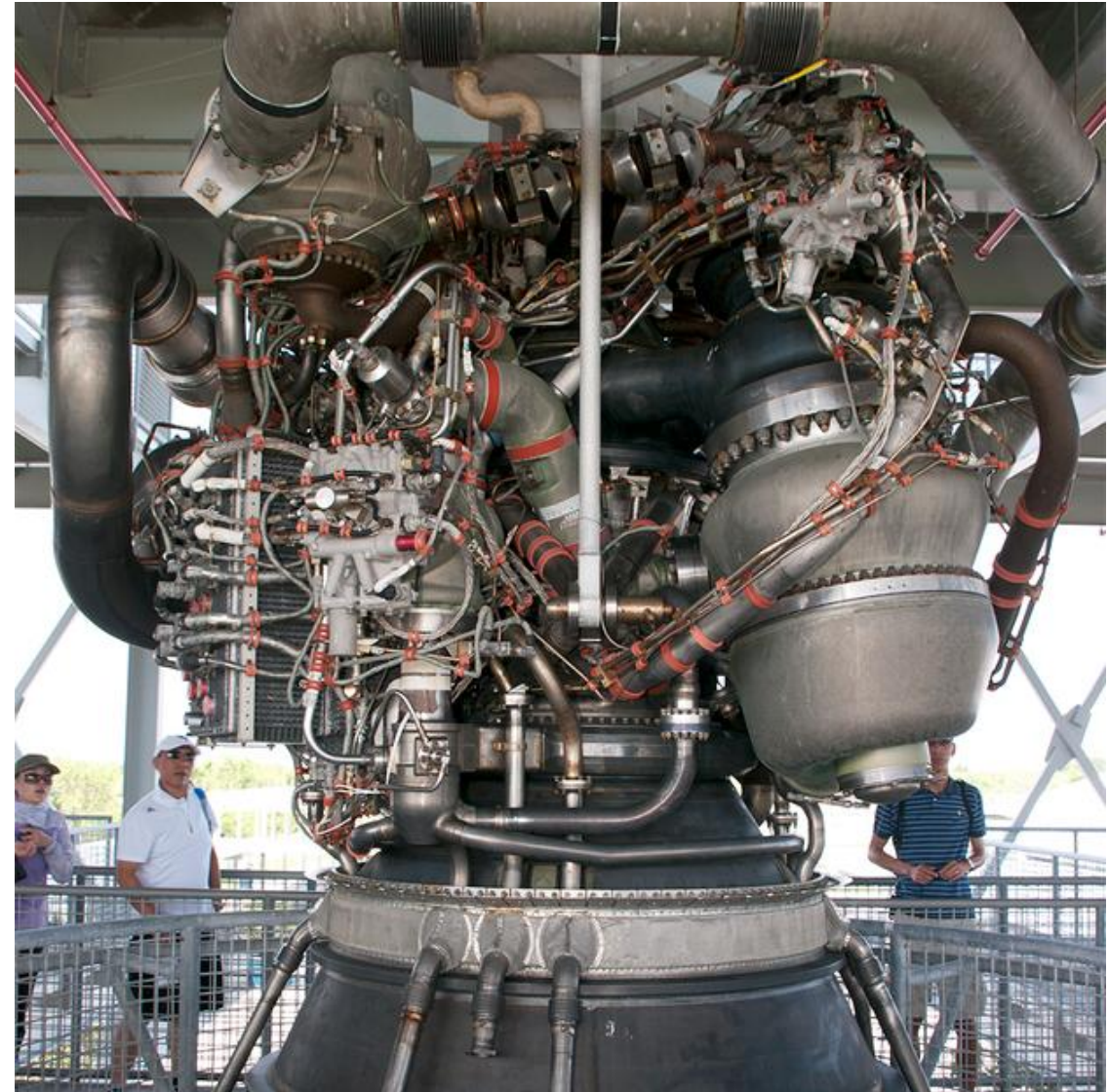


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Stress(testing)
Running
Engineering



What is Load Testing?

*“...Load testing is a type of **Performance Testing** that determines the **performance** of a system, software product, or software application under **real-life-based load conditions**, typically number of users, sessions, traffic,...”*



Azure Load Testing

- Azure Load testing is a **managed service** that can be used to **simulate load** on your application's UI and APIs endpoints
- They can **integrate** into your continuous integration and continuous delivery (**CI/CD**) workflow
- Define **test criteria**, such as average response time or error thresholds, and automatically stop load tests based on specific error conditions.
- Supports **Apache JMeter** and **Locust** Framework



Azure Load Testing Components

- **Load testing resource:** A top-level resource that provides a centralized place to view and manage load tests, test results, and related artifacts.
- **Test:** Describes the load test configuration settings for running a load test. It contains the test plan, test parameters, the load configuration, and test criteria.
- **Test run:** Represents one execution of a load test. When you run a test, the test run contains a copy of the configuration settings from the associated test.
- **Test engine:** The computing infrastructure used for the test. You can figure the number of test engine instances and the number of simulated users.
- **App component:** When you run a load test for an Azure-hosted application, you can monitor resource metrics for the different Azure application components (server-side metrics).



Azure Load Testing Tests

- **URL-based:** With a URL-based test, you can create a load test without prior knowledge about load testing tools or scripting.
- **JMeter test script (JMX):** Supports data parameterization for dynamic inputs and scenarios. The JMX test plan can include various elements like logic controllers, timers, assertions, and listeners to control the flow and validate the results of the test.
- **Locust Framework:** Locust is an Open Source framework, relying on **Python** code to define testing scenarios

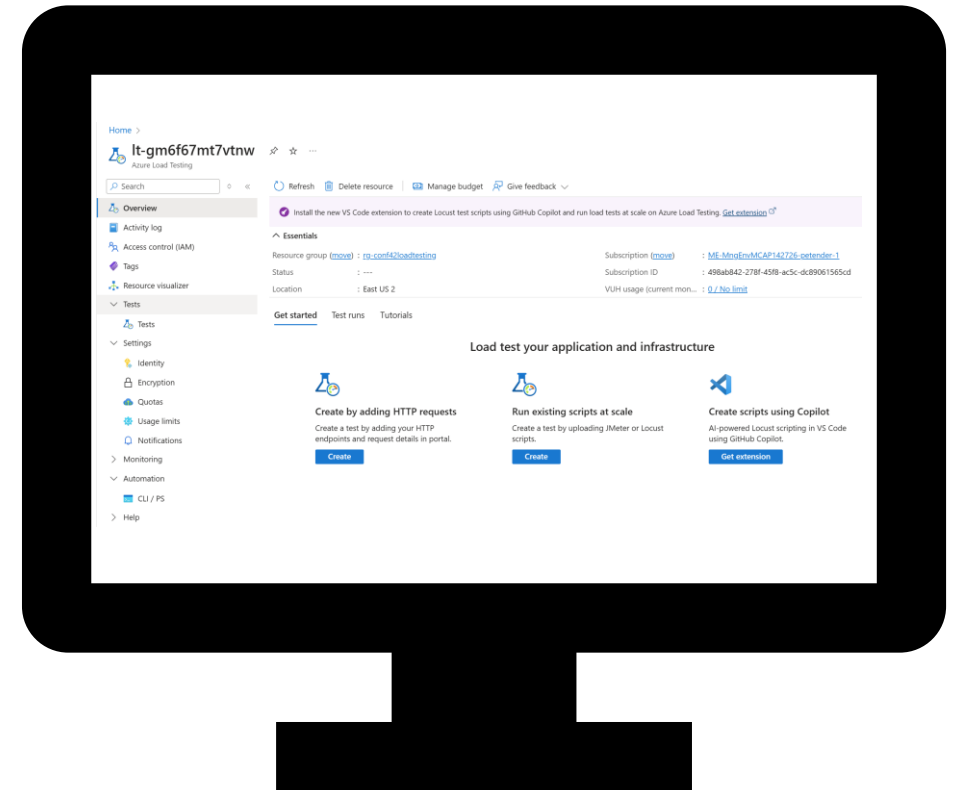


Azure Load Testing in CI/CD

- **Azure DevOps:** Available from Azure DevOps Marketplace, offered as a prebuilt pipeline component (**@AzureLoadTest**)
- **GitHub Actions:** Available from GitHub Actions Marketplace, offered as a prebuilt pipeline component (**Azure/Load-Testing@v1**)
- **Other DevOps tools:** trigger using REST API

Azure Load Testing

DEMO



Azure Chaos Studio



Azure Load Testing



<https://github.com/Azure/Mission-Critical>

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THANK YOU

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